AM 101 .S6635 MSRLSI

Annals of the Smithsonian Institution 1998



Smithsonian Institution

National Collections Program Smithsonian Institution Archives Washington, D.C.



Annals of the Smithsonian Institution 1998



National Collections Program Smithsonian Institution Archives Washington, D.C.

Contents

Smithsonian Institution4Statement by the Secretary6	Award Activity at the Smithsonian Institution in Fiscal Year 1998 140
Report of the Provost 10	Publications of the Smithsonian Institution Press in Fiscal Year 1998 151
Report of the Under Secretary 12 Report of the Board of Regents 18 Chronology 20	Publications of the Staff of the Smithsonian Institution and Its Subsidiaries in Fiscal Year 1998 154
Reports of the Bureaus and Offices of the Smithsonian Institution for Fiscal Year 1998	The Smithsonian Institution and Its Subsidiaries, September 30, 1998 217
44	 Donors to the Smithsonian Institution in Fiscal Year 1998 233 Contributing Members of the Smithsonian Institution in Fiscal Year 1998 264 Financial Report 277
Members of the Smithsonian Councils, Boards, and Commissions, September 30, 1998 93	
Visits to the Smithsonian Institution Museums and Galleries in Fiscal Year 1998 101	
Academic, Research Training, and Internship Appointments and Research Associates in Fiscal	

Notes: The arrangement of bureau and office listings within is not alphabetical but rather follows as closely as possible the organization of the Smithsonian Institution as shown on page 4. The contents of *Annals* were produced from electronic files provided by the bureaus and offices.

MAR U:: 27 9 LIDDADIC

Year 1998

102

Smithsonian Institution

Establishment, Board of Regents, Executive Committee, and the Secretary

Office of the Secretary Office of the Under Secretary Office of the Provost Office of Inspector General Office of Planning, Management, and Budget Office of General Counsel Office of Government Relations Office of Communications

Secretary

Inspector General Secretariat Planning, Management, and Budget Membership and Development

Provost

Museums and Research Institutes

Anacostia Museum and Center for African American History and Culture Archives of American Art Arthur M. Sackler Gallery/Freer Gallery of Art Center for Folklife Programs and Cultural Studies Cooper-Hewitt, National Design Museum Hirshhorn Museum and Sculpture Garden National Air and Space Museum National Museum of African Art National Museum of American Art —Renwick Gallery National Museum of American History National Museum of the American Indian National Museum of Natural History —Museum Support center National Portrait Gallery National Postal Museum National Zoological Park Smithsonian Astrophysical Observatory Smithsonian Center for Latino Initiative Smithsonian Center for Materials Research and Education Smithsonian Environmental Research Center Smithsonian Tropical Research Institute

Education, Museum, and Scholarly Services

Center for Museum Studies Exhibits Central Fellowship and Grants International Relations National Science Resources Center Program for Asian Pacific American Studies Smithsonian Institution Archives Smithsonian Institution Libraries Smithsonian Institution Traveling Exhibition Service Smithsonian Office of Education Sponsored Projects

Other Support Services

Accessibility Program Institutional Studies Scientific Diving Program

Under Secretary

Operations Directorate

Chief Financial Officer Comptroller Contracting Treasurer Senior Executive Officer Equal Employment and Minority Affairs Human Resources Ombudsman Senior Facilities Officer Environmental Management and Safety Physical Plant Protection Services Senior Information Officer Imaging, Printing, and Photographic Services Information Technology

Business Advancement Directorate

Smithsonian Associates Smithsonian Businesses —Retail —Concessions —Product Development and Licensing —Smithsonian Press/Productions Smithsonian Magazine

Affiliated Organizations

John F. Kennedy Center for the Performing Arts National Gallery of Art Reading Is Fundamental, Inc. Woodrow Wilson International Center for Scholars

Statement by the Secretary

I. Michael Heyman

A few years ago, a number of scholars at the Smithsonian convened a meeting at the National Zoo that they titled "What About Increase?" They were concerned that the research function of the Smithsonian had become the hidden part of the Institution's dual mission to promote "the increase and diffusion of knowledge."

It is not, of course, surprising that most Americans think of the Smithsonian principally in terms of our museums and their exhibitions and programs. They are the public face of the Institution and represent our vital commitment to education. But there is another Smithsonian—the Smithsonian of research institutes in Massachusetts, Panama, and Maryland, of field expeditions throughout the world, of scholarly investigations into vanishing technologies, historical traditions, and artistic expression. It is that Smithsonian, committed to expanding the boundaries of knowledge, that we celebrate here.

At the time James Smithson made his generous and mysterious bequest to the people of the United States in the 1820s, America was far from the research giant it has become in our century. While we will never know Smithson's exact intentions for the new institution he imagined, the Smithsonian's first Secretary, Joseph Henry, argued that since Smithson had himself been a scientist (with more than 200 scientific papers to his name), it must have been his intention to found in the New World "an organization which should promote original scientific researches." Henry, known for his experiments with electromagnetism, was in the vanguard of a rising generation of American scientists and saw in Smithson's bequest an opportunity to create, in the unlikely precincts of the capital city, a place devoted to pure research: in his words, a "college of discoverers."

So devoted was Henry to his vision that he downplayed the potential for public education in the use of Smithson's funds.

The notion of a national museum left him cold, and even the construction of a great building on what is now the National Mall struck him as a diversion of monies more usefully spent in the support of investigations in all branches of knowledge and the dissemination of findings in publications and other forms of scholarly exchange.

Happily for us today, Henry was not entirely able to stop the Smithsonian from undertaking responsibility for the care of national collections, nor, for that matter, could he stop the creation of a tradition of great buildings on the Mall to present them. His enduring legacy to the Smithsonian, though, was to underscore and establish the importance of a research agenda of the highest standard.

Within two years of the Institution's founding in 1846, Henry had already demonstrated the potential of his stubborn vision. At a time when only two other U.S. institutions sponsored the publication of research results, he initiated the series Smithsonian Contributions to Knowledge, which continues to the present day as the Smithsonian Contributions and Studies Series Program. The first volume, Ancient Monuments of the Mississippi, a study of Indian mounds, has been described as a "milestone in the development of American anthropology." Henry also saw the Smithsonian's potential as a catalyst and coordinator of scientific inquiry throughout the nation and the world. Using the hot new technology of the telegraph, he set up a network of hundreds of observers to chart weather conditions throughout the United States and as far away as South America. This innovation created a base for the new science of meteorology, grounded in the accumulation of long-range data, and led to the establishment of the U.S. Weather Bureau in 1869.

Henry's interest in the emerging field we now call anthropology bore spectacular fruit when he persuaded John Wesley Powell, a national hero after his explorations of the Colorado River, to add human studies to his interest in geology. In time, Powell established the Bureau of American Ethnology, predecessor to the Department of Anthropology and its National Anthropological Archives in the National Museum of Natural History. The bureau documented the languages and customs of what were then assumed to be vanishing American Indian cultures (later augmented by materials associated with other global communities) in a series of studies, field notes, photographs, and eventually sound recordings. This remarkable and still developing body of materials has been called by the great French anthropologist Claude Lévi-Strauss a "living inspiration."

Research at the Smithsonian has another "godfather" from its early years, Henry's assistant and successor as Secretary, Spencer Fullerton Baird. Baird never saw a contradiction between the Smithsonian's research and museum functions and committed himself, at first discreetly, to the accumulation of extensive collections for study and public display. Henry might have guessed at Baird's intentions when the young man arrived in 1850 to take up his new position with two railroad boxcars filled with his personal collections.

In time, Baird's determination added to the Smithsonian's research goals a commitment to collection-based investigations. Inspired by Henry's own strategy of recruiting a network of scientific observers, Baird established connections to individuals throughout the country-farmers and soldiers, as well as committed naturalists-who were inspired to send to the Castle in Washington, D.C., a range of items, from Indian artifacts (which have grown to the Smithsonian's unequaled collections of well over 2 million items today) to specimens of plant and animal life (now well over 100 million in the National Museum of Natural History alone). Participants in the government's explorations of the West were encouraged to collect for the Smithsonian as well, instructed by Baird, as were all in his army of volunteer collectors, in the proper preparation and documentation of the specimens.

Baird's Smithsonian took a leadership role that the Institution continues to maintain in systematics research, which builds systems of classification of plants and animals derived from the study of their physical characteristics. The National Museum of Natural History's Laboratory of Molecular Systematics, for example, uses molecular biology to examine an organism's DNA as additional aids to classification. In the scientific sense, fossils have taken on new life. And, in another example of new uses for old collections, scientists have used the Smithsonian's vast collection of North American bird eggs, collected in the nineteenth century, to assess damage done to the eggs of bird populations exposed in our own time to DDT.

Neither Henry nor Baird could have imagined the enormous scope of activities of the modern-day Smithsonian, but elements of their research philosophies have shaped much of its development. Henry's ideal of a research institute has been realized in such units as the Smithsonian Astrophysical Observatory and the Smithsonian Tropical Research Institute (STRJ), both ranked among the top centers of their kind in the world. Baird's ideal of museum-based research has expanded from the activities of the single National Museum he presided over to the proliferation of great museums devoted to individual fields in science, history, and art, each with their community of scholars.

While the many hundreds of researchers in the modern Smithsonian cover an extraordinary range of topics, they share the impulse at the heart of all research: to know what has never been known before. The astrophysicist, the natural scientist, the anthropologist, the historian, and the art historian keep in mind the fundamental questions of their particular field—whether about the origins of the cosmos, the interrelationship of life on Earth, the patterns of human behavior and events, or the brilliance of individual creativity—while devoting themselves to the process of uncovering in their own work one piece of a larger puzzle.

One example in the sciences is the painstaking work done by Anthony Coates, deputy director of STRI, and his colleagues in an eight-year project to study the to-million-year geological and biological record represented by an isolated archipelago in Panama. In the end their work will produce maps of rock layers and a time range of fossil species among other measures of environmental and biological change. The period covered is one that saw the creation of the Isthmus of Panama, separating the Atlantic and Pacific Oceans and, by changing ocean currents, possibly providing the moisture that triggered an Ice Age.

A fascinating example of Smithsonian research in history is provided by the work of Paul Johnston, maritime curator in the Division of Transportation at the National Museum of American History, who conducted 211 dives in two years in Lake Superior to recover artifacts and gain information about a propeller steamship wrecked in 1858. One of the earlier ships to travel the Great Lakes, the *Indiana*, well preserved by the cold water, gives modern researchers a way to document mid-nineteenth-century propulsion machinery and to understand better, in Johnston's words, the role of the steamer "in the development of maritime trade, travel, and the settlement of the Great Lakes region."

Late-twentieth-century research in art history has provided new strategies to answer questions about the creative process. One of the most remarkable examples is provided by a collaboration undertaken a few years ago between Elizabeth Broun, director of the National Museum of American Art, and Ingrid Alexander, an art research historian specializing in technical analysis at the Smithsonian Conservation Analytical Laboratory (now the Smithsonian Center for Materials Research and Education). In preparation for her groundbreaking exhibition and publication on Albert Pinkham Ryder, who is counted among America's greatest artists, Broun sought to understand with Alexander's help the nature of Ryder's experimentation with color and materials, often obscured by the deterioration and restoration of his paintings. The autoradiographs (similar to x-radiographs) that Alexander produced enabled new insights into the reclusive artist's technique and sophistication.

These are, of course, just snapshots from the remarkable range of research activities pursued by our professional staff within the Institution and around the world. While it would be impossible here to describe them all, certain frameworks capture the spirit of inquiry across the modern Smithsonian and reveal our particular strengths as a research institution.

The recent creation at the Smithsonian of an Institute for Conservation Biology, involving work pursued across many of our units, reflects recognition of the need for an integrated approach encompassing many scientific fields to understand the complex interdependence and fragility of the natural world. At the National Zoo, for example, researchers draw upon insights provided by the study of genetics, physiology, behavior, evolutionary biology, and ecology to support its breeding and conservation efforts around the world, with special attention to the preservation of threatened animals. The Smithsonian Environmental Research Center in the Chesapeake Bay region devotes its long-term program to the goal of gaining a landscape ecology perspective on air, land, and water interactions in its coastal zone; while at the Center for Earth and Planetary Studies at the National Air and Space Museum, researchers are involved in studies of arid environments around the world as a way of evaluating climate changes.

Other scientists, at our National Museum of Natural History, work to trace the evolutionary relationships that connect all plants and animals, living and extinct; those involved with the many research projects at the Smithsonian Tropical Research Institute cope with the mystery of how little we know about the nature and multimillion number of species, most of them in the tropics, that make up the diversity of life on Earth.

From the start, much of Smithsonian scientific research has been driven by a sense of urgency. The establishment of the National Zoo in 1889, for example, had its roots in the concern of Smithsonian naturalist William T. Hornaday and the third Smithsonian Secretary, Samuel Pierpont Langley, that the population of American bison had been dangerously reduced. So concerned were they over the disappearance of this distinctly North American ungulate that Langley and Hornaday penned a few behind the Castle, sought land and funds from Congress, and founded the National Zoo as the Smithsonian's first step in species conservation.

Modern Smithsonian researchers are in the forefront of those addressing, in the words of a recent statement, such pressing issues of environmental and ecological concern as "acid rain, global warming, deterioration of the ozone layer, clear-cutting of tropical forests, desertification, and pollution of the oceans." On an individual level, an activist research agenda is typified by the work of scientists like Ronald Heyer, curator of amphibians and reptiles at the National Museum of Natural History, whose concern about declining global frog populations has led him to chair an alliance of 1,000 volunteer scientists around the world to monitor the problem.

Another way in which certain research interests throughout the Institution complement each other is within the broad category of the exploration of "material culture," the interpretation of objects as documents of human and natural history. As a repository of "things" of all sorts (141 million in our collections at last count), the Smithsonian offers advantages over the university in providing scholars with the opportunity to examine directly and debate the various meanings objects reveal across disciplines. One example was a discussion held about the Hope Diamond, in which a geologist provided a perspective on its natural formation across millions of years, a decorative arts specialist described its role as a cut and polished gemstone in the history of jewelry, and a folklorist revealed the pattern of its ownership from India to Europe and the United States and the legends that have added so much to its mystery and attraction.

Some of the most interesting discussions of this sort take place under the auspices of the Smithsonian Forum on Material Culture, which invites to its meetings any scholar with an interest in cross-cultural and cross-disciplinary interpretation. One meeting asked forum members representing the history of technology, art history, and archaeology to interpret three African chairs owned by the National Museum of African Art. Another took on the imaginative theme of "Captured Water," in which a curator from the Arthur M. Sackler Gallery showed the ways in which the culture of India has ritualized the human relationship to water and a curator from the Cooper-Hewitt, National Design Museum explained the many purposes fountains serve in European life. Then a scientist, Michael Robinson, director of the National Zoo, joined in with a description of his planned exhibition on the centrality of water to life on the planet. This is the multifaceted Smithsonian at its best, sharing knowledge across the full range of arts and sciences.

Although the Smithsonian is its own community of research, the Institution is as committed to the creation of resources available to researchers throughout the world. No scholar of American art can do without the extraordinary range of materials collected and catalogued by our Archives of American Art, with centers in California and New York, as well as Washington, D.C. Other researchers have available to them such documentary collections as the advertising history materials in the Archives Center of the National Museum of American History, the Catalog of American Portraits at the National Portrait Gallery, and the more than 200,000 photographs and nearly 2 million pages in unpublished materials at the National Anthropological Archives. Add to this the enormous resources of the Smithsonian Institution Libraries system and the Smithsonian Institution Archives, among hundreds of collections of documents and objects too numerous to mention, and the Institution becomes a resource of vast proportions.

There was a reason why James Smithson coupled the "increase" with the "diffusion" of knowledge. The Smithsonian's commitment to "discovery" can mean at the purest level of research the expansion of human knowledge beyond anything grasped before, but "discovery" also happens whenever any one of us encounters and understands something we did not know before. That process is repeated millions of times in exhibitions at the Institution and in those presented by the Smithsonian Institution Traveling Exhibition Service, at programs provided by The Smithsonian Associates and by Smithsonian Productions, in the wealth of articles in *Smithsonian* magazine, and in the expanding world of the electronic Smithsonian, which now welcomes millions of visitors each month to our home page on the World Wide Web, *http://wurw.si.edu.*

But to return to the concerns expressed at the "What About Increase?" conference, very few of our visitors associate the process of research with the exhibitions and programs they enjoy. In her address to that meeting, Maxine Singer, president of the Carnegie Institution in Washington, D.C., and chair of the Smithsonian's Commission for the Future, explained that researchers themselves have "failed to convey to people . . . how we come to know things and what the standards of knowing are."

I find that a very fair observation. Very often exhibitions and programs provide the fruits of investigation but little about the process itself. What were the questions posed? How were conclusions reached? Do questions remain? If the information is groundbreaking, we need to know that. If it is a synthesis of what is already known, tell us that as well.

Some of our most exciting programs are now geared exactly to do that—to let the public in on the workings of research. One of my favorites in a scientific field is "Think Tank," a complete reworking of the small mammal house at the National Zoo. "Our goal," according to the head of the team that produced it, Ben Beck, "is to engage the public in a field of study that has challenged scientists for 2,000 years." Visitors are exposed to monitors showing various aspects of animal behavior such as a group of beavers building a dam and asked, "Is this thinking?" The answers are not clear-cut and point to questions about how we define thinking and its component elements of planning and flexibility. At the heart of the installation is the opportunity to observe behavioral scientists interacting with orangutans in a language project based on communication through touch-screen computer technology and a new symbolic language created at the National Zoo.

Unlike research in the sciences, research in the humanities does not proceed through experimentation as much as through the search for meaning in human history and expression. Because the process is more subjective, it is less easily demonstrated to our visitors, but two curators at the Hirshhorn Museum and Sculpture Garden are at work on a groundbreaking exhibition that might just do the trick. To mark the museum's 25th anniversary in October 1999, Neal Benezra and Olga M. Viso are examining what has happened to the idea and ideal of beauty in the art of the twentieth century. By reviewing how, in Benezra's words, "time-honored aesthetic standards" had come to be considered by many artists and critics "no longer valid," the curators will show through the juxtaposition of various works of art changing visions of the beautiful but draw no absolute conclusions. "Our question to viewers," Benezra says, "will be the same one that we have been struggling with: 'What could beauty in art be at the end of the twentieth century?"

These two exhibitions, one in the sciences and one in the humanities, point the way to the Smithsonian of the future, a place committed to sharing with the public not only what we know, but what we do not yet know, sharing the questions we ask and the approach we take to answering them. That Smithsonian will be a "college of discoverers" for the twenty-first century.

Report of the Provost

J. Dennis O'Connor

When the Chandra X-ray Observatory (CXO) is launched from the Kennedy Space Center aboard the space shuttle *Columbia* later in 1999, the Smithsonian will be there. The Smithsonian Astrophysical Observatory (SAO), a pioneer in X-ray astronomy, played a major role in developing the orbiting observatory and is the site of the Chandra Science Center, which will receive and analyze information from the spacecraft's sophisticated instruments and make it available to the scientific community. SAO will also manage the Chandra Operations Control Center.

The Chandra Observatory takes the Smithsonian in new, but not surprising, directions. Since its founding, the Institution has been on the leading edge of research. The first Secretary, Joseph Henry, one of the most eminent scientists of his time, believed that the importance of the Institution was measured by the knowledge it sent out into the world. Under his successor Spencer Fullerton Baird, a respected naturalist and the quintessential collector, the national collections began to grow. The next Secretary, Samuel Pierpont Langley, an early investigator of variable solar temperatures and the sun's corona, was an astronomer who was also intrigued by aeronautics. The fourth Secretary was Charles Doolittle Walcott, a geologist and paleontologist best known for one of the greatest finds in paleontology, the Burgess Shale.

The fact that this remarkable quarter of scientists shaped the Smithsonian during its first century is a significant statement about the Institution's fundamental purpose. The Smithsonian of Henry, Baird, Langley, and Walcott was on the leading edge of the scientific disciplines of its time: electricity, astronomy, aeronautics, evolution, comparative zoology, and comparative botany.

Headed toward the millennium, the Smithsonian remains on the leading edge. Research brings about paradigm shifts—changes in the fundamental theoretical framework of a discipline or a body of knowledge. As a result of research, a paradigm is initiated, sustained, or refuted, or existing observations are tested and reinterpreted based on a new perspective.

In our museums and research institutes and in the field, Smithsonian researchers advance knowledge in dramatically different areas, Hundreds of intriguing examples could illustrate the research that distinguishes the Institution. Here are a few that suggest the immense range of interests being pursued under its aegis:

Melinda Zeder of the National Museum of Natural History's Department of Anthropology has studied museum collections of modern and archaeological bones to develop a new technique for identifying the earliest stages of animal domestication. She has used accelerator mass spectrometry radiocarbon dating to directly date the earliest evidence for the domestication of a herd animal (the goat) to 9,900 years ago at the archaeological site of Ganj Dareh in highland western Iran.

Wendy Wick Reaves's inquiry into early-twentieth-century caricature in America defined a new art form closely related to the emerging celebrity culture. Her research, which evaluated artists' fresh approaches to traditional caricature, resulted in the National Portrait Gallery exhibition "Celebrity Caricature in America" and the well-received book of the same title.

For a book manuscript titled *Lost Revolutions: The South in the 1950s*, Pete Daniel, curator in the History of Technology Division at the National Museum of American History, has analyzed agricultural transformation, the environment, stock car racing, music, and civil rights.

Jenny So, curator of ancient Chinese art at the Freer and Sackler Galleries, is looking at some 1,000 pieces of jade dating from 4000 B.C. to A.D. 1900. She is trying to determine the location, function, and cultural uses of those pieces and place them in a taxonomy of use throughout that period to see what changes occurred.

Reproductive research by research veterinatian Steven Monfort at the National Zoo's Conservation and Research Center in Front Royal, Virginia, could contribute to saving the endangered scimitar-horned oryx, a species of African antelope that is extinct in the wild. Monfort's research team developed new sperm freezing and artificial insemination techniques to enhance the global genetic management of this rare antelope.

The reports from museums and research institutes on the following pages describe more research highlights. Together, these reports communicate the extent and the significance of the Smithsonian research enterprise.

In the decades ahead, the Smithsonian must remain on the leading edge. The Chandra X-ray Observatory is an especially striking example because it could change our view of the cosmos through the power of X-ray astronomy. In other realms, the opportunities are also compelling: the National Museum of American History's research on the Teodoro Vidal Collection of Puerto Rican Material Culture, the Hirshhorn Museum and Sculpture Garden's analysis of the complex questions of beauty in late-twentieth-century art, the Smithsonian Tropical Research Institute's important interdisciplinary research in tropical paleontology, archaeology, and geology.

How fortunate we are to have the legacy of Henry, Baird, Langley, and Walcott. The Smithsonian's extraordinary research resources are of great value in the "increase" of knowledge and in sharing it with scholarly communities. Of equal value, however, is the potential to carry that knowledge to the public. Using the results of research by Smithsonian scholars in the arts, the humanities, and the sciences, the Institution can demystify the unfamiliar, challenge assumptions, and stimulate new ways of thinking and understanding. That is the ultimate power of our research tradition.

Report of the Under Secretary

Constance Berry Newman

A great strength of the Smithsonian is its emphasis on collaboration. Many collaborative relationships join its diverse museums, research institutes, and offices in their efforts to fulfill a common mission. Through these relationships, each organization preserves its distinctive qualities, while our shared purpose becomes the driving force. Sometimes these linkages happen with great ease, and sometimes they are hard won. Each of them, however, enriches the Institution's contributions to exploring new frontiers of knowledge and sharing what is learned with scholarly communities and the public.

Since the time of Joseph Henry, the Smithsonian's first Secretary, the Institution has been a world-renowned center of research, dedicated to pursuing new discoveries and expanded knowledge, first in the sciences and later in the humanities. The work of Smithsonian scientists and scholars is immensely important to their colleagues throughout the world. This annual report reviews some of their accomplishments in wide-ranging fields of study-the revelation that Indian forest owlets are not extinct, new knowledge about a painting by Willem de Kooning, the recovery of a piece of the Star-Spangled Banner, and new evidence that a black hole the size of 3 million Suns anchors the heart of the Milky Way. The reports on the following pages review the efforts of Smithsonian organizations to share some of this intriguing work with the public and to provide essential operational support to their colleagues who are pursuing research in other parts of the Institution.

Another important initiative underscores the sense of unity that is so essential to the Smithsonian's mission. Over the past fiscal year, staff members from across the Smithsonian, under the leadership of the director of communications, were involved in an interesting and challenging undertaking: the creation of a cohesive visual identity for the Institution. As the Smithsonian, like so many other institutions, faces the challenging reality of competition for funding and for public recognition, our success will depend in part on presenting a unified public image. As Secretary Heyman explained, "The Smithsonian needs to encourage greater understanding of the totality of its activities and its mission. And this requires the use of a uniform graphic presentation."

On the surface, this was a design and communication project—creating a new logo, eveloping guidelines for its use, and then implementing the complete program in every unit. But the project really had a larger symbolic meaning. Today's Smithsonian—a remarkably varied group of organizations with substantial reputations of their own—is quite different from the Smithsonian of Joseph Henry's time. The visual identity that emerged reminds us all that we have important common pursuits, and that the linkages we form among ourselves are vital to the Smithsonian's future.

The Smithsonian Associates

On the National Mall, across the nation, and around the world, The Smithsonian Associates (TSA) offers stimulating educational opportunities for Smithsonian members and the larger public. This year, more than 250,000 people participated in nearly 1,800 programs and learned directly from experts about developments in most areas of scholarship, from music history to astronomy, from genetics to the Civil War.

TSA's Resident Associate Program offerings presented a rich variety of research and scholarship to audiences in the greater Washington area. Among the highlights was an evening with historian John Hope Franklin, who spoke with the Smithsonian's Marc Pachter and Franklin's son John Whittington Franklin of the Center for Folklife Programs and Cultural Studies about his research into the remarkable life and times of his father, Buck Colbert Franklin. Cultural historian Tad Szulc drew on his study of rare correspondence and journals to provide new insights into Fryderyk Chopin's years in Paris as part of a vibrant intellectual community. The evening culminated in a performance of three of Chopin's shorter works by concert pianist Eugene Istomin.

Two thought-provoking lectures reflected the public's growing interest in the work of geneticists: Ian Wilmut discussing the social implications of his sheep-cloning research and Dean Hamer explaining his exploration of the links among genetics, personality, and behavior. Mario Livio of the Space Telescope Science Institute conducted two all-day seminars on the latest discoveries about the universe made possible by the Hubble Space Telescope. A seminar on Ikat textiles in Asia, beld in conjunction with an exhibition at the Arthur M. Sackler Gallery, placed these distinctive textiles in historical context.

In Resident Associate children's workshops, young participants learned from scientists about their work. Dave Bohaska of the National Museum of Natural History, for example, led young paleobiologists on an expedition along the Chesapeake Bay to find and analyze fossils, shark teeth, and other treasures. The popular Smithsonian Summer Camp opened a world of possibilities for young explorers. Sessions included Summer Splash!, in which campers examined the properties of liquids and their various states, and A Shocking Good Time!, which introduced youngsters to the concepts of electricity.

Associates expanded their study through more than 500 Smithsonian Study Tours in the United States and abroad. This year's offerings included a one-week seminar based at the Smithsonian Astrophysical Observatory's Whipple Observatory and the National Observatories on Kitt Peak near Tucson, Arizona. Civil War historians Edwin C. Bearss and A. Wilson Greene led several tours illuminating the strategies and campaigns that determined the war's outcome and shaped northern and southern political life into our own time. Associates on a 10-day study voyage in Panama boarded a small vessel to visit indigenous peoples in island communities and explore the rainforest ecosystem with Stanley Heckadon of the Smithsonian Tropical Research Institute.

TSA's National Outreach Program introduced the public to the research of Smithsonian scholars and taught graduate students new research techniques. A Smithsonian Voices of Discovery Program in Scottsdale, Arizona, for example, featured the work of Gillian Moss, curator of textiles at the Cooper-Hewitt, National Design Museum; James Zimbelman, geologist at the Center for Earth and Planetary Studies, National Air and Space Museum; Jeremy Adamson, curator at the Renwick Gallery, National Museum of American Art; and Andrew Connors, curator of painting at the National Museum of American Art. Some 5,000 people attended these events, while thousands more watched a cablecast to classrooms and homes in the region. In addition, TSA's Master's Degree Program in the History of Decorative Arts, established in 1996 with the Cooper-Hewitt, National Design Museum and Parsons School of Design, graduated its first class this year.

Radio Theatre Live!—A Lively Partnership

In what has become an annual event, the Smithsonian's Resident Associate Program again joined in rich partnership with L.A. Theatre Works and Voice of America (VOA) to present *Radio Theatre Live!*—three classic American dramas that were taped live for later broadcast on VOA worldwide and on public radio in the United States. Under the guidance of the artistic directors of three distinguished Washington theater companies, the plays were performed by some of the country's most talented actors. Smithsonian audiences had the added thrill of observing live radio drama in production.

The plays included Arthur Miller's *All My Sons*, starring the great Julie Harris and James Farantino and directed by Nick Olcott of Arena Stage. Henry *James's The Heiress*, starring Amy Irving, was directed by Michael Kahn of The Shakespeare Theatre. And the musical *Working*, based on a Studs Terkel book, starred Tyne Daly and was directed by Eric Schaeffer of Signature Theatre.

Additional cosponsors of *Radio Theatre Live!* were the Capital Group Companies, Inc.; J.W. Marriott; Dr. Sidney Harman, chairman of Harman International Industries, Inc.; The Luxury Collection/ITT Sheraton; and La Colline.

Smithsonian Press/Smithsonian Productions

Through books for general and academic audiences, exhibition films and videos, and broadcast projects, Smithsonian Press and Smithsonian Productions (SP/SP) build on the strengths of Smithsonian research and collections.

This year, Smithsonian Institution Press (SIP), an SP/SP division, issued approximately 65 new books and sold about 330,000 individual copies. Books from SIP received nine important editorial awards, many design awards, eleven reviews in the *Washington Post Book World*, and three reviews in the *New York Times Book Review*.

Continuing the successful Smithsonian Answer Book series, Bats in Question was included on the New York Public Library's annual list of best books in the teenage category. Author Don Wilson is director of the National Museum of Natural History's Biodiversity Programs Office. Other books for a general audience included Anthropology Explored: The Best of Smithsonian AnthroNotes, a lively selection of essays from the Smithsonian's acclaimed serial publication edited by Ruth Selig and Marilyn London, in which the world's leading anthropologists explore fundamental questions humans ask themselves as individuals, as societies, and as a species. The elegant exhibition catalogue Twelve Centuries of Japanese Art from the Imperial Collections, copublished with the Freer Gallery of Art and the Arthur M. Sackler Gallery, elaborates on the curatorial research behind the exhibition. In collaboration with the Bureau of Land Management, SIP published the first recreational guide to the bureau's enormous land holdings, Beyond the National Parks: A Recreation Guide to the Public Lands in the West.

Books for academic audiences included a posthumously published book by Martin H. Moynihan, founding director of the Smithsonian Tropical Research Institute, *The Social Regulation of Competition and Aggression in Animals. Ecology and Management of the North American Moose* received the annual book award in the edited book category from the Wildlife Society. The Society of American Archaeology gave its annual book award to volume 2 of *Monte Verde: A Late Pleistocene Settlement in Chile,* by Tom Dillehay, part of the Smithsonian Series in Archaeological Inquiry. Continuing its tradition of excellence as a publisher in museum studies, SIP issued an extensively revised and expanded edition of Marie Malaro's classic Legal Primer on Managing Museum Collections.

Many of the exhibition programs that Smithsonian Productions developed during 1998 grew out of the research efforts of Smithsonian museums. Highlights include a video of Ella Fitzgerald's best performances for "Ella Fitzgerald: First Lady of Song" at the National Museum of American History; *Poetics of Line: Seven Artists of the Nsukka Group*, a profile of contemporary African artists produced for the National Museum of African Art; and three videos for "Speak to My Heart: Communities of Faith and Contemporary African American Life," organized by the Anacostia Museum and Center for African American History and Culture.

Several broadcast projects also drew on solid research. "Jazz Smithsmian," the nationally broadcast radio series that features the Smithsonian Jazz Masterworks Orchestra and host Lena Horne, celebrated its sixth season by expanding to 13 programs. "Guitar: Electrified, Amplified, and Deified," produced for the National Museum of American History's Jerome and Dorothy Lemelson Center for the Study of Invention and Innovation and aired nationwide on public radio, traced the musical impact of the electric guitar.

Smithsonian Contributions and Studies Series Program

In scholarly communities, it is firmly held that individual research has little benefit to society unless it is published. This fundamental principle was wisely reflected in the Institution's original mandate not only to increase knowledge but, equally important, to diffuse it.

The Smithsonian's first Secretary emphasized publication as a means of diffusing knowledge. In his formal plan for the Institution, Joseph Henry proposed to "publish a series of reports, giving an account of the new discoveries in science, and of the changes made from year to year in all branches of knowledge."

This commitment to publishing has been honored through the years in the publication of thousands of titles issued in various serial publications under the Smithsonian imprint, beginning with Smithsonian Contributions to Knowledge in 1848 and continuing today with the nine monograph series published by the Smithsonian Contributions and Studies Series Program.

Highly regarded in this country and around the world, the nine series include reports on the results of scientific, technical, and historical research conducted by Smithsonian staff, as well as reports on the Institution's collections. This program is one of the few avenues in which Smithsonian researchers and their collaborating colleagues can publish large monographs and major revisionary works, which are often profusely illustrated. Most of these works are too large to be considered by journals, which typically publish short articles. The nine series are Anthropology, Botany, Earth Sciences, Marine Sciences, Paleobiology, Zoology, Folklife Studies, Air and Space, and History and Technology. The publications in each series are distributed by mailing lists to libraries, research institutions, government agencies, and individual scholars throughout the world.

In addition to providing high-quality editorial assistance, the program's staff editors typeset and design the monographs and provide camera-ready pages to the printer. This year, the program published 18 monographs, including a *Thesaurus of Sporge Morphology* and a two-volume work on the *Systematics* and *Biogeography of Cephalopods*.

Smithsonian Magazine

For 2 million readers, Smithsonian magazine is a respected link to the multifaceted world of the Smithsonian. Articles about research in the sciences, the arts, and the humanities, both inside and outside the Institution, are regular features in the magazine. This year, readers learned about the Smithsonian Astrophysical Observatory's creation of an X-ray sensor for the new space telescope known as the Advanced X-ray Astrophysics Facility (later renamed the Chandra X-ray Observatory) and curator Wendy Wick Reaves' work on the National Portrait Gallery exhibition "Celebrity Caricature in America." Other articles focused on subjects as varied as freshwater mussels, the history of fountains, the causes of back pain, coral reefs, and objects from the California gold rush. Michael Kernan, who explores the Smithsonian in his column "Around the Mall and Beyond," took readers behind the scenes for, among other things, a look at collection storage and laboratories at the Museum Support Center, a visit to the archives of the National Museum of American History's Engineering and Industry Collection; a conversation with Richard Fiske, director of the Global Volcanism Program at the National Museum of Natural History; and a visit to the archives of the National Museum of American History's Engineering and Industry Collection.

Smithsonian Businesses

A Smithsonian Frog Lab, a piece of Art Nouveau glass, a CD-ROM on American art—each says something to the consumer about the Smithsonian's mission as a leading research and educational institution. In turn, merchandise like this—sold in museum shops, through the Smithsonian Catalogue, or in retail stores through licensing agreements—generates revenue that is critical to the Institution's financial base and benefits its many programs, including research.

This year, Smithsonian Museum Shop sales exceeded \$36 million, a 9 percent increase over fiscal year 1997. Exhibition-related shops remained popular, especially at the National Air and Space Museum, where "*Star Wars*: The Magic of Myth" inspired the most successful temporary shop ever. The "Jewels of Lalique" shop in the International Gallery featured glass jewelry and giftware from Lalique and an assortment of products that reflected René Lalique's influence in art and nature.

The Smithsonian Catalogue enjoyed record sales of nearly \$35 million, a 10 percent increase over last fiscal year. In April, the Catalogue opened its new 125,000-square-foot fulfillment center near Dulles Airport in Chantilly, Virginia. Sales resulting from the mailing of 18 million catalogues last year overwhelmed the capacity of the previous, much smaller, location. With the move, the Catalogue plans to increase the number of packages shipped annually from 442,000 to 740,000.

The new facility is home to the Catalogue's call center, as well as purchasing, accounting, human resources, information systems, shipping, receiving, and inventory control operations. The large inventory of holiday ornaments, neckties, furniture, and other items inspired by Smithsonian collections is received and processed there and then shipped to customers around the world.

Licensing agreements also help fund research initiatives. In 1998, more than 65 percent of the available royalties revenue went to collection or programmatic endeavors, including research. As a result of the revenue-sharing system, for example, the Smithsonian Institution Libraries supplemented its General Support Endowment, which addresses the Libraries' needs and strengthens its capacity as an accessible research resource.

Some of the children's retail products developed by licensees reflect the Smithsonian's position as a leading research institution. With the Smithsonian Anatomy Lab and the Smithsonian Frog Lab, for example, young scientists explore anatomical systems and their interaction with their environments. The labs, sold in stores throughout North America, were created by Product Development and Licensing and Natural Science Industries in conjunction with the National Museum of Natural History's Department of Anthropology and the National Zoological Park's Department of Pathology.

Office of Public Affairs

This year, Director of Communications David J. Umansky and staff in the Office of Public Affairs (OPA) began implementing the Secretary's new visual identity program, designed by Ivan Chermayeff of Chermayeff & Geismar in New York City. The foundation of the program is a new logo, used with a sunburst symbol, that links the Smithsonian name with each museum, research institute, and office.

A major effort in implementing the visual identity was the preparation, printing, and distribution of the *Smithsonian Design Guidelines*, which governs use of the logo by staff and outside designers and printers. By the end of the fiscal year, the new identity was in place on many Smithsonian products, including stationery, Web sites, brochures, and reports.

A public service ad campaign put the Smithsonian in the public eye this year. The ad featured Larry Fuente's colorful *Game Fish*, from the Renwick Gallery's collection, with the line "Ever wonder who decides what the Smithsonian keeps?" It ran in *TV Guide, Latina,* the *New Yorker, Elle Decor,* and other magazines in free space provided to nonprofit organizations such as the Smithsonian. The ad received the Addy 98 Citation of Excellence from the Advertising Club of Washington, D.C.

Extensive media coverage followed the announcement of a three-year conservation project for the Star-Spangled Banner. The project is part of the White House Millennium Council's Save America's Treasures initiative, launched at the National Museum of American History on July 13 by President Bill Clinton and First Lady Hillary Rodham Clinton. OPA handled all media for the event and videotaped the ceremony.

OPA produced a 16-minute video for television news producers with exterior views of the museums and the National Mall, as well as shots of famous artifacts, including the Star-Spangled Banner. The staff also developed and produced a seven-minute film about education at the Smithsonian to be used by the Office of Membership and Development and other offices.

Two brochures in OPA's Resources series were updated this year: Native American Resources at the Smithsonian and African and African American Resources at the Smithsonian. The brochures are intended for teachers, students, and researchers interested in exploring Smithsonian collections, databases, publications, and other resources.

OPA also reestablished a full-time staff position this year to publicize and promote research at the Institution.

A Unified Visual Identity for the Smithsonian

The Smithsonian's first logo, in 1847, was James Smithson's profile. Symbols of enlightenment followed: a globe and torches of knowledge in the late nineteenth century and then, in 1966, the sunburst. Over the years, the museums, research institutes, and offices developed their own visual identities. After the 150th anniversary celebration and looking toward the new century, Secretary I. Michael Heyman felt the time was right to create a unified visual identity for the Institution. It was clear, he wrote in *Smithsonian* magazine, that "knowing who we are and being able to communicate that identity clearly and confidently to the public is best achieved in a single graphic representing both our sum and our parts."

The choice was the sunburst, linking the Smithsonian's history with its future. Chermayeff & Geismar, Inc., of New York designed the updated sunburst and logotype and created design guidelines to help implement the new visual identity program throughout the Institution.

Building a strong corporate identity is standard practice in the business world. For the Smithsonian, the challenges are similar. "If we are to be successful in attracting the support we need, now and into the next century, to sustain our multiple departments, activities, and service to our audiences," the Secretary wrote, "the Smithsonian must express those needs with one voice, with one image."

As the sunburst logo continues to appear on stationery, Web sites, publications, and product packaging, a stronger public image of a multifaceted institution dedicated to knowledge is emerging.

Visitor Information and Associates' Reception Center

The Visitor Information and Associates' Reception Center (VIARC) supports both public access to Smithsonian research and the work of the Institution's scholars and scientists. This year, 5,684 volunteers contributed 495,541 hours of service as docents, volunteer information specialists, and staff assistants behind the scenes, as well as in other volunteer activities that help the Smithsonian fulfill its mission.

An important example of VIARC's contributions is the Behind-the-Scenes Volunteer Program, which places volunteers as research assistants to staff on subjects as varied as the Smithsonian itself. VIARC also administers the Public Inquiry Mail and Telephone Information Service, which provides a central point for public contact about the Institution's work. Collectively, mail and phone inquiries number 400,000 annually, many of which are specific to the Institution's research activities.

Hundreds of thousands of visitors are exploring the Institution's research resources online through the electronic "Encyclopedia Smithsonian" (http://www.si.edu/resource/faq/ start.htm), developed and maintained by VIARC on the Smithsonian Web site. "Encyclopedia Smithsonian" also presents fact sheets and recommended reading lists prepared by the Public Inquiry Mail Service in cooperation with curatorial and research divisions.

Research Volunteers

Working with museum and research institute staff on everything from aviation history to threatened plants of Latin America, volunteers in the Visitor Information and Associates' Reception Center's Behind-the-Scenes Volunteer Program actively contribute to the Smithsonian's research efforts. At the National Portrait Gallery, the range of volunteer research projects illustrates just how valuable volunteer participation can be.

In the Painting and Sculpture Department, Philippe Newton, a retired engineering executive and a painter, has spent the past four years doing research for assistant curator Brandon Fortune in preparation for the exhibition "Franklin and His Friends: Portraying the Man of Science in Eighteenth-Century America," which opens in April 1999. "He has researched everything from the transits of Venus to bee keeping," Fortune says, even taking time during a personal trip to London to study some 18th-century manuscripts at the Natural History Museum.

For an exhibition of portraits by photographer Hans Namuth, also opening in April, volunteer Christopher Saks searched the National Archives, locating information that other researchers had not found. "He deserves a lot of credit for his diligence and perseverance, and especially for his skill at using the Archives," says Carolyn Carr, exhibition curator and the gallery's deputy director.

Elsewhere in the Portrait Gallery, Mary Skow and Joseph Phillips volunteer with the Charles Willson Peale Papers project. Their research runs the gamut from tracking down basic biographical information to more complex activities. They summarize and transcribe manuscript letters of Peale family members, for example, and then research specific aspects of the letters' contents. For the Catalog of American Portraits, Sylvia Lee is involved in a variety of tasks, from verifying information about portraits in public and private collections, to data entry, to answering research requests.

Volunteers working on research-related projects are among the 1,240 behind-the-scenes volunteers who contributed 176,128 hours of their time to the Smithsonian during fiscal year 1998.

Office of Government Relations

The Office of Government Relations, with Donald L. Hardy as its new director, oversaw a successful legislative agenda to enact personnel protections for Smithsonian employees and secure funding to update and expand the Institution's transportation collections, exhibitions, and public programming. Supporting the Smithsonian's priority to make its collections and programs more accessible to the public, Government Relations staff coordinated discussions, demonstrations, and tours for members of Congress and their staffs. The goal was to enlist their support for making the Smithsonian the nation's virtual museum and research complex.

In collaboration with educators and with Smithsonian museums, research institutes, and offices, the Office of Government Relations placed special emphasis on bringing Smithsonian resources to the classroom.

Operations

Those involved in the Smithsonian's research activities on the National Mall and around the world depend on the centralized services provided by Washington-based finance, administration, facilities, and information technology staff. This year was no exception, as offices in the administrative area continued to provide a reliable, effective support system for their colleagues throughout the Institution.

A number of activities recognized the Smithsonian's dedicated staff. The annual Unsung Heroes awards, coordinated by the Ombudsman, honored employees nominated by their colleagues for their exemplary service. The Office of Equal Employment and Minority Affairs presented the fourth annual Excellence in Equal Opportunity awards to four employees for their accomplishments in making equal opportunity a reality. The Office of Human Resources introduced open houses for Smithsonian employees who work outside Washington, beginning with an event in New York City at the National Museum of the American Indian.

Two major construction projects were completed this year: the National Museum of the American Indian's (NMAI's) new Cultural Resources Center in Suitland, Maryland, and the renovation and expansion of the Cooper-Hewitt, National Design Museum. The 145,000-square-foot NMAI facility is a support center for the museum and its collection. It features a resource center, conservation laboratories, repatriation offices, indoor and outdoor ceremonial areas, and collection storage. Objects now stored in the museum's Research Branch in the Bronx, New York, will be moved to the center over the next five years. At the Cooper-Hewitt, a multiphase project to transform the museum's landmark structures into an accessible museum facility involved renovating three historic buildings, installing an upgraded climate control system, and creating the new Design Resource Center linked to the museum's historic Andrew Carnegie Mansion by the new Agnes Bourne Bridge Gallery.

Other renovation and expansion projects moved ahead this year throughout the Institution, coordinated by the Facilities division. They included the East and West Court projects at the National Museum of Natural History; plans for renovation of the historic U.S. Patent Office Building, home of the National Museum of American Art and the National Portrait Gallery; the renovation of the National Air and Space Museum and planning for the museum's Dulles Center; and the design of the National Museum of the American Indian's Mall museum. Ground was broken for a major research laboratory for the Smithsonian Marine Station in Fort Pierce, Florida.

Several offices analyzed and improved the efficiency of systems that serve the entire Smithsonian. The Finance division, for example, led an Institution-wide team to study indirect cost issues, resulting in a 50 percent reduction in the indirect cost rate used in financial planning and management. The division also initiated several projects to improve financial systems, including a new time-and-attendance data entry system and more flexible software for developing and issuing financial reports. The Office of Planning, Management, and Budget continues to develop and refine its automated system for improving resource planning and management. The office has also developed an integrated electronic budget management database.

Technical assistance from the Office of Information Technology (OIT) helps the Smithsonian keep pace with rapid developments in information and communication technology. This year, for example, OIT advised Smithsonian art museums in the selection and installation of a new collections information system known as The Museum System (TMS). With the Office of the Provost, OIT is designing a system to provide searchable public access to collections information from the museums, the Smithsonian Institution Libraries, and the Smithsonian Institution Archives.

Report of the Board of Regents

Secretary Heyman and the Regents' committees contributed substantially to the Board of Regents' accomplishments at its three meetings on January 26, May II, and September 14, 1998. At the September meeting, the board voted to designate Esteban E. Torres as a Regent Emeritus, with all the rights and responsibilities thereof, effective upon his retirement from the U.S. House of Representatives.

The Regents continued their practice of meeting as a Committee of the Whole on the afternoons preceding each meeting. In these sessions, they reviewed selected museum operations and advisory board activities, consulting with the directors and board representatives of the Freer and Sackler Galleries, the National Museum of the American Indian, and the National Museum of American History. In addition, the Regents discussed in depth such issues as Smithsonian capital campaign planning, Smithsonian business initiatives, and strategies for fulfilling facilities needs. Out of these discussions, the Regents authorized undertaking a national fund-raising campaign, establishing a special business organization within the Smithsonian, and appointing an ad hoc Committee on Facilities.

The Audit and Review Committee met three times during the year and continued to exercise its primary responsibility for oversight of the Smithsonian's financial operations. The committee discussed KPMG Peat Marwick's report on fiscal year 1997 transactions and considered the Smithsonian Inspector General's semiannual reports to Congress. The committee also considered a study on enhancing business activities, reviewed cash management and pledge collection policies and procedures, and discussed both Year 2000 computer problems and the Regents' policy on the rotation of independent auditors. The Investment Policy Committee also met three times. The committee monitored the investment managers' development of the Institution's endowment, rebalanced the portfolio, and evaluated the managers' performance. In addition, the committee recommended a total-return payout rate for fiscal year 1999 and proposed a plan for meeting the financial needs of the first two years of the Smithsonian's capital campaign out of endowment funds. The Regents appointed Smithsonian National Board vice-chair Frank A. Weil to the Investment Policy Committee, and the committee was saddened by the passing of its member Thomas Keresey.

At each of their meetings, the Regents considered comprehensive financial reports. They approved the trust and federal expenditures for fiscal year 1999 and the request to the Office of Management and Budget for fiscal year 2000 appropriations.

The Regents also discussed how exhibition topics are selected and developed at the Smithsonian and were briefed on the Institution's highly respected security operations that safeguard collections and people.

Through the Secretary's reports at their meetings, the Regents were informed about the design and implementation of a uniform visual identity for the Smithsonian. In accordance with the new institutional logo, the Regents adopted a new seal effective August 10, 1998. The Secretary's reports also informed the Regents about the Star-Spangled Banner Preservation Project and the difficulties emanating from the contract for architectural services for the National Museum of the American Indian. Under the Secretary's initiative, congressional members of the board supported legislation to gain coverage for the Institution under Title VII of the Civil Rights Act, the Rehabilitation Act, and the Age Discrimination Act. The congressional Regents also sought statutory authority for the Board of Regents to enlarge the membership of its advisory boards for the purpose of increasing their ability to raise support for the Smithsonian's museums.

Among their many actions, the Regents affirmed their intention to construct the National Air and Space Museum Dulles Center as soon as possible, approved the acquisition of land in support of Smithsonian research programs, and agreed to endow Smithsonian marine research out of the Seward Johnson Trust for Oceanography.

The Regents established two advisory bodies: the board of the National Air and Space Museum Dulles Center and an advisory board for the Anacostia Museum and Center for African American History and Culture. In addition, the Regents approved bylaws for the Visiting Committees of the Arthur M. Sackler Gallery and the Freer Gallery of Art and bylaws amendments for the Smithsonian National Board.

The Board of Regents made the following appointments and reappointments to Smithsonian advisory boards: Carolyn S. Blount, Sylvia A. Earle, Jane B. Eisner, Patricia Frost, Nely Galan, Bert Getz, Paul Hertelendy, Dona Kendall, Marie L. Knowles, Marc E. Leland, John D. Macomber, Elizabeth S. MacMillan, Holly Madigan, Michael McBride, Kenneth B. Miller, John M. Nelson, Joan Noto, Clemmie Dixon Spangler, and Kelso Sutton to the Smithsonian National Board; Rita Fraad, William G. Kerr, Henry Luce III, Peter Lunder, Richard J. Schwartz, Ferdinand T. Stent, and Wesley S. Williams Jr. to the Commission of the National Museum of American Art; David C. Driskell, Frances Humphrey Howard, and Robert H. Nooter to the Commission of the National Museum of African Art; Todd Axelrod, Richard Carrion, Thad Cochran, Jerry Florence, Dorothy Lemelson, and James Mellor to the National Museum of American History Board; Kenneth E. Behring, William H. Frist, Arthur Gray Jr., John S. Hendricks, Stanley Ikenberry, Jean Lane, Robert Malort, Jeffery W. Meyer, Nancy R. Morin, David Pilbeam, Paul G. Risser, Alan Spoon, and Milton H. Ward to the National Museum of Natural History Board; James Block, Ellsworth Brown, Eloise Cobell, Jorge Flores Ochoa, Catherine Fowler, Doug George, Luci Tapahonso, Bernie Whitebear, and Phyllis Young to the Board of Trustees of the National Museum of the American Indian; Robert A. Bartlett, Edith A. Cecil, Jeannine Smith Clark, Elizabeth Frazier, Laura Howell, Alberta Kelly, William Ramsey, Jeffrey R. Short Jr., and Henry Strong to the Advisory Board of the National Zoological Park; Thomas Alexander and Henry Hartsfield Jr. to the Council of Philatelists of the National Postal Museum; Charlotte N. Castle, Shirley M. Gifford, Rosemary Livingston Ripley, and Frank A. Weil to the Smithsonian Institution Libraries Board; Agnes Bourne,

Anne Ehrenkranz, Barbara Riley Levin, Richard Meier, Enid Morse (Honorary Life Trustee), and Harry G. Robinson III to the Cooper-Hewitt, National Design Museum Board of Trustees; James R. Cargill II, Dollie A. Cole, Morton Funger, Robert James, Walter H. Leimert Jr., Adrienne Bevis Mars, Thomas G. Morr, Donald B. Rice, Clive Runnells, John Safer, Carrington Williams, and Daniel W. Yohannes to the National Air and Space Museum Dulles Center National Board; Kurt Gitter and Elizabeth ten Groetenhuis to the Freer Gallery of Art Visiting Committee; and Robert Feinberg to the Arthur M. Sackler Gallery Visiting Committee.

Staff Changes

Government Relations Director M. John Berry left the Smithsonian during fiscal year 1998 to become assistant secretary for management and budget at the U.S. Department of the Interior. In January, after an extensive search, the Institution was pleased to welcome Donald L. Hardy as director of government relations. Hardy had served as chief of staff to Senator Alan K. Simpson (R-Wyoming) and became well acquainted with the Institution during Senator Simpson's tenure as a Smithsonian Regent.

In August, Refugio I. ("Will") Rochín, former director of the Julian Samora Research Institute at Michigan State University, became the founding director of the Smithsonian Center for Latino Initiatives. Earlier in the year, counselor to the Provost Franklin S. Odo established the Program for Asian Pacific American Studies.

Ross B. Simons was named director of the Smithsonian Environmental Research Center in addition to his duties as associate director for research and collections at the National Museum of Natural History. Michael Sofield was appointed director of the Office of Physical Plant, and Rex Ellis left his position as director of the Center for Museum Studies to become chairman of the Division of Cultural History in the National Museum of American History. Regrettably, Leslie Casson Stevens resigned from her position as comptroller to pursue other interests, and Daniel H. Goodwin retired from the directorship of Smithsonian Press/Smithsonian Productions.

The Smithsonian was supported throughout the year by a loyal and dedicated staff. While some may go and will be missed, the Institution has always been fortunate to attract highly talented individuals to serve in their stead. The result is an ever-productive group of professionals, aided in almost every endeavor by spirited volunteers and guided by increasingly involved members of the advisory boards and the Board of Regents.

Chronology

Fall and Summer 1997

■ *Rediscovery* Unraveling a tangle of falsified scientific data from the early twentieth century, Natural History ornithologist Dr. Pamela Rasmussen and two colleagues found and videotaped a pair of Indian forest owlets from a species long believed extinct. Rasmussen videotaped that encounter—the first between Athene blewitti and scientists in 113 years—and later returned to India to record its distinctive call. Rasmussen and her colleagues have helped launch a project with the Bombay Natural History Society to survey and study the owlet.

October

Publication An umbrella case statement for the Institution's first-ever national capital campaign was drafted and distributed for review by the Office of the Executive Director for Development to board members, museum directors, and SI development professionals.

October

 Meeting The Office of Membership and Development welcomed the Smithsonian National Board to Washington, D.C., for the board's annual meeting. The board also held its spring meeting April 1998.

October

• Collections System With the five other Smithsonian art museums, the National Museum of African Art acquired a collections information system. The software, known as The Museum System, allows staff to manage transactions and information and, ultimately, to give scholars and the public electronic access to the collection.

October

• Exhibition "To Honor and Comfort: Native Quilting Traditions" opened at the George Gustav Heye Center on October 19. Presenting 40 North American and Hawaiian quilts together for the first time, the exhibition illustrated the similarities and differences in the history and meaning of quilts within diverse Native communities.

October

• Special Event The Office of Equal Employment and Minority Affairs orchestrated the fourth annual Secretary's Award Program for Excellence in Equal Opportunity in collaboration with the Secretary's Office and the SI Equal Opportunity Advisory Council. Several outstanding managers and employees were recognized for exceptional contributions to the Smithsonian's Equal Opportunity goals and honored before their peers and hundreds of Smithsonian employees.

October

• Construction The Office of Contracting negotiated and awarded a contract to William V. Walsh to replace the roof of the Patent Office Building. (NMAA/NPG) This is one of the early contracts for the total restoration of the Patent Office Building.

October

■ Exhibition/Sponsorship "The Art of Jack Delano" premiered—to critical accolades—in October 1997 at the Rafael Carrion Pacheco Exhibit Hall in the Banco Popular headquarters in Old San Juan. Banco Popular, also the exhibition national corporate sponsor, made possible the exhibition's mainland debut at the Smithsonian International Gallery by sponsoring the exhibition's opening reception. Following its showing in Washington, the exhibition traveled to the Museo del Barrio in New York City.

October I

• Exhibit Opens The Zoo's refurbished Great Cats exhibit opened October I. Second-graders from Alexandria's Bucknell School cut the ribbon. A grant from Save the Tiger Fund paid in part for the renovations.

October I

• *Electronic Journals* The Smithsonian Institution Libraries brought 177 full-text journals online and made them available to its users in the Institution through an agreement between Academic Publishers and the Chesapeake Information and Research Library Alliance, of which the Libraries is a founding member.

October 1

• Curators Installed Leslie K. Overstreet assumed the position of Smithsonian Institution Libraries' Curator of Natural History Rare Books scheduled to open in 2001. Ms. Overstreet is involved in the planning and development of the new Natural History Rare Book Library. Mrs. Jefferson Patterson contributed funds to support this position for the first three years. In June 1998 Ron Brashear became the Curator of Rare Books in the History of Science and Technology. Mr. Brashear serves researchers working in the Dibner Library of the History of Science and Technology. Both Ms. Overstreet and Mr. Brashear are in the Libraries' Special Collections Department.

October 7

Public Program "Smithsonian Honors Queen of Salsa"—Celia Cruz, the undisputed Queen of Salsa, received the National Museum of American History Programa Latino Lifetime Achievement Award for Excellence in Music. Ms. Cruz donated one of her worldrenowned costumes to the museum and during a public oral history session, reflected upon her career, the changing nature of the Latin music business, and the role of women in the Latin music business.

October 7

Exhibition The National Postal Museum opened the "As Precious As Gold" exhibition examining the gold rush and the struggle of the Post Office Department to ensure that stampeders received adequate mail service.

October 9

• *Exhibition* "Mayhem by Mail," an exhibition that explores the three categories of crimes investigated by the U.S. Postal Inspection Service, the nation's oldest consumer protection agency, opened at the National Postal Museum.

October 9

 Exhibition and Programs Introducing biblical scenes, nudes, portraits, allegories, and landscapes by a midtwentieth-century British artist (1891-1959) whose paintings are highly celebrated in England but little exhibited or studied abroad, "Stanley Spencer: An English Vision" opened at the Hirshhorn Museum and Sculpture Garden. Coorganized by Hirshhorn Director James T. Demetrion and Andrea Rose of the British Council in London, the show generated a Sunday-afternoon lecture series (October 12-November 16) exploring Spencer's work from four distinct perspectives: an overview by Director Duncan Robinson of the Fitzwilliam Museum in Cambridge; the artist's milieu by curator Judith Collins of the Tate Gallery in London; his religious themes by Professor Nicholas P. Woltersdorff of the Yale University Divinity School; and his impact on later artists by Director Hugh Davies of the Museum of Contemporary Art in San Diego. British writer Fiona MacCarthy contributed an essay to a fully illustrated 195-page catalog, and the show received major funding support from Howard and Roberta Ahmanson, Fieldstead and Company. After closing in Washington on January 11, 1998, the exhibition traveled to the Centro Cultural/Arte Contemporáneo in Mexico City (February 19-May 10, 1998) and the California Palace of the Legion of Honor, Fine Arts Museums of San Francisco (June 8-September 6, 1998).

October 11-December 7

• Exhibition "Wade in the Water: African American Sacred Music Traditions"—Collaboratively developed between the National Museum of American History and the Smithsonian Institution Traveling Exhibit Service, "Wade in the Water" examined how the legacy of music sung during slavery and the development of the worship practices of America's black churches during the nineteenth and twentieth centuries has contributed to the African American heritage and to making this music a worldwide cultural force.

October 14

■ Public Program Justice Sandra Day O'Connor, the first woman appointed to the U.S. Supreme Court, spoke about her life, personal philosophy, and hoped-for legacy in an interview program conducted by veteran Washington broadcast journalist Maureen Bunyan and presented by The Smithsonian Associates' Resident Associate Program.

October 18

• Special Event The Office of Membership and Development organized the Smithsonian Benefactors Circle Dinner to recognize and honor those individuals whose gifts, over their lifetimes, have preserved the traditions of the Smithsonian and furthered its vision. At the October 1997 dinner, Herbert and Evelyn Axelrod received the Circle's annual award for their support including endowment gifts for a revolving chair in the Department of Fishes at the Natural History Museum, and for the Chamber Music Program of the American History Museum's Cultural History Department.

October 19

• Exhibition and Publication The SITES exhibition "Seeing Jazz" premiered at the International Gallery. The book, also entitled Seeing Jazz, published for the premiere, complemented and expanded on the themes of the exhibition, including more artworks and literary selections. As part of its national tour, select works from the exhibition were shown at The Jazz Gallery in New York City on February 22, 1998. The New York City Host Committee brought the exhibition there as part of city-planned events for the Grammy Awards. Support for the exhibition was provided by America's Jazz Heritage, A Partnership of the Leila-Wallace-Reader's Digest Fund and the Smithsonian Institution.

October 20-23

• Collecting The Archives of American Art held a fourday meeting of all regional collectors from around the country at the Washington Center. The meeting provided an opportunity for Washington staff to meet and discuss a wide variety of Archives' issues with collectors from New York, New England, the Southeast, and the West Coast.

October 22-April 26

Exhibition The National Museum of African Art opened the Sylvia H. Williams Gallery, the first permanent gallery to be devoted to modern African art in a U.S. museum, reflecting the museum's expanded mission to collection and display of modern African art. The gallery's inaugural exhibition, "The Poetics of Line: Seven Artists of the Nsukka Group," featured 64 paintings, drawings, prints, wood sculptures, and mixedmedia works by seven Nigerian artists connected to the Department of Fine and Applied Arts at the University of Nigeria. In conjunction with the exhibition, the museum organized a symposium with the seven featured artists and leading scholars from Africa, Europe, and the United States who explored Nsukka art and related the artists' work to the larger contemporary art scene in Nigeria and throughout the world.

October 23-May 12

• Exhibition "Oil from the Arctic: Building the Trans-Alaska Pipeline" at the National Museum of American History examined the engineering, economic, cultural, and environmental issues involved in building the 800mile-long Trans-Alaska Pipeline. A 21-foot section of the pipeline was placed on display.

October 23

• Outreach The National Science Resources Center participated in the 1998 Smithsonian Office of Education's Teachers Night. Staff handed out thousands of information packets about the curriculum materials and outreach and leadership developments programs of the National Science Resources Center.

October 23

• Training Seminar The Smithsonian Accessibility Program presented a training session titled "Service Animals Welcome at the Smithsonian." The session was offered to accessibility liaisons, Office of Protection Services staff, and all staff responsible for working with the public. Presenting the session were speakers from the Delta Society National Service Dog Center and the U.S. Department of Justice's Disability Rights Section.

October 24

■ Public Program The Smithsonian Associates, in association with the Thelonious Monk Institute of Jazz, presented the Thelonious Monk International Jazz Trumpet Competition. British musician Darren Barrett took first prize in the contest.

October 25

• Donation The National Zoo receives a \$32,400 donation from Enron Corp. to support Asian elephant research. The funds will support to Malaysian Elephant Satellite Tracking System, run jointly by the Conservation and Research Center and the Malaysian Wildlife Department.

October 26–January 31

• *Exhibit* "About Faces" at the National Museum of American History explored how the application of medical research to everyday life in the past 50 years has changed our perception and understanding of the way we look.

October 29

• Endowment Established The Smithsonian Institution Libraries established The Wineland Research Library Endowment in conjunction with the purchase of the Lloyd and Charlotte Wineland Collection of Native American and Western Exploration Literature. Income from this endowment will support projects, exhibitions and public outreach, and study and research in collections relating to the fields of Native American and Western Exploration literature. A reception was held to recognize the establishment of the endowment.

October 29

• Special Event The Smithsonian Associates awarded the James Smithson Bicentennial Medal to filmmaker George Lucas for his contributions to the advancement of the art of motion pictures.

November and May

• Acquisitions Several major acquisitions will be the focus of further research and future exhibitions. They include a selection of 14 sculptures from Central and East Africa and a rare Mbete reliquary figure from Gabon;

two fine Urhobo and Igbo figures from Nigeria; the artist's book *Emandulo*, *Re-Creation*, created in Johannesburg, South Africa; and a sculpture, *The Ancestors Converged Again*, by Ghanaian artist El Anatsui.

November

• Film Festival The National Museum of the American Indian presented its biennial Native American Film and Video Festival at the Heye Center. The festival offered free screenings of 70 films, videos, radio programs, and multimedia products by indigenous media makers from North America and Latin America.

November

Program The Center for Museum Studies, in collaboration with the Fundacion Antorchas and the University of Buenos Aires, concludes a professional development training project, based in Argentina, designed to ensure that the cultural patrimony of South American museums will not disappear as a result of neglect or lack of resources.

November 2

• Program The 1997 Mordes Lecture in Contemporary Art, made possible by Board of Trustees member Marvin Mordes of Baltimore and his wife, Elayne, featured the observations of *New York Times* art critic Roberta Smith, who titled her talk "On Becoming and Remaining a Critic." The annual Mordes lecture was one highlight in a year of stimulating public programs, including ongoing "First Friday," "Young at Art," "Young Artists," and "New Voices" talks and programs, writers' workshops, and the popular independent film series. With the arrival in June of Linda Powell, formerly of the Kimbell Museum in Fort Worth, Texas, as Education Program Director, the Hirshhorn looked ahead to further expansion and innovation in its public programs.

November 3–14

International Workshop The Smithsonian Center for Materials Research and Education staff organized and conducted a two-week course on "Preservation of Paper-Based Collections and Archives," at the Museo de Bellas Artes in Caracas, Venezuela. Financially supported by the U.S. Information Agency and the SI-150 Committee, and organized in collaboration with the Galeria de Arte Nacional and the Bibliotheca Nacional in Caracas, the course attracted 17 Venezuelan museum professionals.

November 6

• International Technical Assistance The Smithsonian Accessibility Program presented information on the application of Universal Design principles in museums to a group of accessibility professionals from Yamaguchi Prefecture in Japan.

November 7–July 12

• Exhibition "George C. Marshall: Soldier of Peace" was on view at the National Portrait Gallery. The show was organized to mark the 50th anniversary of the Marshall Plan to restore stability and prosperity to Europe. It traced the career of George Marshall from his childhood and entry into the military to his distinguished service as Harry Truman's Secretary of State and following its viewing at the Gallery, traveled to the George C. Marshall Foundation in Lexington, Virginia. Curator for the show was historian James G. Barber.

November 7

• Exhibition "Vida y Costumbres de un Pueblo Precolombino" ("Life and Customs of a Pre-Columbian Village"), an exhibit produced by the Tropical Research Institute with the collaboration of Panama's Institute of Culture, opened at the Museo de la Nacionalidad, in la Villa de Los Santos, Panama.

November 8

• *Gift* Californian businessman and philanthropist Kenneth E. Behring and his family made a gift of \$20 million to the National Museum of Natural History, at that time the largest donation made to a Smithsonian museum. The Behring gift will enable the museum to update its Rotunda and Hall of Mammals and create two new programs to promote the understanding of mammals and how they live in the wild.

November 11

• Exhibition "Blue Guitars"—An exhibit opens at the National Museum of American History of 22 blue archtop guitars selected from the collection of Scott Chinery. Each guitar was commissioned by the collector who challenged the world's leading luthiers to expand their limits, become more innovative, and move in new directions in constructing guitars.

November 12

• Special Event The Smithsonian Associates awarded the James Smithson Bicentennial Medal to John Hope Franklin in recognition of his outstanding achievements as a historian of American life.

November 13

Publications Awards The Office of Public Affairs was presented the following awards in the National Association of Government Communicators' Blue Pencil competition for 1997: First Place for the quarterly newsletter Smithsonian Institution Research Reports; First Place (tied) for The Torch, the employee newspaper; and Third Place for the annual report, Smithsonian Year 1996.

November 18

• Exhibition The Tropical Research Institute's exhibition "Parting the Green Curtain: The Evolution of Tropical Biology in Panama" returned to Panama to be displayed at the Smithsonian's Marine Exhibition Center.

November 20

• Exhibition "Directions—Toba Khedoori" opened at the Hirshhorn Museum and Sculpture Garden, presenting three floor-to-ceiling wax-covered paintings on paper by this Los Angeles—based Australian-born artist (b. 1964). Organized by Associate Curator Olga M. Viso, who discussed Khedoori's work in a gallery talk on December 4, the show revealed the artist's dexterous approach to "phantom figuration," as one critic has coined a current trend, in enormous floating images of a rooftop railing, a cutaway view of a house, and a section of empty theater seats.

December

■ Endoument Herbert and Evelyn Axelrod made a gift of \$1.5 million to the National Museum of Natural History to create a chair of ichthyology, the first endowed chair in the Smithsonian's 102-year history. Curator of fishes Dr. Victor Springer, whose research has been a continuing interest of the Axelrods', will hold the chair for the initial three-year term.

December

• New Wing Construction began on the new Discovery Center of the National Museum of Natural History. Designed to complement the museum's original Beaux Arts architecture and tucked into its West Court, the center will add 80,000 square feet of public space to the Natural History Building and will house a 600-seat cafe and Washington's only 3D IMAX theater.

December

• NZP Medal Presentation Director Michael Robinson presented the NZP Medal for Outstanding Service to Biological Sciences and Conservation to Knut Schmidt-Nielsen. The award was made in recognition of Schmidt-Nielsen's distinguished career in biology and his untiring quest for answers to complex questions of animal physiology.

December

• Special Event Smithsonian Institution Archives and its Joseph Henry Papers Project (JHPP) commemorate the 200th anniversary of the birth of the Smithsonian's first Secretary, Joseph Henry, with a series of articles, interviews, presentations and media events. The celebration includes the launching of the project's home page on SIA's Web site on October 10, 1997.

December

• Award and Giving Fund The Smithsonian Libraries received \$47,600 from the Atherton Seidell Endowment Fund for a digital camera and other computer equipment necessary to produce high-resolution digital scans. The Libraries will establish a digital imaging center where important rare books will be scanned and made available to large audience on the Internet. The same month, the Smithsonian Libraries' Cooper-Hewitt, National Design Museum Branch benefitted more than \$20,000 from the Parsons School of Design Graduate Program Annual Giving Fund, which allocates 25 percent of the total received to the branch library.

December

• Annual Audit The Smithsonian received an unqualified opinion on its audited statements.

December

• Latino Outreach The Office of Public Affairs ran the first of four print advertising campaigns for the year in a number of Washington, D.C., Spanish-language newspapers. The campaigns were geared toward the December holidays, spring events, summer events around the time of the Smithsonian Folklife Festival, and Hispanic Heritage Month. The Institution-wide advertisements highlight exhibits and activities of special interest to the community.

December

• Construction Smithsonian Marine Station—The Office of Contracting negotiated and awarded a contract to Associated Construction for the building of the laboratory/office facility at Fort Pierce, Florida. This is the beginning building of a research campus for Marine Biology.

December

• Food Service Agreements The Office of Contracting negotiated and awarded food service agreements for the Smithsonian Mall to Sodexho Marriott and Compass Group USA, Inc. These agreements produce about one quarter of the trust fund revenues for the Smithsonian Business Activities.

December

• Publication The Office of Equal Employment and Minority Affairs published and distributed the fifteenth Smithsonian Institution Equal Opportunity Report in response to a 1989 request from the House and Senate Committees on Appropriations. This report described the composition of the work force in terms of gender, racial/ethnic identity, grade, and occupational categories. It also contains a summary of the Institution's efforts to ensure that programs reflect the nation's diversity and pluralism. It covered the period September 1997 to September 1998.

December and March

• Consignment Agreements The Office of Contracting negotiated and awarded Smithsonian-wide consignment agreements to Christie's and Sotheby's auction houses for auction sales of deaccessioned works of art. These agreements provided a simple standard for the sale of art and a discounted fee for services.

December 1

• Exhibition The Tropical Research Institute traveling exhibition "Our Reefs: Caribbean Connections" opened in Jamaica, where it was on view at three sites: Negril, Montego Bay, and Kingston, as part of its travels through the Caribbean area.

December 4

• Training Seminar The Smithsonian Accessibility Program presented a training session titled "An Accessibility Critique of NASM's 'How Things Fly'" exhibition. The session was offered to accessibility liaisons, exhibition designers, and exhibit team members, as well as all staff responsible for working with the public. Presenting the session was a group of people with disabilities who critiqued the exhibition from both a personal and consumer advocacy perspective.

December 8–12

• Course The course "Preserving Natural History Collections" was an introduction to an integrated approach to managing and preserving natural history collections, including risk assessment, categorizing collection specimens, and collection profiling applied to collections-care strategic development, and sponsored by the Smithsonian Center for Materials Research and Education. The course included a full-scale exercise using Smithsonian Institution collections.

December 10

• Ceremony In a ceremony on December 10, National Air and Space Museum Director Donald D. Engen accepted into the collection a backup "Iridium" spacecraft. This is one of the few "production" models in the collection, and represents achievements in space communications and applications for the public.

December 15

 Meeting The Office of Membership and Development and the Office of the Secretary convened five meetings of the executive committee of the Smithsonian Washington Council. The Washington Council is chaired by Washington attorney and philanthropist R. Robert Linowes. Four more meetings were held during the year, on January 28, 1998, April 14, June 9, and September 17. The group of Washington-area business and philanthropic leaders was formed to extend and deepen Smithsonian services to local residents.

January 1998

• Program The Center for Museum Studies initiates a collaboration with Montgomery Community College, Rockville, Maryland, to establish the Montgomery College Humanities Institute. The institute will host a wide range of scholarly and community-focused activities, including an annual faculty seminar led by a Smithsonian scholar-in-residence; museum-based faculty research fellowships; student internships at the Smithsonian; public lectures and symposia; and an enhanced humanities honors program.

January

• Construction The Office of Contracting negotiated and awarded a contract to Tompkins Builders for skylight window, wall replacement and miscellaneous work at the National Air and Space Museum. All the walls and skylights in the Museum will be replaced over 48 months at a cost of \$25 million. The museum will remain open throughout the entire construction period, and the building envelope will remain secure and watertight at all times.

January–March

• *Exhibition* Horticulture Services Division collaborated with the U.S. Botanical Gardens to mount the fourth annual orchid exhibition in the Ripley Center. The display of over 5,000 orchids attracted more visitors to the Quadrangle than any single previous exhibit.

January 5–9

• Collecting Dr. Liza Kirwin, Curator of Manuscripts for the Archives of American Art traveled to Tesuque, New Mexico (north of Santa Fe), to collect the papers of Chuck and Jan Rosenak. For the past two decades, the Rosenaks have devoted their energies to studying and collecting twentieth-century American folk art. Their papers consist of their research material gathered in the course of writing three books: Museum of American Folk Art Encyclopedia of Twentieth-Century American Folk Art and Artists (1991), The People Speak: Navajo Folk Art (1994), and Contemporary American Folk Art: A Collector's Guide (1996).

January 15–16

• Presentation In San Juan and Humacao, Puerto Rico, National Science Resources Center Executive Director Douglas Lapp and Deputy Director Sally Goetz Shuler presented workshops to government, business, and education leaders. They discussed science education reform and presented workshops on inquiry-centered science teaching.

January 17

• *Exhibition* "We Shall Overcome: Photographs from America's Civil Rights Era" began its national tour with a very successful opening at the National Museum of American History. The tour, which continues through the year 2004, includes stops in California, Georgia, New York, and Pennsylvania. The exhibition explores the role of several prominent African American photographers—Bob Adelman, Bob Fitch, Leonard Freed, Matt Heron, Charles Moore, and Gordon Parks in documenting one of the most decisive eras in American history. The 80 black-and-white photographs focus on key events and personalities in the civil rights era (1954–1968).

January 23

• Outreach The National Collections Program of the Smithsonian Institution Archives launches its home page, featuring guidelines, publications, and other resources of use to museums and collections managers.

January 26

Radio Advertising Campaign The first radio advertisement ran in the Office of Public Affairs' Black History Month campaign, one of three radio advertising campaigns this year aimed at local African American audiences, ages 25 to 45. Another campaign was run in the spring for spring break and a third in the summer for the Smithsonian Folklife Festival. The following stations were used in the three campaigns in different combinations: WHUR, WMMJ, WKYS, WPGC, WYCB, and WTOP.

January 26–31

 Meeting Seventy-five scholars from 15 countries gathered for the meetings of the International Byozoology Association held at the Tropical Research Institute's Earl S. Tupper Conference Center.

February

 Publication A strategic plan for implementing the capital campaign was drafted and distributed by the Office of the Executive Director for Development.

February

• Outreach In observance of Black History Month, the Archives of American Art inaugurated online access to the second, revised edition of its guide *The Papers of African American Artists* (1992). The guide includes photographs and other illustrations.

February

 Publication With the Australian Biological Resources Study and the Department of Environment, Canberra, the museum helped produce The Darwin Declaration, a blueprint for incorporating taxonomy into the goals of the International Convention on Biological Diversity. Although the discovery, description, naming, and classification of individual species has been well carried out for some groups, little is known about the taxonomy, biology, distribution, and genetics of the vast majority of plant and animal species. The Darwin Declaration explains the importance of collections-based research to understanding the environment and the threats it faces. The declaration also outlines actions to be taken to support taxonomic research. The International Convention on Biological Diversity was developed by leaders of key natural history museums and research institutions. policy makers, funders, and ecologists and conservationists, with major financial support from the Smithsonian, the MacArthur Foundation, the Global Environment Facility, and the U.S. Department of the Interior.

February

• Grant The Smithsonian Libraries was awarded a grant of \$3,780 by the Smithsonian Women's Committee to preserve nineteenth-century bindings on a collection of horticultural works. The grant provides money to clean the books and to purchase protective bindings for several hundred books.

February

• Web Site Redesign SITES launched its redesigned Web site: www.si.edu/SITES. The new design provides easy access to information. Visitors will find it easier to locate exhibitions within their regions by clicking on a map of the United States linked to tour information. The site also features more extensive educational resource and activity material based on current and past SITES' exhibitions. Materials include "Diversity Endangered," "The Good the Bad and the Cuddly," "Frank Lloyd Wright," "Jazz Age in Paris," "Moscow Treasures and Traditions" and "Tropical Rainforests." The inclusion of the new educational materials was made possible by grants from the Smithsonian Women's Committee and the Educational Outreach Fund.

February

• License Agreement The Office of Contracting negotiated and awarded an affinity credit card with Novus Services, Inc. This business arrangement was the continuation of financial support from Novus, which began, with the sponsorship of the 150th-anniversary "America's Smithsonian" traveling exhibition.

February-April

■ Public Program The Smithsonian Associates offered the second season of Radio Theatre—Live!, produced by the L.A. Theater Works and presented in collaboration with the Voice of America. The plays, *The Heirass, All My Sons,* and *Working,* were recorded in front of live audiences for subsequent broadcast across the United States on public radio and around the world on the Voice of America.

February, September

• Architecture/Engineering and Exhibit Design The Office of Contracting negotiated and awarded a contract to Polshek, Tobey & Davis to restart the National Museum of the American Indian Mall Museum design project. The office directed the project team for design and construction to continue the effort during litigation of the previous design contract. Also, the Office of Contracting awarded negotiated contracts to Howard-Revis Design, Staples & Charles, and Design Communications to design the exhibits for the Mall Museum. These exhibitions will showcase the Museum's collections on opening day 2002.

February 6-7

 Public Program "Between Slavery and Freedom: Free People of Color and the Coming of the Civil War"—An outgrowth of the African American Communities Project, begun at the National Museum of American History in 1981, "Berween Slavery and Freedom" was a landmark gathering of scholars and community representatives designed to analyze and synthesize new information about the experiences of free people of color in the antebellum South.

February 6-May 28

• Exhibition The Archives of American Art presented the exhibit "El Movimiento: Selections from the Tomás Ybarra-Frausto Research Material on Chicano Art" in the gallery space of the New York Regional Center. The archival display from the papers of Tomás Ybarra-Frausto illustrated the major phases of the Chicano art movement from its inception in the 1960s to the present.

February 10

• Presentation Tropical Research Institute scientist Nancy Knowlton gave a presentation on "Basic science: key to the management of the oceans" at "An Evening at the Smithsonian," an annual event organized by the Fundacion Smithsonian de Panama and held at STRI's Earl S. Tupper Conference Center.

February 12

 Professional Presentation The Coordinator of the Smithsonian Accessibility Program lectured on accessible design of museum-based security systems during the National Conference on Cultural Property Protection.

February 18

■ Public Program In an illustrated lecture presented by The Smithsonian Associates, embryologist Dr. Ian Wilmut of the Roslin Institute in Edinburgh, Scotland, discussed the background, controversy, and possible implications of his world-famous experiment: Dolly the sheep, the first adult mammal ever to be successfully cloned.

February 19

■ Exhibition and Programs "George Segal, A Retrospective: Sculptures, Paintings, Drawings," a four-decade retrospective honoring an American artist (b. 1924) whose evocative sculptures of everyday people in urban environments have become signature works of modern

art, opened at the Hirshhorn Museum and Sculpture Garden. The show, on tour from the Montreal Museum of Fine Arts in Canada, included such landmark works of the Pop Art era as Cinema, 1963, as well as singlefigure reliefs, boldly expressive paintings and pastels, and the original, mixed-media version of Depression Bread Line, 1991, recently cast in bronze for Washington's new Franklin Delano Roosevelt Memorial. As a barometer of Segal's popularity, his auditorium talk on March 9 was so popular that 200 people had to be turned away. In an unprecedented arrangement, the Washington Metropolitan Transit Authority donated advertising for the show in its subways and buses as a public service. After closing on May 17, 1998, the exhibition traveled to the Jewish Museum in New York and the Miami Art Museum in Florida.

February 23

 Benefit The Detroit Council of the Archives of American Art presented its annual black-tie gala, Lundi Gras XXXVIII, "An Evening of Elegance," on February 23, 1998. Traditionally held on the Monday preceding Mardi Gras, this is the longest-running fund-raising event for the Archives.

February 23-27

 Program The Center for Museum Studies collaborates with George Mason University and Historic Alexandria to offer a one-week workshop for small museums, "Introduction to Museum Management."

February 25

Award Smithsonian Folkways' six-CD recording Anthology of American Folk Music received Grammy Awards for best historical album and best album notes at the 40th Annual Grammy Awards Ceremony in New York City.

Spring

Professional Program The Smithsonian Associates' National Outreach program formally introduced the Smithsonian Institutes for Professionals. Geared to corporate audiences, the institutes include the Smithsonian Creativity Institute, which takes participants into Smithsonian collections, laboratories, and research facilities for customized hands-on workshops designed to introduce participants to new ways of seeing, thinking, and understanding; the Smithsonian Signature In-

stitute, which provides a unique behind-the-scenes look at the Smithsonian; and the Smithsonian World Affairs Institute, which uses Smithsonian connections within the Washington international community to examine a selected region of the world.

Spring-Summer

• Educational Program The National Museum of American Art held its first high school poster competition and award ceremony in conjunction with the "Posters American Style" exhibition. The poster designs were so popular that the U.S. Department of Veterans Affairs reproduced several of them to display at their facilities in Veteran's hospitals nationwide.

March

• Award The Archives of American Art received a grant from the Smithsonian Latino initiatives Fund administered by the Office of the Provost in the amount of \$42,984. This grant funded Spanish-to-English translations of 12 oral history interviews with Cuban-American artists. The award allowed the Archives to broaden its current survey of art-related manuscript material in Puerto Rico.

March

• Special Event The National Museum of American Art celebrated the final weekend of "Ansel Adams, A Legacy: Masterworks from the Friends of Photography" with extended evening hours on March 27 and 28, a first for any Smithsonian museum. Both nights featured live jazz, café dining, and screenings of a video on Adams's career. More than 11,500 people took advantage of this opportunity, made possible by the generous support of the Monsanto Corporation, to see the most popular exhibition in the museum's history, which attracted some 285,000 visitors in 18 1/2 weeks.

March

 Public Program Legal Problems in Museum Administration Conference—OGC in conjunction with the American Law Association—American Bar Association hosted the annual seminar in Chicago.

March

• Exhibition To highlight the Archives of American Gardens Collection, Horticulture Services Division recreated the Lanes End estate at the New England Flower Show. The exhibit received five awards, including the *Boston Globe's* People's Choice Award for being the show's most popular exhibit.

March

• Fellowship The Center for Museum Studies, in collaboration with the Inter-University Program for Latino Research (IUPLR) develops a new Rockefeller Humanities Fellowship Program with the theme "Latino Cultural Research in a National Museum Context: Issues of Representation and Interpretation." The fellowships, a mix of residencies for scholars and museum professionals, will be interdisciplinary and will support Latino/a focused scholarship using the extensive cultural, archival, historical, and professional resources that only the Smithsonian can offer.

March 5

Exhibit Opening and Lecture Remote Oceania: Biology, Archaeology, and History of Hawaii's Leeward Islands, a lecture by Sheila Conant, professor of zoology at the University of Hawaii, focused public attention on the Zoo's new exhibit at the Bird House, "The Birds of Paradise Lost."

March

• Seminar In March, the National Air and Space Museum's annual "Mutual Concerns of Air and Space Museums" seminar, cohosted by the American Association of Museums, brought more than 130 Air and Space museum directors, curators, and other staff together for three days of trading ideas and information concerning their museums.

March 7

• Outreach Archives of American Art Catalog Manager Karen Weiss delivered a paper at the national Art Librarians Society of North America (ARLIS) conference in Philadelphia for the panel "Collection Level Records: Archivists and Librarians Share Solutions." She was joined by colleagues from the Frick Art Reference Library, the National Gallery of Canada, and the university archivist at Rutgers, The State University of New Jersey.

March 13

Professional Collaboration The Smithsonian Accessibility
 Program began a four-month technical assistance pro-

gram with the Missouri Historical Society (MHS) in St. Louis. The accessibility program collaborated with the MHS to develop accessible exhibits for the Society's new wing. These exhibits, on the history of St. Louis, were not only to be fully accessible to people with disabilities but were also to include this group's participation in the development of the city's history.

March 15-September 7

■ *Exhibition* The exhibition "Olowe of Ise: A Yoruba Sculptor to Kings" at the National Museum of African Art celebrated the work of one of Africa's greatest traditional sculptors, introducing visitors to Olowe's distinctive style of carving wood. The exhibition presented more than 30 major works including the museum's palace dooe and bowl with figures, as well as shrine figures, veranda posts, and a mask.

March 16–20

Program The Center for Museum Studies offers the annual "Awards for Museum Leadership" diversity seminar. The program explores diversity issues in museums and provides training opportunities for enhancing leadership skills and competencies.

March 18–21

• Collecting Archives of American Art Director Dr. Richard J. Wattenmaker, and Southeast Regional Collector Dr. Liza Kirwin traveled to Puerto Rico to meet with directors of museums and archives. The purpose of the trip was twofold: To explore a potential microfilming project documenting art in Puerto Rico and to underscore the significance of the Archives' current survey of art-related manuscript material in Puerto Rico as the foundation for future research and microfilming.

March 19

■ Exhibition In "Directions—Kiki Smith: Night" (March 19–June 21, 1998), an American artist (b. 1954) who energized figurative sculpture in the late 1980s with her expressively anatomical images of the human body revealed a new direction focused on nature. The show, organized by Associate Curator Phyllis Rosenzweig, featured a metaphorical, nocturnal ecosystem consisting of a diorama-like photo-etching of animals interacting at night and, filling the Directions Gallery's center, long platforms displaying literally dozens of silhouetted and three-dimensional sculptures of birds, stars, flowers, rabbits, cats, snowflakes, raindrops, eggs, and other natural elements.

March 19

• Outreach The Institutional History Division of Smithsonian Institution Archives produces "Historic Pictures of the Smithsonian Institution," a site on its home page that provides a comprehensive visual tour of Smithsonian museums and research centers.

March 20-August 2

• Exhibition "Faces of TIME: 75 Years of Time Magazine Cover Portraits" was on view at the National Portrait Gallery. Organized to mark the 75th anniversary of Time, this exhibition was drawn primarily from the Gallery's collection of original Time cover artwork and represented some of the finest and most interesting moments in the magazine's newsmaker-of-theweek cover tradition. Among the most eye-catching pieces was a life-size papier-maché caricature of The Beatles. The show's curator was Senior Historian Frederick S. Voss.

March 23-27

 Presentation In San Juan, Mayaguez, and Ponce, Puerto Rico, National Science Resources Center Executive Director Douglas Lapp and Deputy Director Sally Goetz Shuler presented workshops to government, business, and education leaders. They discussed science education reform and presented workshops on inquirycentered science teaching.

March 26

• *Ecologist Dies* Dr. James Lynch died. A Terrestrial Animal Ecologist at SERC since 1974, Dr. Lynch published more than 70 scientific articles on the ecology of salamanders, ants, and birds, with special emphasis on habitat fragmentation and conservation.

March 26

• Training Seminar The Smithsonian Accessibility Program presented a training session titled "An Accessibility Critique of 'American Encounters." The session was offered to accessibility liaisons, exhibition designers, and exhibit team members, as well as all staff responsible for working with the public. Presenting the session was a group of people with disabilities who critiqued the exhibition from both a personal and consumer advocacy perspective.

March 29-April 3

• Meeting The First International Workshop on Sustainable Cocoa Growing organized by the Tropical Research Institute, the Migratory Bird Center, and the Institute for Conservation Biology was held at STRI's Earl S. Tupper Research and Conference Center. The meeting gathered more than 80 international participants, both chocolate manufacturers and representatives from cacao-producing countries.

March 31

• Special Event The U.S. Postal Service launched a new form of computer-generated postage at the National Postal Museum. PC-based postage, created by E-Stamp Corporation, enables mailers to electronically mail letters and documents through the Postal Service without affixing postage stamps.

April

• Grant A \$500,000 challenge grant awarded to the NMAI by the Kresge Foundation in July 1997 was successfully completed in April thanks to the generous support of individuals, corporations, and foundations. Funds raised through the Kresge challenge grant totaled \$1.6 million.

April

Panda Studies NZP's panda conservation team returned from China. Scientific specialists from three U.S. zoos worked with colleagues at Chinese zoos to carry out the first health and reproductive survey of giant pandas in China's zoos.

April

• School Envirothon SERC served as one of three hosts for the Anne Arundel County Envirothon, a program to teach middle-school students basic environmental principles and ways to apply them to real-world problems in their communities.

April

• Exhibition "Berween a Rock and a Hard Place: A History of American Sweatshops, 1820–Present," an exhibition that opened at the National Museum of American History in April, represented an ambitious intellectual and design treatment of a complex and controversial topic. The Office of Exhibits Central designer's innovative use of materials, media, design, and lighting to express distinct time periods and diverse content issues enhanced the exhibition's intellectual content and facilitated the understanding of challenging subject matter.

April

• Online Exhibition In partnership with ASTC, SITES launched the online exhibition "Rotten Truth (About Garbage)." The exhibition provides information to educators, students, and home users regarding the complex environmental issues surrounding daily trash disposal. Links to related Web sites give users easy access to wide ranging information and opinions on the topic. As visitors review the exhibition, they will find suggestions for activities they can do at home or in the classroom. "Rotten Truth (About Garbage)" was made possible in part by support from Rodale Press Inc.

April

National Meeting SERC hosted a national meeting on invasive species for the U.S. Fish and Wildlife Service. The meeting brought together the leading researchers in biological invasions of marine and aquatic ecosystems to develop national guidelines for long-term monitoring of species introductions.

April 3-6

 Outreach At the National Science Teachers Association's annual convention in Boston, the National Science Resources Center exhibited its programs, conducted presentations, and gave workshops on its Science and Technology for Children curriculum.

April 10-August 23

• Exhibition "Celebrity Caricature in America" was on view at the National Portrait Gallery. This landmark exhibition reintroduced an inventive form of portraiture that captured the spirit of the modern era in the first half of the twentieth century. Highlighting such personalities as Mae West, Will Rogers, and Josephine Baker, the more than 200 caricature objects explored the intersection of wit, stylized design, and mass mediagenerated celebrity. Along with many virtually unknown original drawings, the show featured caricature on a silk dress, on a theater curtain, on the walls of Sardi's restaurant, and in a series of animated cartoons. The exhibition will travel to the New York Public Library in April 2000.

April 13

• African American Family Day The Zoo's annual African American Family Day featured performances of jazz and gospel music along with African storytellers, drummers, and special animal demonstrations.

April 15

• Publications The Office of Public Affairs issued its general information brochure in six languages—Arabic, Chinese, French, German, Japanese, and Spanish—for distribution from information desks in each museum.

April 16-19

• Study Tour Smithsonian Study Tours, a division of The Smithsonian Associates, offered the first in a series of tours called "American Snapshots" during a four-day program on Amelia Island, Florida. Snapshots feature smaller towns and regions known for their unique heritage, such as Amelia Island's well-preserved Victorian architecture. Other planned Snapshots featured the Amish community in Holmes County, Ohio, and the maritime heritage of Puget Sound, Washington.

April 22-November

• Exhibition "Between a Rock and a Hard Place: A History of American Sweatshops, 1820–Present"—This National Museum of American History exhibition was designed to help the public understand the history of sweatshops in the United States and efforts to reform and control their proliferation. The exhibition looked at global competition, government regulation, immigration, business practices, and racial, ethnic, and gender discrimination.

April 23

Anniversary Barro Colorado Island, the Smithsonian's oldest field station and one of the oldest in all the New World tropics, celebrated its 75th anniversary as a reserve.

April 23-26

Public Program The Smithsonian Women's Committee's Annual Craft Show was held again at the National Building Museum, and featured 120 artisans from across the country. Proceeds from the show are used to fund SI projects in the Women's Committee's competitive grant program. The committee is under the umbrella of the Office of Membership and Development.

April 24-May 30

• Exhibition and Public Programs "Duke Ellington Youth Festival and Art Exhibition"—Produced in collaboration with the District of Columbia Public Schools, this National Museum of American History exhibition featured dynamic artwork done by students from the Washington, D.C. area depicting Edward Kennedy "Duke" Ellington during his career. Ellington's life and career was also celebrated in art, poetry, and musical performances.

April 30

• Exhibition "Natural Selections: Museum Photography" by Chip Clark opened at the National Museum of Natural History. This exhibition presented 30 photographs that capture life at Natural History and the special skills science photography, like scientific research, demands: curiosity, knowledge, and great patience.

April 30

• Training Seminar The Smithsonian Accessibility Program presented a training session titled "Parents+ Kids+Disabilities+Museums." The session was offered to accessibility liaisons, museum educators, exhibition designers, and staff responsible for working with the public. Presenting the session were two parents, one who herself has a disability and one whose child has a disability.

May

 Public Program In May, the NMAI launched the first annual Children's Festival at the George Gustav Heye Center. Staff from many museum departments including public programs, education, film and video, and the resource center joined together to create a museumwide event that was attended by a record number of visitors.

May

• Exhibition "Indian Humor," an exhibition of 87 paintings, photographs, sculptures, and mixed-media works opened at the George Gustav Heye Center in May. The exhibition used humor, sarcasm, and irony to dispel the stereotype of the stoic Indian. "Indian Humor" was developed by the American Indian Contemporary Arts of San Francisco.

May

• Lecture The Smithsonian Institution Libraries' annual Dibner Library Lecture featured Professor Katharine Park of Harvard University who delivered an illustrated lecture on "Visible Women: Anatomical Illustration and Human Dissection in Renaissance Italy." The lecture is supported by The Dibner Fund.

May

• Furniture The Office of Exhibits Central's design and fabrication of the Arts and Industries Building information desk was inspired by the materials and motifs of the nineteenth-century building's original interior finishes. Reflecting contemporary office planning requirements, the ergonomic and accessible casework meets the needs of volunteer staff and visitors while housing publications, telephones, and computer equipment. The ash-andfaux-granite desk presents a gracious and inviting focal point for visitors entering from the Mall, enhancing their visit and fulfilling their quest for information.

May 1

• Concert Smithsonian Folkways Recordings celebrated its 50th anniversary with a concert in Carnegie Hall. Participants and performers included Ossie Davis, Theodore Bikel, Pete Seeger, Ella Jenkins, Lucinda Williams, Ralph Stanley, and the SNCC Freedom Singers.

May I

• Exhibition "Our Town: Post Office Murals of the New Deal Era," a beautiful art exhibition featuring 17 mural studies and three sculptures created during the Great Depression as decorations for post offices, opened at the National Postal Museum.

May I-4

• Exhibition Restaging The 1997 "Mississippi Delta" program was restaged in Greenville, Mississippi, and featured traditions created daily in the homes, churches, rivers, fields, and juke joints of the Delta. The "Mississippi Delta" program was produced for the Center for Folklife Programs and Cultural Studies' annual Smithsonian Folklife Festival.

May 5

• Exhibition Seventy-five decorative envelopes were displayed as part of the National Postal Museum's fifth "Graceful Envelope" exhibit. The 75 envelope designs were selected from the more than 260 entries received by the museum as part of its fifth annual calligraphy contest.

May 6-9

• Program The Center for Museum Studies, with the Program for Asian Pacific American Studies, presents "Diversity, Leadership, and Museums: The Representation of Asian Pacific American Communities," at the Japanese American National Museum (JANM) in Los Angeles, California. The seminar, a pilot program funded by the Anheuser-Busch Companies and the Smithsonian Institution Educational Outreach Fund with additional support from the Hawaii Museums Association, explored diversity issues in museums and examined current issues affecting Asian Pacific Americans in the museum profession.

May 10

• Award The Smithsonian Board of Regents induct Kenneth E. Behring into the Order of James Smithson in recognition of his \$20 million gift to the National Museum of Natural History. The Office of Membership and Development assisted in coordination of the event.

May II

• Special Event The Office of Membership and Development's Smithsonian Corporate Membership Program held its Annual Luncheon Meeting, which was attended by 120 corporate representatives. Attendees joined Secretary Heyman, Regents Dr. Hannah H. Gray and Rep. Sam Johnson for a luncheon to discuss the theme "Education at the Smithsonian." Smithsonian National Board Member Marie L. Knowles gave the keynote address, and *The Smithsonian: America's Classroom,* a video detailing Smithsonian education programs, was premiered. NOVUS Services, Inc. (now Discover Financial Services, Inc.) received the Corporate Leadership Award for its support of the "America's Smithsonian" traveling exhibition and creation of an affiliate credit card agreement with the Smithsonian.

May II-15

 Public Program The Office of Membership and Development's "Smithsonian Treasures," the annual tour for Contributing Members, brought 70 people to Washington, D.C., for behind-the-scenes tours of exhibitions, as well as the Office of Exhibits Central, the Smithsonian Institution Libraries, and other SI units.

May 14-15

Program The Center for Museum Studies collaborates with the Smithsonian Associates Creativity Institutes to offer "New Ways of Seeing, Thinking and Understanding," an interactive exhibit production workshop designed for independent stockbrokers affiliated with Commonwealth Equity.

May 15

■ Publication The magazine Science published a landmark paper by Dr. Doug Erwin, curator of paleobiology at the National Museum of Natural History, and colleagues from MIT and Nanjing, China, narrowing the time frame for mass extinctions at the end of the Permian period 250 million years ago. By dating volcanic ash beds in South China, Erwin and his colleagues determined that the extinction of many insects, 85 percent of all marine species, and 70 percent of all terrestrial genera worldwide took place within less than 1 million years, far shorter than the 8-to-10-million-year period previously suggested.

May 15-16

• Symposium The National Portrait Gallery and the Library of Congress jointly sponsored a two-day symposium, "Caricature and Cartoon in Twentieth-Century America." Friday's session at the National Portrait Gallery included Wendy Wick Reaves, "The Celebrity Caricature Vogue"; Thomas P. Bruhn, "The Life and Times of Al Frueh"; Bruce Kellner, "Ralph Barton: Affectionate Insults"; and Edward Sorel, "Anything Goes: Caricature after 1960."

May 15-16

• Special Event The Office of Membership and Development welcomed the James Smithson Society to Washington. The Society, the highest circle of Contributing Membership, gave its Founder Medal to Shirley Sichel for her generous support of the National Zoo and the work of the Conservation and Research Center. Sir Christopher Meyer, KCMG, British Ambassador in Washington, and Lady Meyer attended the dinner and were made honorary Smithson Society members.

May 19-22

■ International Workshop The "Preservation of Santos" was a three-day conference sponsored by the Smithsonian Center for Materials Research and Education held at the Universidad del Sagrado Corazón, San Juan, Puerto Rico, for an estimated 123 attendees. It included a survey of the history of polychrome Hispanic religious artifacts, their materials, techniques of fabrication and decoration, and preservation and restoration. Following the three-day workshop, which included intensive lecture and laboratory sessions, a unique one-day free gathering was convened at the Museo de Arte de Ponce, Ponce, Puerto Rico, for practicing santo makers to engage the presenters in thoughtful discussions of history, materials, and techniques.

May 20

Board Established The Smithsonian Institution
 Libraries established a Board, following approval by the
 Board of Regents. The Libraries' Board, which held its
 inaugural meeting with the initial seven members,
 will provide leadership during the Institution's capital
 campaign and help to develop new constituencies and
 generate support for the Libraries' services and
 programs nationwide.

May 28

• Outreach Director Richard J. Wattenmaker presented a talk on the role of the Archives of American Art in scholarly research as a part of the Second Biennial Smithsonian-Westminster Symposium, "Public Institutions: Access and Cultural Identity," organized conjointly by the University of Westminster London and the Smithsonian Institution.

May 28

• Professional Presentation The Coordinator of the Smithsonian Accessibility Program lectured on accessible exhibition design to members of the society for Environmental Graphic Design.

Summer

Installation The National Museum of American Art premiered David Hockney's 24-foot painting of the Grand Canyon, titled "A Bigger Grand Canyon." The work, composed of 60 small canvases mounted as one continuous image, presents a sweeping, colorful view of one of America's most extraordinary topographical wonders.

Summer

• Construction Construction of the NMAI Cultural Resources Center continued during 1998. With the completion of the concrete work and the installation of the dramatic, nautilus-shaped roof, the profile of the building became visible during the summer of 1998.

Summer

• Training Program Thirty undergraduate students from 18 states and 6 foreign countries took part in the Research Training Program of the National Museum of Natural History. The program, supported by the National Science Foundation, the Smithsonian Women's Committee, and the director's discretionary fund, brings science students to Washington to do original research projects under the direction of museum scientists.

June

• Award Scott Weidensaul's article "The Belled Viper" (Smithsonian, December 1997) won first prize in the Conservation/Environment Contest and the President's Choice award ("best of the best" for all winning magazine entries) in a competition sponsored by the Outdoor Writers Association of America, Inc.

June

• Award "Ranchers Form a Radical Center to Protect Wide-Open Spaces" by Jake Page (*Smithsonian*, June 1997) won the Western Writers of America's Spur Award for Best Western Short Nonfiction.

June

Awards Program Finance recognition awards recognized Finance staff contributions.

June

Minority Leadership Program The Smithsonian Institution Libraries' Valerie Wheat, Librarian of the Museum Reference Center, one of the Libraries' 18 branches, participated in a program designed to prepare librarians from a racial minority group for top leadership positions in research and academic libraries. The program, which is sponsored by the Association of Research Libraries, a group whose membership includes the 120 largest research libraries in North America, offers two training institutes and a mentoring network. Ms. Wheat was one of 21 librarians chosen from a highly competitive pool. The Department of Education awarded ARL a grant to establish this program.

June

Award The Smithsonian Libraries was awarded
 \$10,000 by the Latino Initiative Fund to purchase Latino newspapers, magazines, and journals in print and microform formats for its collections.

June 2

• Training Seminar The Smithsonian Accessibility Program presented a training session titled "Accessibility Critiques of Several SI Web Sites." The session was offered to accessibility liaisons, web designers, museum educators, and staff responsible for working with the public. Presenting the session was an expert on creating Web sites accessible to people who are blind.

June 4

Exhibition "The Collection in Context: Henry Moore's Stringed Figure No. 1, 1937," opened at the Hirshhorn Museum and Sculpture Garden, continuing a series that uses an interdisciplinary approach to deepen understanding of an art object. To demonstrate the central source of a carved-wood, stringed sculpture by British artist Henry Moore (1898–1986), Valerie J. Fletcher, curator of Sculpture, borrowed nineteenth-century mathematical models from the Smithsonian's Museum of American History, matching those that inspired the artist 60 years ago. The impact of Moore's innovation in which organic form is imbued with the logic of engineering—was exemplified in other sculptures from the permanent collection by Constantin Brancusi, Naum Gabo, Barbara Hepworth, Alexander Calder, and others.

June 6, June 11

• Awards Program The National Science Resources Center, in partnership with the White House Office of Science and Technology Policy and the National Science Foundation, hosted programs for teachers who received the 1997 Presidential Awards for Excellence in Elementary and Secondary Mathematics and Science Teaching.

June 16

• Exhibition opening Colombia exhibition featuring Jose Mutis botanical illustrations opens at Amazonia Science Gallery.

June 17

• Purchase agreement The Tropical Research Institute formalized a purchase agreement of a six-hectare lot of land on Isla Colon, Bocas del Toro, where it will establish a research and educational center.

June 18

Exhibition and Programs Associate Curator Olga M. Viso of the Hirshhorn Museum and Sculpture Garden organized "Triumph of the Spirit: Carlos Alfonzo, A Survey, 1975-1991" for the Miami Art Museum, an exhibition that opened in Washington in a slightly abridged version. The show went far in establishing an international context for Alfonzo, a Havana-born, Miami-based painter (1950-1991) who died of AIDS at age 40. A scholarly catalog with an essay by Viso and contributions from Giulio V. Blanc, Dan Cameron, Julia P. Herzberg, and Cesar Trasobares accompanied the show, and Hilton Kramer of The New York Observer, among others in the local and national press, praised Alfonzo's expressive, symbol-laden imagery. The exhibition's Washington presentation received major support from the Smithsonian Latino Initiatives Fund,

and for the Smithsonian's "Art Night on the Mall" program of extended summer hours on Thursdays, a concert series titled "Latin Music on the Plaza," cosponsored with the Prince George's Arts Council, attracted some 8,000 visitors.

June 18

Exhibition/Partnership SITES began a strategic relationship with Silver Dollar City, a theme park located in Branson, Missouri a popular midwestern vacation spot. The first exhibition to be shown at Silver Dollar City was "Earth to You, Exploring Geography," sponsored by Nissan Motor Corporation U.S.A. In September 1998, "American Glass: Masters of the Art," an exhibition that examined the work of 13 American glass artists, opened as a part of Silver Dollar City's National Crafts Festival. The alliance between SITES and Silver Dollar City is important because of the park's large visitorship-1.8 million visitors a year, all ages, drawn mostly from the South and Midwest-generates high visibility for the Smithsonian and its exhibitions. Over 400,000 people visited each exhibition during its run in Branson. In addition, Silver Dollar City has provided financial support to SITES in conjunction with these exhibitions.

June 20

• Elephant Birthday Ambika, one of the Zoo's Asian elephants, was feted in honor of her 50th birthday. Nancy, Shanti, Tony, and Ambika showed their training routine to the public in a series of interpretive demonstrations. Historic photo displays and panels on elephant conservation provided the public with information on the role of elephants in the Zoo's history. Visitors also had a chance to add handmade cutout fabric decorations to an elephant blanket made for Ambika.

June 23–27

• Seminar The Center for Folklife Programs and Cultural Studies held its fifth annual seminar for teachers, "Bringing Folklife into Your Classroom: A Multicultural Learning Experience." The teacher seminar drew upon the Smithsonian Folklife Festival as a "living laboratory" for using multicultural resources and folklife techniques in the K-12 classroom.

June 24–28 and July 1–5

 Folklife Festival The Center for Folklife Programs and Cultural Studies produced the 32nd annual Smithsonian Folklife Festival featuring "Wisconsin," "Pahiyas: A Philippine Harvest," "The Río Grande/Río Bravo Basin," and "The Baltic Nations: Estonia, Latvia, and Lithuania." The Office of Public Affairs developed a local and national publicity campaign for the festival. Media coverage included network and local morning shows, a number of articles in the Washington Post, and coverage in the New York Times, USA Today, and Washingtonian magazine.

June 26 and June 28

• Concerts Smithsonian Folkways Recordings celebrated "Folkways at 50" with three concerts. A children's matinee featured Ella Jenkins, Larry Long, and children from rural schools in Alabama. "Folkways Founders" featured Arlo Guthrie, Toshi Reagon, the Willie Foster Blues Band, and Josh White, Jr., who have carried on the traditions of Folkways artists Woody Guthrie, Lead Belly, Josh White, and Sonny Terry—honored with stamps issued by the U.S. Postal Service. And "Heartbeat" honored Native American women singers from across the continent and celebrated the release of a new Smithsonian Folkways album.

June 29–July 10

■ Program The Center for Museum Studies and the Inter-University Program for Latino Research (IUPLR) host the annual seminar, "Interpreting Latino Cultures: Research and Museums." This program offers hands-on training in methods of researching and interpreting museum and archival collections. This year's program challenged students to develop strong research skills while exploring issues of interpretation and representation of cultural materials and traditions in museums.

June 30

• Publication The Office of Public Affairs issued an updated version of "Native American Resources at the Smithsonian," one in its series of Institution-wide "Resources" brochures. The "Resources" brochures encourage readers to participate in and partake of cultural activities as well as research, employment, internship, and fellowship opportunities at the Smithsonian.

July

 Research Curator of Paintings Judith Zilczer presented a striking discovery regarding the subject of a Willem de Kooning painting in the collection of the Hirshhorn Museum and Sculpture Garden; her research was published in a scholarly article for the summer 1998 issue of *American Art*, the journal of the Smithsonian's National Museum of American Art. Based on a comment from a colleague, Zilczer had pieced together evidence that proved that a painting by de Kooning depicting a male with shock of brown hair, heretofore known as *Reclining Man* with the date 1964, was not a simple figure study but instead the artist's impassioned response to the assassination of John F. Kennedy on November 22, 1963. The work was consequently retitled *Reclining Man* (John F. Kennedy) and redated 1963.

July

• Special Event First Lady Hillary Rodham Clinton helped launch the second phase of SOS! (Save Outdoor Sculpture), a \$1.4 million public-sculpture conservation program funded by generous grants from Target Store and the National Endowment for the Arts. SOS! is a nationwide public program cosponsored by the National Museum of American Art and the Heritage Preservation.

July

• Award Smithsonian won Best Overall External Magazine in the 1998 Clarion Awards, sponsored by The Association for Women in Communications.

July

• Web site Redesign A new look for Smithsonian's home page on the World Wide Web (http://www.smithsonianmag.si.edu) made its debut with the July 1998 issue. The new design provides expanded promotion of editorial coverage each month, as well as easier navigation to popular contests, image galleries of photographers' work, and a powerful search engine.

July

• Teacher Training SERC hosted a two-day intensive training session on the ecology of Chesapeake Bay for deaf teachers and teachers of deaf students. The training was carried out by Gallaudet University as part of the National Science Foundation's Summer Institute in Biology.

July 1

• Special Event The National Postal Museum served as the site for the First Day of Issue ceremony for the 1998– 1999 Federal Duck Stamp.

July 1

• Exhibition The permanent exhibition in the National Postal Museum's Jeanette Cantrell Rudy Gallery reopened with a new presentation of rare and valuable Federal Duck Stamps from Dr. Rudy's collection.

July 2

 Concert The Center for Folklife Programs and Cultural Studies held the fourth annual Friends of the Festival Ralph Rinzler Memorial Concert, featuring "Klezmer! The Triumphant Return of Yiddish Music."

July 2

Exhibition and Programs "Directions—Tony Oursler: Video Dolls with Tracy Leipold," which opened at the Hirshhorn Museum and Sculpture Garden as the first solo museum show in Washington for this New Yorkbased artist (b. 1957), continued through September 7. Organized by Public Affairs Head Sidney Lawrence, the show presented six of Oursler's unusual doll-like cloth figures-from puppet- to effigy-size-wherein "talking heads" in the form of live-action video projections of expressive, loquacious, anguished faces confront and amuse the viewer. The artist's most frequent model and collaborator, performer Tracy Leipold, was the focus of this group of works. In a series of public programs, Oursler's interest in film, the media, and psychology (specifically a condition known as multiple personality disorder) was explored.

July 4

• Exhibition An exhibit of more than 40 rare state, local, and tribal waterfowl stamps opened in the National Postal Museum's Rarities Gallery. This exhibit was loaned to the museum from the prize-winning collection of David Torre of Santa Rosa, California.

July 13–17

 Program The Center for Museum Studies collaborates with the Institutional Studies Office to offer "Introduction to Visitor Studies," a five-day workshop for staff at small museums in the United States.

July 15

Publication The publication of A Garden for Art: Outdoor Sculpture at the Hirshhorn Museum by the Hirshhorn Museum and Sculpture Garden with Thames and Hudson was announced by the museum. The 96-page, copiously illustrated guide, researched and written by Valerie J. Fletcher, Curator of Sculpture, provides a clear, in-depth overview of the subjects, styles, materials, and conservation issues presented by the museum's comprehensive collection of modern and contemporary sculpture, with particular emphasis on fostering understanding and appreciation of each work. The book was made possible by a generous gift from Board Chairman Robert Lehrman and supported by a grant from the Smithsonian Women's Committee.

July 18-23 and July 25-30

• Institutes The National Science Resources Center conducted two K-8 Science Education Leadership Institutes for 29 teams from school systems in 18 states, and Sweden. Most teams included a school superintendent or assistant superintendent, a science coordinator or director of curriculum and instruction, an experienced teacher, and a senior scientist representing a company or academic institution. The teams worked with nationally recognized experts to develop strategic plans to improve the teaching of science in their elementary and middle schools.

July 20–24

Courses Three courses, "Humidity," "Mold and Mildew," and "Pests," held at the Smithsonian Center for Materials Research and Education, were grouped around the theme of "Preservation Fundamentals." Each course dealt in depth with a particular environmental issue that has been highlighted by recent conservation developments in North America. "Humidity" reviewed the measurement of moisture in the air, psychrometric values, and the control of moisture in buildings with and without HVAC units. With the instructor, the class toured Smithsonian facilities containing recently installed humidity controls. "Mold and Mildew" divided fungal damage between organic materials and inorganic substrates so that participants could gain a broader understanding of the issues and so that the speakers could focus attention on the particular test methods and research associated with specific museum materials. In addition, the susceptibility for museum staff to potential pathogenic microorganisms was discussed. The third course was devoted to pest control in museums, including changes in the regulations of pesticides and of fumigants, as well as the development of alternative treatments.

July 23

 Publication The Smithsonian Accessibility Program wrote and delivered to the Provost the annual report on the Institution's progress in improving access to people with disabilities in the areas of programs, publications, and exhibitions.

July 26-30

• Scientific Meeting The National Museum of Natural History hosted the first world conference on mollusks squids, oysters, and snails. The two largest molluskstudying societies in the world—the American Malacological Union and Unitas Malacologica—met together for the first time and discussed their findings on biodiversity and conservation issues. The museum houses the world's largest collection of mollusks, more than 10 million specimens, and the preeminent collection of North American mollusk species.

July 30–Present

• *Exhibition* "A Collector's Vision of Puerto Rico"— This National Museum of American History exhibit contained art, photographs, and other artifacts that offer insight into Puerto Rico's distinctive history and culture from the 1700s to the present. The artifacts are part of a vast collection created over 40 years by Puerto Rican philanthropist and businessman Teodoro Vidal Santoni.

July 30

• Special Event The National Postal Museum celebrated its fifth anniversary with a party that included more than 2,400 well-wishers.

July 30

• *Exhibition* The creativity of everyday Americans was celebrated at the National Postal Museum with the opening of "Rural Routes: Folk Art Mailboxes of America." This exhibition featured II unusual and whimsical mailboxes chosen through a nationwide contest.

August

• Symposium SERC organized a special symposium at the annual meeting of the Ecological Society of America and the American Institute of Biological Sciences in Baltimore, Maryland. The symposium focused on the ecology of Chesapeake Bay and featured presentations from four SERC scientists.

August

• Sponsorship SITES secured a pledge for funding from Lockheed Martin as the sole corporate sponsor of an exhibition on the Hubble Space Telescope. The pledge from Lockheed completes the funding needed for the project, which includes a highly interactive large exhibition (3,000 square feet) designed to travel to science museums and centers in large urban areas; a smallformat version of the exhibition designed for museums, space centers, and educational institutions with smaller facilities; and a museum education trunk that will include hands-on classroom lessons on the Hubble Space Telescope, astronomy, and mathematics. To create the exhibition SITES has partnered with the Space Telescope Institute. The exhibition is also generously supported by a grant from NASA.

August

• Exhibition Design The Office of Contracting negotiated and awarded a contract to Douglas Gallagher to redesign the Mammal Hall exhibit in the National Museum of Natural History. The Kenneth E. Behring Gift supports this design effort.

August 20-23

• Exhibition Restaging The 1998 "Wisconsin" program was restaged in Madison, Wisconsin, and presented music, crafts, foodways, work, recreational, and religious traditions to celebrate Wisconsin's 150th anniversary of statehood. The "Wisconsin" program was produced for the Center for Folklife Programs and Cultural Studies' annual Smithsonian Folklife Festival.

Fall

• Exhibition The National Museum of American Art's exhibition "Eyeing America: Robert Cottingham Prints" celebrated the acquisition of a set of the artist's photorealist prints spanning three decades that focus on signs, storefronts, and marquees, the emblematic details of the urban American landscape.

Fall

E*xhibitions* The Renwick Gallery, a department of the National Museum of American Art, introduced the

work of a relatively unknown artist working with pure gold, steel, fossil ivory, and precious gems to create extraordinary objects featured in "Daniel Brush: Gold without Boundaries." Beautifully installed at the Renwick Gallery, it drew unusually large attendance (almost 50,000 in four months).

September

Repatriation During 1998, the NMAI continued its commitment, under federal law and museum policy, to repatriate human remains and objects of religious and cultural patrimony to Native groups throughout the hemisphere. Among the most significant returns this year was to the Haudenasavnee (Ironquois Confederacy) in September.

September

• Exhibition "The Art of Being Kuna: Layers of Meaning Among the Kuna of Panama" opened in September at the George Gustav Heye Center with Kuna tribal leaders in attendance. The exhibition featured approximately 300 works of art, including vibrant molas colorful, richly decorated appliques that express all aspects of Kuna culture. "The Art of Being Kuna" was organized by the UCLA Fowler Museum and included molas from the NMAI collection. The Smithsonian Center for Latino Initiatives provided additional support for the Heye Center venue.

September

• International Agreement SERC and the National Institute of Water and Atmospheric Research of New Zealand signed a memorandum of understanding to formally facilitate research collaborations between the two organizations. Their cooperative programs and professional training will focus on global change, landscape ecology, and coastal ecosystems at land-sea interfaces in both the United States and New Zealand.

September

National Meeting SERC hosted a national meeting on global change for the U.S. UV Monitoring Work Group. Present at the meeting were representatives from several universities and all federal agencies involved in measuring changes in the penetration of ultraviolet solar radiation to the Earth's surface.

September

Publication Smithsonian Institution Archives issues the brochure, Research Resources at the Smithsonian Institution Archives, featuring an overview of many little-known but highly useful ready-reference collections at SIA.

September

• Exhibition The Smithsonian Institution Libraries opened the yearlong exhibition "Frontier Photographer: Edward S. Curtis" in the Libraries' exhibition gallery (located in the National Museum of American History). Curtis's own Reversible-back Premo camera and tripod were displayed with gold- and silver-tone prints Curtis made in his studio along with 13 original photogravures and two copper-plates. Curated by William E. Baxter, head of the Libraries' Special Collections Department, the exhibition was accompanied by an educational brochure prepared for high school curricula, as well as large-print and Braille versions of the brochure's text.

September

 Public Program Environmental Law Seminar—OGC in conjunction with the American Law Association— American Bar Association and the Environmental Law Institute hosted this annual seminar in Washington, D.C.

September

• Web Site Addition In September 1998, "Kids' Castle" made its debut on the Smithsonian Web site. The new educational area gained immediate popularity through "kid-worthy" articles drawn from Smithsonian editorial, interactive message boards, a "facts and photos" section, and a free monthly newsletter. Additional content for the site is provided through Smithsonian's partnership with Cricket Magazine.

September

• Special Event The Smithsonian Associates' National Outreach program facilitated a three-day residency of the Smithsonian Jazz Masterworks Orchestra for the Public Corporation for the Arts in Long Beach, California. Members of the orchestra presented master classes, an open rehearsal, and an improvisation workshop for students and teachers in the California community, and it sponsored a youth concert. The event culminated with a public concert for an audience of 2,000 people that also launched Long Beach's celebration of October as the city's arts month.

September

Publicity Campaign The Office of Public Affairs' publicity campaign for Hispanic Heritage Month included news releases, radio advertisements on a Spanishlanguage station, ads in three local Spanish-language newspapers, and Spanish-language telephone recordings at the Smithsonian Information Center. In addition, the office produced 15,000 post cards advertising Smithsonian activities for Hispanic Heritage Month and had them placed in racks throughout the Washington area from September 13 through 30.

September 8

• Reorganization The Center for Museum Studies begins a reorganization, merging with the Smithsonian Office of Education. The new alignment will preserve the center's mission to advance and enrich knowledge about museum theories and practices. It will also serve to enhance the capabilities of both offices to build a rich mix of constituencies for the Smithsonian.

September 15

• Public Event The National Portrait Gallery, with the Hispanic Heritage Month Planning Committee of the Smithsonian Office of Education, presented the Latino Film Festival Opening Celebration. The opening celebration was made possible with major support from Home Box Office and a generous contribution from the Washington Post and the Embassy of Argentina. Welcome and opening remarks were given by Alan Fern and I. Michael Heyman. Panels included "Immigration and Public Education" and "Latino Images in Film and Television."

September 15-16

• Course The two-day course "Just in Time: Disaster Preparedness for Paper-Based Collections," part of the Smithsonian Center for Materials Research and Education's RELACT program, focused on developing a disaster plan, as well as preservation management of collections before, during, and after emergencies. A workshop included a hands-on exercise for rescuing water-damaged documents.

September 18–November 29

• *Exhibition* "Andy Warhol's Flash—November 22, 1963" was on view at the National Portrait Gallery. Warhol's portfolio of 14 silkscreen prints reinterprets the assassination of President John F. Kennedy and the barrage of print and broadcast coverage that ensued. The color prints, manipulating the photographic images that the public saw repeatedly in the press and on television, cover the four days between the shooting and the funeral. Accompanied by a stark narration based on teletype reports, the portfolio combines verbal and visual elements to capture the overwhelming public experience of the assassination.

September 19

• Special Event The Smithsonian Associates' Young Benefactors produced its ninth annual black-tie gala at the National Air and Space Museum. This glittering event raises more than \$100,000 each year for the Smithsonian Institution.

September 19 and October 17

Public Programs National Museum of American History launched a new series of family programs under the name "OurStory" as part of an effort to bring history to life for museum visitors from preschoolers to adults. OurStory explores America's rich cultural heritage through Museum objects, quality children's literature told by the authors or by storytellers, and hands-on activities.

September 20–February 28

• Exhibition The exhibition "South Africa 1936–1949: Photographs by Constance Stuart Larrabee" was the first public presentation of an important collection of blackand-white photographs of South Africa given to the museum by the photographer in 1997. In addition to the photographs, the collection includes Larrabee's entire personal documentation of her photographic activities in South Africa, which has never before been made available to researchers. The collection is the basis of ongoing study and future publication.

September 21-22

• Symposium "Patterns and Process—A Symposium in Tribute to Edward V. Sayre" was sponsored by the Smithsonian Center for Materials Research and Education to honor the outstanding contributions made at the intersection of science and the humanities by retired staff member Dr. Edward V. Sayre. His many groundbreaking endeavors, which range widely from conservation science to analytical and technical studies of historic and artistic works, and his leadership efforts in the area of the characterization of archaeological materials, have brought him international acclaim. Not only have his immediate achievements been of exceptional merit, but his accomplishments as both a formal and informal teacher have extended his influence far beyond his own specific research efforts. Symposium participants included former colleagues and students from the United Stares, England, and Greece.

September 21-25

• Course The course "Applied Optical Microscopy," the first in a series, provided the foundation for advanced optical microscopy applications and training at the Smithsonian Center for Materials Research and Education. Subjects addressed included sample selection and preparation; microscope specifications, selection, and set-up; design and layout of microscopy spaces; function and use; imaging and photomicrography; specialized techniques and limits of material identification; documentation and analysis; and introduction to specialized applications, such as archaeobotany, coating materials, and natural history specimens.

September 24

• International Technical Assistance The Smithsonian Accessibility Program presented information on the application of Universal Design principles in museums to barrier-free design professionals with the NEC Corporation.

September 26–January 4

• *Exhibition* "Mathew Brady's Portraits: Images as History, Photography as Art," was on view at the National Portrait Gallery. This was the most comprehensive exhibition devoted to Brady's career in more than a century. More than one hundred images were on view representing Brady's work in every form, including, for the first time, examples of his collaboration with artists to create oil paintings, lithographs, and wood engravings based on photographs.

September 26–January 25

• *Exhibition* "Edith Wharton's World: Portraits of People and Places" was on view at the National Portrait Gallery. Born into an atmosphere of material luxury, Edith Wharton (1862–1937) transformed her careful observations of the elite, cosmopolitan society in which she moved into such American classics as *The Age of Innocence* and *The House of Mirth*.

September 26-27

• *Fiesta Musical* Fiesta Musical, a festival for Hispanic Heritage Month, brought Latino jazz and traditional dances to the Zoo for a celebration of Hispanic culture.

September 29

• Exhibition Smithsonian Institution Archives and its Institutional History Division open the exhibition "Baird's Dream: The Arts and Industries Building," tracing the history of the A&I Building from Secretary Baird's initial ideas of a U.S. National Museum to the innovative exhibitions of today. An on-line version of the exhibition is available on SIA's Web site.

September 30

• Award The Tropical Research Institute's Game Warden Force received the Panama Canal Honorary Public Service Award in recognition of the important service to the community by protecting the Barro Colorado Nature Monument, an integral part of the Panama Canal Watershed.

Reports of the Bureaus and Offices of the Smithsonian Institution for Fiscal Year 1998

Office of Planning, Management, and Budget

L. Carole Wharton, Director

Mission Statement

The Office of Planning, Management, and Budget (OPMB) assists the Secretary and Board of Regents in setting priorities, determining the best allocation of resources, and measuring performance. OPMB gathers, analyzes, and presents resource needs and information to the Office of Management and Budget, Congress, and the Board of Regents to facilitate wise and favorable evaluation. OPMB also provides services to central and unit managers that foster the planning, allocation, and management of Institutional resources.

In addition, the Office also develops and disseminates Institutional announcements and policy directives.

Budget Management, Planning and Policy Systems (BUMPPS)

The BUMPPS team developed a new security foundation and implemented it with the new release of BUMPPS in FY 1998. The Unit Budget Allocation and Budget Transfer modules were modified to include the enhancements submitted by the users in 1997 survey.

The Call for Plans and Call for Budgets were fully automated in 1998. This included the mission statement, initiatives, fund-raising priorities, fund-raising development plans, risk assessments, items of increase, workyear resource summary, resources by program category, and information technology. BUMPPS released four new modules. The Salaries and Projections Worksheet allows units to project their salaries and benefits for the current year. The Initial Budget Spending Plan allows users to create and spread their initial budget spending plans for nonallocated funds to the detailed accounting classification key. The Working Budget Spending Plan module allows the user to increase, decrease, and create new budget spending. The OMB Non-Allocated Resources module allows the user to review and update current fiscal year income and expenses projections and enter outyear income and expenses projections for nonallocated funds.

Strategic and Performance Plans

OPMB continued to work with senior management and various units across the Institution to update the annual performance plan for inclusion in the FY 2000 budget request to the Office of Management and Budget and Congress in the fall of 1998. Additional targets and measures linked to the fiveyear strategic plan and tied to the Institution's programs were developed and included in the FY 2000 plan. OPMB also worked with the Under Secretary and Provost to develop a process for collecting information on the status of the various goals and measures included in the FY 1999 performance plan. This information will be used to prepare the first annual performance report, in line with the Government Performance and Results Act of 1993, which will be submitted to OMB and the Congress in March 2000.

Team-Based Organization (TBO)

Faced with the multiple challenges of office mergers, highly specialized staff, and an increasingly complex set of needs on the part of client's offices, OPMB has abandoned its formerly hierarchical structure and has become a team-based office. A steering committee was formed to define the structure of the new team organization. The experience of the BUMPPS team provided valuable experience that formed part of the foundation upon which OPMB began to plan and develop itself as a team-based organization. In March 1998, the committee presented the new concept to the rest of the staff, and by June the structure was in place for the work of OPMB to be performed by self-managing teams.

Office of Membership and Development

Robert V. Hanle, Execuitve Director for Development

Research is integral to everything we do at the Smithsonian. It uncovers new knowledge, enriches our exhibitions, and provides the foundation for our education programs. It keeps the Smithsonian vital, and it inspires millions to return year after year seeking fresh insights and stimulating challenges. The many facets of research at the Smithsonian provide ways for our supporters to share their love for the Institution and their commitment to the spirit of inquiry in which it was founded.

This was an excellent year for private giving at the Smithsonian. We focused on helping our supporters build their relationships with the Institution by exploring their interests in different ways and by finding the right match for them in the Smithsonian mosaic. Research was a guiding presence, and throughout the Smithsonian development community, our perspectives are constantly evolving as the excitement of discovery sparks new opportunities for giving. The Institution received more than \$92 million in fiscal year 1998 through the generosity of individuals, corporations, foundations, and other friends, or 187 percent of private gifts raised in 1997. Donations from individuals constituted \$25.7 million, or 27.7 percent of the total, including planned gifts from individuals, such as charitable gift annuities, charitable remainder trusts, and bequests. Corporations and foundations, including those established by individuals, contributed \$60.9 million (65.5 percent). Of the total funds raised, \$75.3 million was restricted to specific programs.

This major increase in support is evidence of the growing recognition by a wide variety of audiences that the Smithsonian is a national treasure that needs philanthropic investment to continue meeting the standards of excellence for which it is known. The hard work of many volunteers and staff was responsible for this success, and the momentum is building as we enter our first national capital campaign. The Smithsonian is indeed fortunate to have so many friends and supporters. One thing remains constant: Our friends want the Smithsonian to keep pushing the envelope of knowledge and experimenting with ways to share it worldwide. Many are exploring their interests through deepening relationships with our research centers. Gifts this year included a large anonymous unrestricted gift to the Smithsonian Tropical Research Institute, a gift to help the Smithsonian Environmental Research Center fund an internship program, foundation support for the Smithsonian Astrophysical Observatory's Multiple-Mirror Telescope project, a generous gift that helped us reconstruct and plant new public gardens, and many unrestricted gifts to help the Archives of American Art build, preserve, and catalogue its collections.

The Smithsonian gratefully acknowledges the many individuals, corporations, foundations, and organizations that have supported the Institution over the years, as well as those whose generous contributions during fiscal year 1998 helped us achieve the successes described in this annual report.

Smithsonian National Board

The Smithsonian National Board's generous gifts and unselfish donation of its time and expertise are among the Institution's greatest assets. Led in 1998 by Chair Jean Mahoney and Vice-Chair Frank A. Weil, the board's 51 current, 116 alumni, and 14 honorary members worked tirelessly as goodwill ambassadors across the country and often laid the groundwork to help bring the Smithsonian to their communities.

The Board Annual Giving Committee, chaired by Mrs. John M. Bradley, this year focused on Secretary I. Michael Heyman's priorities of expanding the Smithsonian's electronic presence and increasing opportunities for access to our unparalleled resources. The National Board gave generously to shape education programs that experiment with new ways of engaging people in learning. The Board Annual Giving Fund raised more than \$1.6 million for these purposes and for other programs for which board members have a special affinity.

We extend our deepest thanks to Jean Mahoney, who completed seven years of board service this year, the last three as board chair. Under her guidance, the board, working through the Office of Membership and Development, played a key role in organizing activities for the 150th anniversary celebration. Mahoney was a driving force in recruiting leaders for board committees and engaging volunteers in productive work. During Mahoney's tenure as chair, regional constituency development work advanced significantly, as teams of current, alumni, and honorary board members organized working groups to discuss ways of bringing local friends into a closer involvement with the Smithsonian. Mahoney also dramatically increased the board's commitment to annual giving. This change was due in part to strengthened ties between the board and Smithsonian museums, research institutes, and offices, which allowed members to pursue personal interests and understand how the many parts of the Institution relate to the greater whole.

In April, the New York Committee of the board organized a special event at the Cooper-Hewitt, National Design Museum in cooperation with the National Museum of the American Indian and the New York regional center of the Archives of American Art. A cocktail reception brought together new and old friends of the Smithsonian, including supporters of the New York "America's Smithsonian" gala, for a concert by the Smithsonian Jazz Masterworks Orchestra. New York is one of our strongest bases beyond the National Mall, and we were happy to showcase for our supporters the many ways the Smithsonian is active in their region. With the National Board's assistance, we continue to build on the strong relationships we established around the nation during our historic anniversary year.

Contributing Membership

The Contributing Membership is the Smithsonian's annual fund, an important source of unrestricted contributions that provides support for research and other initiatives where it is needed most. This year, the Contributing Membership raised nearly \$9 million.

The program also presents Smithsonian research to large national audiences through its publications and events and helps engage people across the country more closely with the Institution. "Smithsonian Treasures," the popular annual series of behind-the-scenes tours, this year welcomed 70 Contributing Members for an insider's look at exhibition development at the Office of Exhibits Central, a curator's perspective on the Janet Annenberg Hooker Hall of Geology, Gems, and Minerals at the National Museum of Natural History, a concert on a classic piano in the National Museum of American History's Hall of Musical Instruments, and an opportunity to explore the Smithsonian Institution Libraries' rare-book collection.

In September, the Contributing Membership introduced a second behind-the-scenes tour series, "Smithsonian Focus," concentrating on a specific aspect of the Institution. This year's program, "Smithsonian Architecture: Preserving Our Buildings for Today and Tomorrow," brought 20 participants to Washington for an in-depth look at our buildings: their preservation, their role in housing our collections, and their stature as works of art.

In addition to their dues, Contributing Members gave generously to special needs. This year was one of the strongest ever for generating unrestricted support for research and education initiatives. Many Contributing Members also strengthened their support by upgrading their memberships to higher levels, such as the James Smithson Society.

James Smithson Society

Research at the Institution requires a commitment for the long haul, so that Smithsonian scholars can put emerging knowledge into perspective over many years. The unrestricted gifts of the James Smithson Society are one important means of sustaining this commitment. This year, the society's 450 members gave nearly \$600,000 through membership dues and special gifts.

Six new members joined the James Smithson Society Endowed Life Program. Mrs. Alton Grimes, William Hopkins, Richard and Elaine Kaufman, Shirley P. Sichel, and an anonymous donor made this generous commitment to the long-range work of the Smithsonian. An endowed Life Member makes a one-time gift, and part of the proceeds is used for the member's annual dues over his or her lifetime. This growing program helps provide essential support for our efforts to focus on the big picture and plan ahead.

Shirley Sichel was also recognized with the James Smithson Society Founder Medal for her longstanding support of the National Zoological Park, its Conservation and Research Center, and its New Opportunities in Animal Health Sciences Program. She has founded the Sichel Family Endowment for Research to advance the vital work of these units. At the Smithson Society's annual dinner, Sir Christopher Meyer, KCMG, British Ambassador in Washington, and Lady Meyer joined Secretary Heyman in presenting the medal to Sichel. The Meyers were also granted honorary membership in the society.

Highlights of Corporate Philanthropy

The business community is a growing segment of support for a wide range of Smithsonian activities. This year, corporate support opened new avenues of exploration for millions of people through research, education, and exhibition initiatives.

As planning for the upcoming capital campaign proceeded, we drafted a policy for corporate associations that will help us maximize corporate support while finding the best match between Smithsonian programs and the interests of our corporate supporters. A Director for Corporate and Foundation Relations was named earlier this fall, who will work with Smithsonian administrators, directors, and development officers to coordinate a strategy for engaging more corporations in the Institution and maximizing their philanthropic support.

The Smithsonian Corporate Membership Program welcomed 17 new members and raised \$1.027 million in unrestricted funds. The program's annual luncheon in May featured Marie Knowles, executive vice president and chief financial officer of ARCO and a member of the Smithsonian National Board, as the keynote speaker. Education at the Smithsonian was highlighted in a new video produced by the program. *The Smithsonian: America's Classroom* demonstrates the wide-ranging educational impact of Smithsonian research in the classroom, exhibitions, public programs, and behind-the-scenes activities.

The Corporate Membership Program awarded the second annual Corporate Leadership Award to NOVUS Services, Inc. (now Discover® Financial Services, Inc.). Thomas Butler, then president of NOVUS, accepted the award and described how the partnership between the Smithsonian and Discover® Card has benefited the company while improving education nationwide.

The generosity of the business community makes a positive difference in the number and quality of programs that the Smithsonian is able to undertake. We especially want to recognize the contribution this year of Polo Ralph Lauren Corporation, whose pledge to the Star-Spangled Banner Preservation Project will enable the Smithsonian to preserve one of our country's most important icons and later rehang it in a redesigned exhibition space with fresh educational and interpretive materials. Polo Ralph Lauren's partnership with the Institution is an outstanding example of how corporations are making a difference in the lives of all Americans through our national museum and education center.

The National Air and Space Museum's Dulles Center campaign also benefited from the generosity of the business community this year. The Boeing Company made a leadership pledge to the center. Lockheed Martin Corporation pledged major support in addition to its support for a Smithsonian Institution Traveling Exhibition Service show on the Hubble Telescope. Federal Express Corp. also pledged its support for the center. Discover® Card gave a significant unrestricted gift to the Smithsonian this year. The gift was part of the company's five-year commitment to fund specific programs and provide unrestricted support. Discover® Card also continues its association with the Institution through an affinity card program, which generates donations to the Smithsonian with every purchase made using the card and makes a conttibution with every card issued or renewed. NAMM/International Music Products Association gave a generous gift to support the National Museum of American History's "Piano 300" project, which will explore the history and life of this influential instrument on the occasion of the 300th anniversary of its invention.

Foundations

Foundation support was strongly felt this year with programs as varied as the historically significant Star-Spangled Banner Preservation Project (through a leadership gift from the Pew Charitable Trusts), the inventive Web hit "Revealing Things" (supported by the Rockefeller Foundation), and the exhibition "Speak To My Heart: Communities of Faith and Contemporary African American Life" (underwritten by the Lilly Endowment and the Henry Luce Foundation). Foundations value the Smithsonian as a partner for leveraging change in people's lives, both on the community and the national levels. Through their investments in scholarly and popular education programs, research endeavors, professional development and training, collection sharing, and access to unparalleled expertise, foundations help the Smithsonian apply its considerable resources to enhance the quality of life for people around the world

Smithsonian Benefactors Circle

The Smithsonian Benefactors Circle this year honored two longtime friends who continue to have a strong impact on research. Dr. and Mrs. Herbert Axelrod received the circle's annual award in recognition of their gift this year to establish the first endowed chair at the Smithsonian. The Herbert and Evelyn Axelrod Revolving Chair of Systematic Ichthyology at the National Museum of Natural History will have a threeyear occupancy and rotate among curators in the Department of Vertebrate Zoology's Division of Fishes. Dr. Axelrod's gift ensures the vitality of research in the field to which he has devoted his professional life.

The Axelrods also established two chamber music endowments in the Division of Cultural History at the National Museum of American History to support care for their other major gifts—four Stradivarius instruments and four 17th-century instruments by Jacob Stainer—and to enable wider audiences to hear these priceless instruments in live performance.

The Benefactors Circle continues as a way to honor friends who have made significant commitments to the Institution.

Smithsonian Women's Committee

The Smithsonian Women's Committee, a volunteer group chaired in 1998 by Paula Jeffries, continued outstanding service through its coordination of the 16th annual Smithsonian Craft Show. One hundred twenty artists were chosen from 1,600 applicants to exhibit at the prestigious show, chaired by Eleanor Carter and held again at the National Building Museum. Nearly 17,000 people attended the four-day event in April. The Women's Committee raised more than \$320,000, which it will distribute in a competitive grants program. Proceeds from the 1997 show, distributed in the spring of 1998, funded 27 projects in 12 museums and offices across the Smithsonian. Research was a strong component, with such projects as an exhibition on the famous and mysterious "Iceman" mummy and a program of biology and wildlife management courses in Uganda, Brazil, and China.

A New Rose Garden and Fountain

Outside the east door of the Smithsonian Institution Building, a beautiful rose garden flourishes through the generosity of individual donors. The renovated Kathrine Dulin Folger Rose Garden is the gift of Lee and Juliet Folger and the Folger Fund in memory of Lee Folger's mother. At the center of the garden is the Gur-Karma-Rana Keith Fountain, restored and installed as a gift of the Keith family: Gurdit Singh Keith, Karam Kaut Keith, Mahinder Singh Keith, Rajinder K. Keith, and Narinder K. Keith.

Juliet and Lee Folger are Contributing Members, and Mr. Folger is the former chair of the Smithsonian Luncheon Group and a supporter of the Smithsonian Luncheon Group Endowment Fund. The Folgers and the Folger Fund are generous contributors to many philanthropic causes in the Washington area. Narinder K. Keith, a member of the Smithsonian Legacy Society and a Smithsonian volunteer, has supported the Fund for the Future, as well as the Freer and Sackler Galleries.

A tree planted in the garden honors the memory of Joseph Coudon VII, special assistant to the Secretary from 1980 to 1988. His mother Katherine H. Coudon Murphy established the Joseph Coudon VII Fund for Acquisitions for the Archives of American Art after his death in 1988 and has been a generous contributor to the fund.

The Folger Rose Garden space has had a number of uses over the years—a curved gravel entrance, a lawn, shrubbery, and eventually a rose garden, created in 1978 and redesigned in 1998. The three-tiered Victorian fountain was made in the late nineteenth century by the J.W. Fiske Iron Works of New York City. The Smithsonian acquired it in 1977 from the estate of Nanette F. Dunlop. A new fountain in the courtyard of Blair House, the President's guest quarters, was cast from a mold of the Smithsonian fountain.

The new Folger Garden is a tangible reminder of how valuable individual support is to the Smithsonian. The generous gifts of Lee and Juliet Folger, the Keith family, and Katherine H. Coudon Murphy have helped to create a restful spot that thousands of visitors will enjoy in the years to come.

Smithsonian Washington Council

The Smithsonian Washington Council, established last year by the Secretary and regional leaders, remained dedicated to expanding the Smithsonian's relationship with the Washington region. Chaired by Washington attorney and civic leader R. Robert Linowes, the council gave unrestricted gifts that will benefit research and education projects. Members' gifts also supported the Institution's partnership with the D.C. Public Schools, the Museum Magnet School program; helped ensure that the Smithsonian Office of Education's Web site reaches teachers locally and nationally with lesson plans and other resources; made possible Teachers' Night, an annual event showcasing ways educators can use the Smithsonian in their teaching; and helped advance a planned Education Resource Center on the National Mall.

Smithsonian Legacy Society

The Smithsonian Legacy Society, founded in 1996 to honor out friends who carry on James Smithson's tradition by making legacy gifts to the Smithsonian, gained momentum this year. Supporters continue to explore bequests, charitable gift annuities, charitable remainder trusts, pooled income fund gifts, gifts of retirement and life insurance plans, and other giving vehicles. Legacy gifts are a growing and important source of future support at the Smithsonian. Those whose planned gifts are made known in future years will be welcomed into the society.

Smithsonian Luncheon Group

Chaired by C. Benjamin Crisman Jr., the Smithsonian Luncheon Group is a circle of supporters from the Washington area who meet regularly to learn about Smithsonian programs, from art to zoology. The group met five times this year and visited the National Museum of American History's Hall of Musical Instruments, explored Japanese art at the Arthur M. Sackler Gallery, attended a showing of Ansel Adams photographs at the National Museum of American Art, delved into research at the National Zoological Park's "Think Tank" exhibition, and attended a lecture about Mars by scientists from the Center for Earth and Planetary Studies at the National Air and Space Museum. The endowment that the group established two years ago for education programs to benefit Washington, D.C.-area youth continues to grow.

Capital Campaign

This year, we began planning in greater detail for a capital campaign in which we will ask the American people for their support to ensure that their Smithsonian remains a vital national resource. The campaign received a significant boost from philanthropist Kenneth E. Behring, whose gift to the National Museum of Natural History will enable the renovation of the popular Mammal Hall and the development of outreach activities that teach budding scientists across the country about biology and conservation. The Smithsonian Board of Regents recognized Behring for his generosity, and he was inducted into the Order of James Smithson, a distinction given to only four people in the Institution's history.

Another project benefiting from the early stages of the campaign is the National Museum of American History's StarSpangled Banner Preservation Project. Through research, education, and exhibitions, the project illustrates the wideranging support the Smithsonian must seek during its capital campaign. Gifts this year ranged from \$10 million from Polo Ralph Lauren Corporation and a \$5 million pledge from the Pew Charitable Trusts to \$5 donations from individual supporters. In between, foundations, individuals, and many other friends made gifts and shared their expertise so that the Smithsonian can undertake the research necessary to conserve the flag, better understand its history and context, and provide fresh educational and interpretive materials.

The Smithsonian Fund for the Future, an important vehicle for the campaign and the foundation for a solid base of longterm support, continued to grow this year. The fund is a living endowment established through the generosity of the Smithsonian National Board.

We also developed a strategic plan for implementing the capital campaign and a case statement detailing the Smithsonian's needs and its benefits to the nation. In mid-September, the Smithsonian Regents gave the campaign their official endorsement and committed resources to support its implementation. This momentum and the early gifts to the campaign point to a strong national interest from people in all regions and all walks of life. We will also deepen our relationship with the friends whose generosity and active involvement with the Smithsonian are described in this report.

Preserving the Star-Spangled Banner

The Star-Spangled Banner—an American icon and a great treasure of the national collections—is undergoing what may be the largest single textile conservation effort ever undertaken by a museum. The three-year project, which is recognized by the White House Millennium Council's Save America's Treasures program, has attracted wide public attention, as well as generous support from corporations, foundations, and individuals.

Polo Ralph Lauren pledged \$10 million to the National Museum of American History, the largest single corporate gift ever received by the Smithsonian Institution in its 152-year history.

"The flag is an inspiration for all Americans," said Ralph Lauren, chairman and CEO of Polo Ralph Lauren Corporation. "It captures the dreams and imagination of men and women all over the world. I am a product of the American dream, and the flag is its symbol. We at Polo Ralph Lauren are incredibly honored to be able to make this possible."

The flag preservation project is also supported by a \$5 million grant from the Pew Charitable Trusts and a special \$3 million appropriation from the Congress of the United States.

Other organizations that had contributed to the flag by the close of fiscal year 1998 include the John S. and James L. Knight Foundation, the Brown Foundation, Ivan and Nina Selin Family Foundation, Susan and Elihu Rose Foundation, Warren Winiarski and family, Montgomery Watson Americas, Robert Hemphill, Abell-Hanger Foundation, Rockwell Fund, the Veterans of Foreign Wars, the Ladies Auxiliary to the Veterans of Foreign Wars, and the Society for the War of 1812.

The complex preservation process involves first wrapping the Star-Spangled Banner in protective fabric and carefully removing it from the metal framework that has supported it since 1963. Then a team of conservators, led by Suzanne Thomassen-Krauss, will examine the flag and develop a comprehensive treatment plan. Early in 1999 it will be moved to a custom-designed lab in the museum for conservation work.

When the 185-year-old flag returns to public view in 2002, it will have been cleaned, restored, and installed in a fourstory climate-controlled display case—all made possible through Smithsonian partnerships that preserve America's treasures for the public to enjoy.

Support for Online Innovation

Can an electronic museum experience be just as enjoyable as the real thing? As online technology and content continue their explosive growth, a Smithsonian program called Smithsonian Without Walls is testing the possibilities. The challenge is to create engaging Internet presentations that capture the sense of wonder and discovery visitors feel when they come face-to-face with real objects in museum exhibitions.

With generous support from the Rockefeller Foundation and the Merck Family Fund, the program has launched the prototype for "Revealing Things," an inventive online exhibition about the multiple meanings of everyday objects (www.si.edu/revealingthings). A pair of patched bell-bottom jeans, a chemistry set, and a Victorian-era gas meter are just a few of the objects presented in the prototype. Using Smithsonian collections and scholarship along with material from other museums and collections, the exhibition will combine text, graphics, narration, and music.

Broad-based support is essential for innovative projects like "Revealing Things," which test the boundaries of public education and outreach. Smithsonian Without Walls receives no federal funds and raises all program and operating expenses from outside sources. The Rockefeller Foundation and the Smithsonian National Board currently provide program support.

Smithsonian Women's Committee

Millicent F. Mailliard, Chair

The Smithsonian Women's Committee serves as an ongoing source of support for a variety of Institutional programs through volunteer fund-raising and public relations services.

In 1998, the Committee distributed \$304,992 in competitive grants to 27 projects in 10 museums and offices across the Smithsonian. The committee's awards program is the result of its successful and profitable annual Smithsonian Craft Show, which this year celebrated its fifteenth anniversary and was held at the National Building Museum April 22 through 26. From more than 1,500 applicants, 120 exhibitors in all media were selected to show their wares. The annual event presents the nation's finest contemporary crafts and also raises money for the committee's educational and outreach programs benefiting the Smithsonian.

Smithsonian National Board

Jean Mahoney, Chair Frank A. Weil, Vice Chair

Smithsonian National Board members work for the advancement of the Institution as advocates and as private-sector advisors to the Secretary and Under Secretary, as well as through personal financial support and fund-raising activities.

This year a Campaign Planning/Fund for the Future Committee under the leadership of Allison Cowles and David Silfen commenced work to structure the Smithsonian's firstever Institution-wide capital campaign.

In calendar year 1998, Mrs. John M. Bradley chaired the board's Annual Giving Committee. Under his leadership, board members' cumulative annual contributions totaled more than \$1 million. This support went toward construction of a donor recognition room and for an Institution-wide membership and fund-raising database for donor cultivation and stewardship in the capital campaign. The board's support is critical to the success of many promising projects that could not move forward without their directed philanthropy.

Archives of American Art

Richard J. Wattenmaker, Director

FY 1998 was an extraordinarily productive year for the Archives of American Art, the largest collection of documents pertaining to the study of the visual arts in America. New collections were added to its more than 13 million holdings, and publications, exhibitions, and services to researchers fostered new research in American art history. Highlights from the Archives' work in FY 1998 follow.

Collecting

After four years of negotiation, the Archives acquired the papers of the Hans Hofmann Estate. Hofmann (1880–1966) was a member of the Abstract Expressionists who achieved fame and influence not only through his abstract paintings but also by means of the school that he established in America. Many American artists, such as Lee Krasner and Larry Rivers, and the critic Clement Greenberg studied with Hofmann. The Hans Hofmann Papers span the dates 1911 to 1966, with the bulk of the material covering the period 1945– 1965. Roughly one quarter of the collection comprises personal papers. Fully half comprises art books, periodicals, and shorter works collected by Hofmann and frequently annotated by him.

Liza Kirwin, Southeast Regional Collector, traveled to Tesuque, New Mexico, in 1998 to collect the papers of Chuck and Jan Rosenak. For the past two decades, the Rosenaks have devoted their energies to studying and collecting twentieth century American folk art. Their papers consist of their research material gathered in the course of writing three books: *Museum of American Folk Art Encyclopedia of Twentieth-Century American Folk Art and Artists* (1991), *The People Speak: Navajo Folk Art* (1994), and *Contemporary American Folk Art: A Collector's Guide* (1996).

Among other new acquisitions in FY 1998 was the Lily Harmon's Research Collection on J.B. Neumann, which consisted of Harmon's research material for a biography of art dealer J.B. Neumann (1887–1961), who was director of the New Art Circle Gallery, New York. The collection consists of photographs, interview tapes, transcripts of letters between Neumann and art dealer Karl Nierendorf from 1925 to 1934, and letters to Clifford Odets, as well as the unpublished biography itself. Another notable addition was the records of O'-Toole-Ewald Art Associates, including files on artists Louise Nevelson, Clyfford Still, Roy Lichtenstein, and Kenneth Nolan, as well as materials on gallery owners and collectors. The Archives also acquired documents from artist Joseph Solman (b. 1909) and the Richard Wunder Research Collection on Harriet Blackstone, a painter who was a turn-of-the-century colleague and friend of William Merritt Chase and Thomas Dewing.

A major addition to the Archives was approximately 100 feet of the papers of sculptor/painter Claire Falkenstein (1908– 1997). More than 60 sketchbooks and a large number of drawings complete this significant collection. Among Falkenstein's famous commissions were the gates at the home (and now museum) of Peggy Guggenheim in Venice. The Archives collected an addition to the Jacob Lawrence/Gwendolyn Knight Papers, including three feet of correspondence with art museums, galleries, and friends. Also added were the papers of Los Angeles artist John Altoon [Altoonian] (1925–1969), who was a major figure in the Los Angeles art scene from the late 1950s until his death. The Archives collected the papers of Beniamino Buffano (1889–1970), documenting the life and career of San Francisco's favorite sculptor.

Other collections include additions to the Betty Parsons Papers, comprising correspondence (1944–1982), calendars/date books (1933–1981), and exhibition announcements and clippings (1929–1944). Additions were made to the Eugene Goosen Papers, the William I. Homer Papers, and the Reginald Marsh Papers, as well as a gift of papers (1946–1989) from the sculptor Dmitri Hadzi (b. 1921). The Archives acquired papers from the New York sculptor William Walcutt (1819–1882). These papers include a handwritten journal documenting his voyage from New York City to London in 1852 and a notebook containing notes made during the voyage, as well as a sketchbook dating ca. 1853 and letters written between 1878 and 1880. The Archives also collected select papers from the estate of Herbert Waide Hemphill, Jr. (1929– 1998), folk art collector, founder of the Museum of American Folk Art, and Smithsonian benefactor.

On March 18–21, 1998, Director Richard Wattenmaker and Southeast Regional Collector Dr. Liza Kirwin traveled to Puerto Rico to meet with directors of museums and archives and explore a potential microfilming project documenting art in Puerto Rico. Their trip underscored the significance of the Archives' current (FY 1998) survey of art-related manuscript material in Puerto Rico as the foundation for future research and microfilming. The trip was underwritten by a generous grant from the Smithsonian Latino Initiatives Fund. Dr. Wattenmaker and Ms. Kirwin visited Puerto Rico's major cultural institutions, including the Luis Muños Marin Foundation, the Museum of Art in Ponce, the Institute of Puerto Rican Culture, the University of Puerto Rico at Rio Pedras, and the Athenaeum.

The Archives received a grant from the Smithsonian Latino Initiatives Fund administered by the Office of the Provost in the amount of \$42,984, which will fund Spanish-to-English translations of 12 oral history interviews with Cuban-American artists that are currently being conducted. The money will also allow the Archives to broaden the current survey of art-related manuscript material in Puerto Rico that was described above to include a field survey of the papers of Puerto Rican artists in New York, which will be compiled of information about the papers of prominent Puerto Rican artists living in New York City and will survey personal papers at museums, historical societies, research institutions, and arts organizations. The two surveys, one in Puerto Rico and the other in New York, promise to illuminate the separate but interrelated culture of Puerto Rican artists and greatly enhance the Archives' sources for cross-cultural research.

The Archives held a four-day meeting of its Regional Collectors from around the country October 20–23, 1997. The sessions provided an opportunity for Washington staff to meet and discuss a wide variety of Archives' issues with collectors from New York, Boston, the Southeast, and the West Coast. Topics covered included collections management policies and procedures, with particular emphasis on processing of archival collections and registrarial standards; administrative policies and procedures; development planning; and collecting guidelines.

Publications and OnLine Services

The Archives published A Finding Aid to the Rockwell Kent Papers, which was underwritten by a generous grant from The Henry Luce Foundation, Inc., which also funded the processing of the collection. Rockwell Kent (1882–1971), an energetic and multitalented man, pursued many interests and careers during his very long and active life, including architect, painter, printmaker, writer, dairy farmer, and political activist.

In FY 1998, the Archives unveiled its newly updated and revised Web site, which encompasses various categories, including the history of the Archives, its collections, membership information, list of publications in print, and its ongoing programs, as well as links to the online catalog and our reference desk. The site is copiously illustrated by images and contains selected documents from the collections.

In observance of Black History Month in February, the Archives inaugurated online access to its guide *The Papers of African American Artists* (1992), which includes photographs and other illustrations describing the Archives' holdings.

The Archives also presented on its Web site "A Guide to Art Gallery Records in the Archives of American Art." The online guide contains the name and dates of each collection, size, reel numbers (if microfilmed), and historical notes.

Outreach: Exhibitions, Education, and Research Services

An archival display from the papers of Tomás Ybarra-Frausto, "Tomás Ybarra-Frausto and the Chicano Art Movement, 1965-1985," was on view in the American Art/Portrait Gallery Library, in connection with Hispanic Heritage Month, September 18-October 24, 1997. The show consisted of photographs of works by leading Chicano artists, such as Malaquias Montoya and Esther Hernandez; letters, including one signed by Cesar Chavez; and many related objects. The exhibition illustrated the major phases of the Chicano art movement from its inception in the 1960s to the present. The exhibition, organized by Archives Technician Rosa Fernandez and Southeast Regional Collector Liza Kirwin, was expanded and presented in the Archives' New York Regional Center display space February-May 1998. The Archives opened the exhibit "El Movimiento: Selections from the Tomás Ybarra-Frausto Research Material on Chicano Art" on February 6, 1998, with a reception attended by more than 100 guests, including representatives of the Latino community in New York from cultural institutions such as El Museo del Barrio, the Centro de Estudios Puertorriqueños at Hunter College, and the Museum of American Folk Art. The Archives will publish a finding aid to this important collection to coincide with the exhibition.

Dr. Ybarra-Frausto, Associate Director for Arts and Humanities at the Rockefeller Foundation, was former Chair of the Smithsonian Council and Chair of the Latino Oversight Committee. The documents donated by Dr. Ybarra-Frausto to the Archives represent part of his research for the book Arte Chicano: A Comprehensive Annotated Bibliography of Chicano Art, 1965–1982, which he coauthored with Shifra M. Goldman in 1985. The collection comprises letters, newspaper clippings, exhibition catalogues and invitations, and rare printed material concerning the Chicano art movement in the United States and Latin America. The Ybarra-Frausto collection complements the Archives' extensive resources on Latin American and Latino art and artists delineated in the Archives' publication The Papers of Latino & Latin American Artists (1996).

Paul Karlstrom, West Coast Regional Center Director, spoke at a conference, "El Sueño Americano/O sonho americano/The American Dream: The Reception of Latin American Art in the United States and Europe," held at the Los Angeles County Museum of Art in connection with the exhibition "Mexican Masterpieces from the Bernard and Edith Lewin Collection" on January 10, 1998. Dr. Karlstrom's paper, "Mexico, Muralism, and Modernism in Northern California," concluded with a description of the Archives' Latino focus in current collecting projects

The Archives completed its Interlibrary Loan Automation Project at the Archives' Midwest Regional Center where staff bar coded a set of microfilm, consisting of nearly 8,000 reels, that is used to service interlibrary loan requests from researchers throughout the world. The software used for this project enables the user to track the movement of reels throughout the Interlibrary Loan System with additional speed and efficiency. The enhancements to the Interlibrary Loan Program will enrich the level of services provided to researchers worldwide

Progress continues apace on various grant-funded projects. The Judith Rothschild Foundation funded a project on the Abraham Rattner Papers, including the processing and microfilming of the collection. A descriptive finding aid has also been written.

Thanks to a grant from The Henry Luce Foundation, Inc., three collections have been processed, arranged, and preserved, including the Rockwell Kent Papers, which was also microfilmed. Also processed were the Downtown Gallery records. Microfilming and the preparation of a finding aid are in progress. The Luce Foundation also funded the processing of the records of the American Federation of Arts, which date from AFA's founding in 1909 through 1993. The collection is particularly valuable for its documentation of twentieth-century American art history and the wealth of information about the numerous programs and exhibitions supported and implemented by the AFA to promote and study contemporary American art.

Archives staff also processed the papers of Cuban art historian Giulio V. Blanc (d. 1995), which dated from 1923 through 1995 and are particularly valuable for the extensive artists files of both major and lesser known contemporary Cuban artists.

Fund-raising

Lundi Gras XXXVIII, "An Evening of Elegance," was held on the evening of February 23, 1998, in Farmington Hills, Michigan. Benefit chairpersons were Mr. and Mrs. Morton L. Scholnick. Mrs. Kim K. Lie, president of the Detroit Chapter of the Archives, welcomed more than 75 guests to this elegant affair, which is the longest-running fund-raising event for the Archives.

The Archives received a \$2,000 grant from the Pasadena Art Alliance toward the transcription, editing, and reproduction of oral history interviews of California contemporary artists. Mrs. Yoshiko Mori donated \$12,000 to fund a video interview with Richard Shaw, a Bay Area potter. *Richard Shaw: Love of the Common Object* describes the ceramicist's artistic philosophy and goals.

The Archives' Annual Appeal for FY 1998 raised over \$35,000 to support Archives' operations and to fund the Brown Challenge Grant, which will establish the William E. Wolfenden Fund for Archives' publications. All contributions to the Brown Challenge will be matched on a one-to-one basis by The Brown Foundation, Inc.

Freer Gallery of Art and Arthur M. Sackler Gallery

Milo C. Beach, Director

Much of the creative energy of the Galleries' staff, friends, docents, and volunteers was directed this year toward festivities around the 75th anniversary of the Freer Gallery of Art and the conclusion of last year's observance of the Arthur M. Sackler Gallery's first decade. An extraordinary outpouring of art from generous donors; successful curatorial detective work resulting in outstanding purchases; writing and production of many publications; planning and funding of exhibitions and research; and expansion of the Galleries' constituencies through public programs, publicity, and advertising marked the anniversary years as a truly remarkable period of growth.

The anniversaries also have given the Galleries new opportunities to focus on establishing endowment funds to ensure the future of important initiatives and programs, and to launch major multiyear projects that could not be undertaken without significant private support. I am delighted to announce that numerous donors expressed their confidence in the Galleries by contributing funds totaling nearly \$10 million over the last two years. These gifts will support a variety of gallery projects—from major publications, exhibitions, and acquisitions to endowments for research and education.

The anniversary celebrations not only honored the Freer's distinguished past, but also forecast a bright future in tandem with the Sackler Gallery. Together, the two institutions form the national museum of Asian art for the United States, maintaining separate collections and exhibition policies but sharing their staff and a single mission. The Freer also is home to a specialized collection of nineteenth- and early-twentiethcentury American art, including the world's most important holdings of work by James McNeill Whistler (1834–1919).

Symbolic of this auspicious alliance was the presentation of "Twelve Centuries of Japanese Art from the Imperial Collections," an exhibition of painting and calligraphy representing the taste and patronage of Japanese rulers from the ninth century to the present and held at the Sackler Gallery. Their Imperial Highnesses Prince and Princess Takamado were guests of honor for the gala dinner celebrating the exhibition opening.

The exhibition served as a finale to the Sackler's anniversary year and the inauguration of the Freer's 75th—a special tribute to the continuing collegiality between the Freer and the Japanese arts community that was forged by the Gallery's founder during his first visit to Japan in 1895.

"Twelve Centuries" was organized by the Imperial Household Agency, the Agency for Cultural Affairs, the Japan Foundation, and the Freer and Sackler galleries and was made possible by generous grants from the Henry Luce Foundation and the Blanchette Hooker Rockefeller Fund, with additional support from the Smithsonian's Special Exhibition Fund, the Japan World Exposition Commemorative Fund, and an indemnity from the Federal Council on the Arts and the Humanities. Its illustrated catalogue won awards from the American Association of University Presses, the Art Director's Club of Metropolitan Washington, and the American Association of Museums.

Many dedicated individuals merit recognition for the success of these anniversary events, but one extraordinary volunteer stands out as deserving our special gratitude. Without the enthusiastic commitment of Cynthia Helms, I suspect the anniversaries would have been far less productive and certainly less memorable. Mrs. Helms served simultaneously as chairman of the eight-member Anniversaries Committee (with Honorary Chairman Katharine Graham and Vice-Chairman Ann Kinney), planning two years of special events, and the nine-member Gala Opening Committee (with Honorary Chairman Senator Jay Rockefeller), organizing the dinner for "Twelve Centuries of Japanese Art from the Imperial Collections," and as co-chairman (with Ada Linowes) of the sevenmember Freer Gallery of Art Anniversary Dinner Committee.

In all of these roles, Mrs. Helms was indispensable for her creativity, persuasiveness, and plain hard work. Our ability to expand and refine the Galleries' offerings to visitors, scholars, and far-flung members of the public will be enhanced far into the future because of Mrs. Helms's leadership as a deft and gracious constituency builder.

Incongruous as it may seem, technology is another aspect of the broadening mandate of this and many other museums. As recently as five years ago, I could not have imagined how significantly computers and the Worldwide Web could advance the business of running a museum. But today, it seems unlikely that a museum director exists who does not understand the crucial role technology can play in attracting a wider public and making better use of a gallery's collections.

And so we are particularly grateful for the support we received this year from the Smithsonian's Office of the Provost, which provided funding for the Sackler and Freer photography department to digitize and store on compact disks some 12,000 color transparencies of art in the Galleries' collections. When the conversion is completed, the images will be accessible electronically for research, education, collections management, and public information. The digitized images are also being used to create an Institution-wide database that will offer electronic public access to the collections of all the Smithsonian art museums.

To efficiently manage these and other computer-based strategies critical to our mission as a public institution devoted to research and education, I appointed Michael Edson, a staff member who had developed and coordinated several impressive interactive computer-based programs, to head a new Department of Digital Information Services. Working with colleagues in other departments, the digital information services staff is charged with managing and developing effective new uses for technology at the Galleries.

Exhibitions

Summer is the season when museums on the Mall welcome their largest number of visitors, as travelers from around the nation and the globe take advantage of the Smithsonian's wealth of free and enjoyable educational pursuits. To attract them, along with local residents who work during the day, the Freer and Sackler Galleries, joined by the National Museum of African Art, the Hirshhorn Museum and Sculpture Garden, and the International Center Gallery, have extended their hours until 8:00 p.m. on summer Thursdays for the past three years.

This year's attendance at the Freer and Sackler during "Art Night on the Mall" was up 54 percent from 1997, due in no small measure to the Galleries' rich selection of exhibitions, films, and concerts. Just as they have done during previous Art Nights, members of the Freer and Sackler docent corps volunteered beyond their regular service to greet visitors, give impromptu "mini-tours," and answer questions about the collections.

All the exhibition galleries were open this summer, with "Ikar: Splendid Silks of Central Asia from the Guido Goldman Collection," the Gallery's first major presentation of textiles, attracting a new audience to this colorful and dramatic array of rare woven silk, velvet, and cotton garments and wall hangings from nineteenth-century Central Asia. One admiring critic commented that the exhibition "makes a good case for the elevation of textiles to fine-art status." In conjunction with the exhibition, the Gallery and the Smithsonian Associates cosponsored a two-day symposium on ikat textiles in Asia coordinated by Louise Cort, the Galleries' curator for ceramics. Participants toured the Sackler exhibition and heard from specialists on the ikat weaving of Central Asia, India, Thailand, Laos, and Japan.

Summer visitors to the Sackler also could see "Sakhi: Friend and Messenger in Rajput Love Painting," a small but potent loan exhibition that explored Rajput love poetry and the role of the "female friend" in facilitating romance between the heroine and her beloved.

Another summer exhibition, "Poetic Landscapes: Two Chinese Albums," drew on two seventeenth-century albums in the Sackler collection to show the relationship between calligraphy and image in Chinese painting. "The Buddha's Art of Healing," a presentation of 17 paintings from an extraordinary illustrated medical treatise, on loan from the History Museum of Buryatia (Siberia) and one of the greatest surviving treasures of Tibetan civilization, attracted a large audience of visitors interested in Buddhism, Tibet, and the history of medicine.

"Puja: Expressions of Hindu Devotion," the popular interactive exhibition and Web site that resulted from collaboration among gallery education specialists, members of the local Hindu community, scholars, and representatives from the American Council of the Blind, the National Council of Senior Citizens, the National Federation of the Blind, and Gallaudet University, won the 1998 Accessibility Award from the American Association of Museums and the National Organization on Disability. The JCPenney Company provided a \$1,000 prize to the Gallery.

At the Freer, new exhibitions focused on aspects of the collections appropriate to the 75th anniversary. "Arts of the Islamic World" presented many of the outstanding objects from a part of the Freer collection that has developed primarily since the 1950s and grown significantly over the past decade. Today, the Freer collection of Islamic art, together with the rich holdings of the Sackler Gallery, make Washington one of the world's most important cities for the exhibition and study of arts of the Islamic world.

"Charles Lang Freer and Egypt" featured a display of the founder's acquisitions made during two trips to Egypt, including examples from what is acknowledged as the best collection of eighteenth-dynasty glass in the world. The exhibition organizer Ann Gunter, associate curator of ancient Near Eastern art, is writing a book on Freer's interest in Egypt.

"Japanese Art in the Age of Koetsu" looked at the renaissance that transformed Kyoto into a vibrant hub of artistic activity in early-seventeenth-century Japan and focused in particular on the creative impact of Honoami Koetsu (1558– 1637), the artist who helped to inspire that rebirth. Koetsu, one of the most notable aesthetic pioneers of the period, was highly regarded by gallery founder Charles Lang Freer, who was able to acquire several important examples of his work. The four examples of Koetsu's calligraphy and one of his ceramic tea bowls on view were complemented by the works of other major artists of the period who collaborated with or were influenced by the multitalented Koetsu.

Public Programs

Along with a full schedule of exhibitions, public programs attracted many visitors to the Galleries this year, especially over the summer. ImaginAsia, which has become an institution for families and groups seeking intergenerational ways to enjoy museums together, drew unprecedented crowds and nearly overwhelmed education department staff and interns. On Mondays and Wednesdays during July and August, the galleries were filled with children and their "adult companions" exploring exhibitions as part of their ImaginAsia projects. An experiment with a late-afternoon session extending into early evening as part of "Art Night on the Mall" was a huge success.

Film programs this year included works by the "Beijing Underground," the next generation of young filmmakers to follow the celebrated "Fifth Generation" to the Beijing Film Academy; other films from China; and series featuring recent productions from Iran, the Philippines, Hong Kong, Vietnam, Japan, and Pakistan.

Special programs during Art Night—Korean dance and Indonesian music and dance—were held on the Freer steps, enhanced by splendid sunsets and summer breezes.

Marking the opening of the Sackler exhibition "The Buddha's Art of Healing" were five Tibetan Buddhist monks from the Drepung Loseling Monastery in southern India. During the first nine days of the exhibition, they created a five-foot mandala, or diagram of the universe, in colored sand. The process could be observed by a visit to the Sackler Gallery or from afar on washingtonpost.com, which featured daily updates on the process. The monks' efforts attracted 23,286 fascinated visitors to the Sackler. People arrived in a continuous flow, watching as the mandala emerged, first in a pattern of white chalk lines and then an increasingly colorful diagram as they filled in the lines with fine, colored sand. After the mandala was complete, tradition called for its destruction and deposit into a body of water, so that the sand could carry its healing powers all over the world. Consequently, on the ninth day, the monks performed a closing ceremony, then swept the finished design into a container, and led a phalanx of visitors to the nearby Tidal Basin, where, chanting, they poured the sand into the water.

The highlight and finale of the Galleries' full schedule of lectures and book events this year was the visit by acclaimed writer Jan Morris, who spoke on "Imperial Everest," drawing comparisons between British attempts to climb the world's highest mountain and British imperialism in Asia. Morris had been special correspondent for the London Times and broke the story of Sir Edmund Hillary's successful conquest of Everest in 1953.

Among the ten concerts scheduled this year in the popular Bill and Mary Meyer Concert Series were three concerts by Musicians from Marlboro and performances by the Shanghai Quartet; Cho-Liang Lin, violin, Hai-Ye Ni, cello, and Li Jian, piano; Mitsuko Shirai, soprano, accompanied by Hartmut Höll, piano; and the Brentano String Quartet, winner of the Cleveland Quartet prize.

As the season finale, the Takács Quartet devoted two evenings to the six string quartets of composer Béla Bartók (1881– 1945). Included in the program notes was an essay, "Bartók, the Chinese Composer," by Bright Sheng, who explains how his own music is influenced by his encounters with folk music in rural China during the Cultural Revolution, and by his later interest in Bartók, who incorporated Hungarian folk traditions into his work.

Presentations of Asian music regularly filled the Meyer Auditorium and sounded from the Freer steps in concerts by such acclaimed artists as virtuoso Wu Man, pipa (Chinese lute), and Joseph Fung, guitar; actor Iraj Anvar and vocalist Reza Derakshani presenting an evening of Persian poetry and music; Asad Ali Khan, the last surviving master of the "rudra vina" (bin), and Mohan Shyam Sharma, "pakawaj" (drum); Sanjay Mishra, guitar, and friends; Ilyas Malayev and Ensemble Maqam, performing music and dance from Central Asia; Karma Gyaltsen of the Tibetan pop band Chaksam-Pa playing Tiberan traditional songs; the Gamelan Mitra Kusuma Ensemble, a full Balinese gamelan; the Gundecha Brothers performing Hindustani vocal music; South Indian dancer Swati Bhise and vocalist Savithri Ramanand and her ensemble interpreting the twelfth-century love poem "Gita Govinda"; and Reiko Kimura, koto. Kimura is a longtime member of the Japanese new music ensemble, Pro Musica Nipponia.

Research

The Galleries' research mandate has been enhanced significantly this year by gifts that have allowed us to initiate important research projects and publications. The Andrew W. Mellon Foundation gave \$600,000 to support a four-year study, "Materials and Structures of East Asian Paintings," that is allowing researchers in the Department of Conservation and Scientific Research to address long-standing problems in the history and survival of works of art based on scientific knowledge of their components. Designed and directed by Dr. John Winter, the Galleries' senior conservation scientist, the project uses laboratory methods to examine the materials used in Asian paintings, how they are made, and how they deteriorate under various conditions.

In addition to a gift of funds to purchase an outstanding group of Chinese paintings and calligraphy in honor of the Freer's 75th anniversary (see Acquisitions), grants from the E. Rhodes and Leona B. Carpenter Foundation made possible the initiation of two important research and publication projects on Chinese art: A catalogue of the Freer and Sackler jade collections by Jenny F. So, curator of ancient Chinese art; and a catalogue of the Song- (960–1279) and Yuan- (1279– 1368) dynasty paintings in the Freer Gallery by Joseph Chang, associate curator of Chinese art.

The Galleries initiated a series of Occasional Papers reviving a Freer tradition. The first of the new papers, *Dara-Shikoh* shooting Nilgais: Hunt and Landscape in Mughal Painting, by Ebba Koch of the University of Vienna, focuses on an important Mughal hunt scene in the Sackler Gallery collection. A second Occasional Paper, *The Jesuits and the Grand Mogul: Renaissance Art at the Imperial Court of India (1580–1630)* by Gauvin Alexander Bailey of Clark University accompanied an exhibition of the same title. As guest curator, Dr. Bailey examined the exchange of visual imagery that occurred as a result of Jesuit missions to India.

Two imposing monographic studies—Sultan Ibrahim Mirzaos Haft Awrang, A Princely Manuscript from Sixteenth-Century Iran (1997), by Marianna Shreve Simpson with contributions by Massumeh Farhad, and *The Peacock Room: A Cultural Biography* (1998), by Linda Merrill—were copublished by the Freer and Yale University Press this year. The *Haft Aurang* volume was produced with the assistance of the Getty Grant Program and with funds provided by the Smithsonian Institution Scholarly Studies Program. *The Peacock Room* was made possible by a generous grant from the Henry Luce Foundation.

Acquisitions

We were surprised and particularly delighted with the number of related objects, even whole collections, that benefactors generously presented in observance of the Freer's anniversary. Among the gifts, for example, were the most important existing set of nineteenth- and twentieth-century Chinese calligraphies-the Ellsworth collection; the finest group of paintings and calligraphies outside of China by the seventeenth-century eccentric Zhu Da (more commonly known by his sobriquet Bada Shanren); 15 paintings by the twentiethcentury master painter Qi Baishi; a superb group of Chinese seals; an assembly of tea ceremony objects that animates the Freer collection of tea wares; a significant number of Islamic manuscripts; and a single Persian manuscript of such complexity that it too is a virtual collection within the covers of one book. Those groups, and the magnificent individual gifts as well, have almost all been gathered by true connoisseurspeople who have spent years assembling a meaningful group of objects, and whose knowledge of them often surpasses that of scholars in the field. We are especially honored that they chose the Freer to be home for these gifts, which have also inspired other collectors to make important donations. These acquisitions can be seen in a continuum with art donated for the tenth anniversary of the Sackler Gallery last year, when this distinctive giving pattern emerged: A group of 181 Japanese prints describing life in the port city of Yokohama, the entire group shown in a very popular 1990 Sackler exhibition; two major collections encompassing some 100 examples of calligraphy, painting, and drawing from the Islamic world; and highly important groups of ceramics from West Asia, the Khmer empires, and other regions in southeast Asia. In total, 898 important works have been designated as anniversary acquisitions for the national collections of Asian art. We are grateful to those foundations and private individuals who have contributed so generously in honor of these important anniversaries.

Staff

Vidya Dehejia, a scholar who has served as the curator of South and Southeast Asian art at the Sackler and Freer Galleries since 1994, was appointed to a new position as the Galleries' associate director and chief curator, supervising four curatorial areas (Japan; China; South, Southeast, and West Asia; and American art) and the education department. She continues to oversee the Galleries' South and Southeast Asian collections, which include some 4,000 works dating from the second to the twentieth centuries. With a single staff managing the complex exhibition schedules of the Freer and Sackler Galleries, the systematic and prompt circulation of accurate information has emerged as a critical aspect of the Galleries' exhibition program. In response to the need to standardize gallery procedures for exhibition development and implementation, Cheryl Sobas was hired this year as the Galleries' first exhibition coordinator. Ms. Sobas comes to the Smithsonian from the Brooklyn Museum of Art, where she was exhibitions manager.

In closing, I wish to personally pay tribute to the entire staff of the Freer and Sackler Galleries: These are people of extraordinary talent, who have worked long hours, continually suggested new ideas, carefully assessed possibilities, and made all the achievements of this year possible. They deserve the full appreciation of our expanding circle of friends and visitors.

Center for Folklife Programs and Cultural Studies

Richard Kurin, Director

Collaborations with associations, communities, and individuals marked the year with work on festival programs and restagings, Folkways Recordings, ongoing projects, and educational programs. The Smithsonian Folklife Festival's success was felt not only on the National Mall, but also back in Wisconsin, the Philippines, the Baltic Nations, and throughout the Río Grande/Río Bravo basin. The Center worked closely with the Wisconsin Arts Board and the Wisconsin Sesquicentennial Commission to feature Wisconsin as a state rich in ethnic diversity, with presentations that included Hmong, Latvian, Finnish, Mexican, Tibetan, Polish, Greek, Croatian, Swiss, African American, and Norwegian crafts, foodways, and, of course, music. Displays on the dairy and agricultural industries underlined the state's slogan, "America's Dairyland," with a red, Gambrel-style barn, holsteins that were milked several times a day, a pigpen and show ring for presentations on showing and raising pigs, and other agricultural presentations that revealed some of the lesser known yet widely produced crops in Wisconsin: a cranberry marsh, ginseng garden, a Three Sisters garden, and an Ojibwe Indian rice camp. A decorated tavern was the scene for fiddle, tuba, and accordion workshops, as well as sheepshead and euchre card games and narrative sessions. Two music stages featured a wide variety of music; one featuring soloists and small ensembles, and the other presenting polka and dance music that reflected a mix of ethnic sources, national traditions, and classical and popular influences. Occupational and recreational traditions were also highlighted, with presentations of cheese and beer making, logging and wreath making, lure making and boat building, and ice fishing. A highlight of the program came

on July 3 with a tailgate party. More than 150 members of the University of Wisconsin marching band came to open the tailgate party by marching onto the mock football field on the Mall and giving a performance of band music, and then closed the event with a rendition of the "fifth quarter." Governor Tommy Thompson joined other dignitaries, including Packer Hall of Famer Willie Wood, former Packer Tom Brown, director of the University of Wisconsin marching band Mike Leckrone, and Jim Irwin, voice of the Packers, who spoke about football community traditions. The Wisconsin program was made possible by and was produced in cooperation with the Wisconsin Arts Board and the Wisconsin Sesquicentennial Commission on the occasion of Wisconsin's 150th anniversary of statehood. Wisconsin corporate contributors included AT&T, SC Johnson Wax, and The Credit Unions of Wisconsin.

"Pabiyas: A Philippine Harvest" marked the centennial of the Philippine declaration of independence from Spain at the Festival. This program was the result of several years of research and development by the Smithsonian Center and the Cultural Center of the Philippines. Pabiyas, a Tagalog word meaning "gems" or something of value, given to strengthen a relationship, became a theme of a program that was organized, in part, to connect Americans and particularly Filipino Americans with the cultures of the Philippines. Some of the very best community-based artists who demonstrate mastery of their tradition came to represent their country, and they were presented in contexts familiar to all Filipinos. A basketball court, always a focal point of any barrio or barangay in the Philippines, hosted kulintang gong performers from Mindanao Island, Kalinga and Talaandig community groups from upland regions of the country, and martial artists. An elaborately decorated chapel was the venue for presentations by a bamboo marching band, devotional singers and dancers, and a rondalla ensemble. The chapel was lit up with elaborate colored lights for Philippine-American Day and the Fourth of July celebrations. Craft traditions were presented in three cluster areas that highlighted the technical process used by the artist: weaving, pounding, and carving. The small sari-sari (general goods) store on the site, "4 Marias," was the venue for some very thought-provoking narrative sessions on topics as varied as "concepts of home," "Philippine centennial," "Filipino time," and the "faces of gender." On Philippine-American Day, June 27, seven Filipino-American groups from across the country performed on the basketball court and then joined the Philippine delegation for a traditional procession around the Mall. Afterward, all the performing groups joined in presenting an evening concert. The Philippines program was produced in collaboration with the Cultural Center of the Philippines and the Philippines Centennial Commission and was supported by the American International Group, Inc., The Starr Foundation, Bell Atlantic, the Philippine Centennial Foundation/USA, and the Asian Cultural Council.

Issues of identity and resistance were at the heart of the program "The Baltic Nations: Estonia, Latvia, Lithuania." During the Soviet occupation, native languages and traditional customs were suppressed; the large song festivals, held every four to five years, provided one of the few opportunities for the expression of cultural identity. Thus music and song took on a special meaning, and music was heard everywhere in the Baltic Nations program. In one very moving session at the Lithuanian Village Table, participants from the Marcinkonys Village Folk Ensemble sang music of exile, from the time of the mass deportations to Siberia. In the Foodways kitchen, members of the Salmanis Family sang Larvian songs on the advantages of herring as they prepared fish soup. Craft demonstrations from the three countries featured work in wood, amber, metal, ceramics, and cloth, fence making, egg decorating, and straw craft. Opening day of the Festival, June 24. was also St. John's Day, or Midsummer Eve, Estonians, Latvians, Lithuanians, and Americans all joined together to celebrate the holiday with song, dance, and a large bonfire. The Baltic Nations program was made possible by and produced in cooperation with the Estonian Government and Estonian Ministry of Culture, the Latvian Government and Latvian Ministry of Culture, and the Lithuanian Government and Lithuanian Ministry of Culture.

The Río Grande/Río Bravo Festival program was a preview of a program on the relationship of culture to environment in the Río Basin planned for the 2000 Festival. A very diverse community was formed for this festival program, which included 17 participants coming from Basin regions in Texas, New Mexico, Colorado, and the Mexican states of Tamaulipas, Coahuila, and Chihuahua; and colleagues from El Colegio de la Frontera Norte (Tijuana and Ciudad Juárez), Mexico's Consejo para la Cultura y las Artes, Colorado College, Narciso Martínez Cultural Arts Center, New Mexico State University, University of New Mexico, and University of Texas-Pan American. Three thematic areas were defined in the program: environment and contemporary communities, traditional knowledge and management of environment, and local culture and sustainable development. In these areas participants demonstrated crafts, ground corn, cooked on a two-hot-plateburner makeshift stove, tuned accordions, talked about planting and ritual cycles, and generally engaged visitors in conversations on their traditions and on environmental issues in their communities. A single stage served both for conjunto music performances and dancing, and for narrative sessions where issues of land and water, migration and immigration, gender and occupation, education, resource management, and more were addressed. Each Festival week closed with a procession to San Isidro, patron saint of agriculture. The Basin project was cosponsored by El Consejo Nacional para la Cultura y las Artes with support from the U.S.-Mexico Fund for Culture (The Rockefeller Foundation, Fundación Cultural Bancomer, the Fondo National para la Cultura y las Artes), SBC Foundation, Texas Folklife Resources, and the Texas Council for the Humanities

The fourth annual Friends of the Festival Ralph Rinzler Memorial Concert on July 2 was a tribute to Rinzler's musical heritage and featured Klezmer musicians who were among the young innovators who created this distinctive sound of the 1930s, and musicians of the Klezmer revival. The concert was supported by Friends of the Festival, the Ruth Mott Fund, and The Recordings Industries Music Performance Trust Funds.

As we have seen in the past, Festival programs do not always end on the Mall in Washington. This year, the 1997 Mississippi Delta program was restaged in May in Greenville, Mississippi, and the Wisconsin program was remounted in August in Madison. The Philippine program continued with a small group of performers traveling to Hawai'i to participate in Philippine Centennial celebrations at the Honolulu Academy of Arts, and exhibit signs were shipped to Manila for a display mounted in the Cultural Center of the Philippines. In addition to program outreach, the research that went into all four Festival programs also remained back home, in the form of contributing fieldwork and Festival documentation to an existing or new archive, as well as leaving behind a group of people trained in fieldwork skills.

Folkways Recordings celebrated a banner year with the winning of two Grammy Awards and with the observance of its 50th anniversary. The very large reissue project that produced the boxed set of six compact discs, ample documentation, and a CD-ROM track on an enhanced CD-the Anthology of American Folk Music-received two Grammy Awards in the categories of "Best Liner Notes" and "Best Historical Album" in February. A few months later, on May I, a gala concert in Carnegie Hall marked the 50th year of the founding of Folkways Records. Ossie Davis and Theodore Bikel served as masters of ceremonies, and performers included Bernice Johnson Reagon, Dar Williams, Mickey Hart, Ella Jenkins, Los Pleneros de la 21, Lucinda Williams, the Mahogany Brass Band and Norman Dixon's Untouchable Secondliners, the New Lost City Ramblers, Pete Seeger, Ralph Stanley, the SNCC Freedom Singers, Toshi Reagon, and Ulali. The concert was supported by BMI (The American Performance Rights Organization), Columbia Records and Sony Music Entertainment, KOCH International, Smithsonian Magazine, and TRO (The Richmond Organization). The Festival also celebrated Folkways at 50 with three concerts. A children's matinee featured Ella Jenkins and Larry Long with children from rural schools in Alabama. "Folkways Founders" featured Arlo Guthrie, Toshi Reagon, Josh White, Jr., and The Willie Foster Blues Band, musicians who have carried on the traditions of Folkways artists Woody Guthrie, Lead Belly, Josh White, and Sonny Terry-recognized this year with stamps issued by the U.S. Postal Service. The third Folkways concert, "Heartbeat," honored Native American Women singers from across the continent and celebrated the release of a new Folkways album. These concerts were supported by The Recording Industries Music Performance Trust Funds.

Other Center projects reflect ongoing collaborations with communities and individuals. The Latin American Youth Center, in partnership with the Washington metropolitan area Latino community, the Historical Society of Washington, D.C., and the Smithsonian Institution, recently created the Latino Community Cultural Heritage Center (LCCHC). The mission of LCCHC is to research, exhibit, and preserve the history and culture of the Washington Latino community. Several Smithsonian units have been collaborating on the inaugural exhibit scheduled to open in the spring of 1999. The project was partially supported by grants from the D.C. Humanities Council and the Smithsonian Educational Outreach Fund to develop educational materials to complement the exhibit. The curatorial team includes staff from the Center for Folklife Programs and Cultural Studies and other Smithsonian offices, Latin American Youth Center staff and interns, Historical Society staff, local researchers, and community advisory committee members. The African Immigrant Folklife Study continues to work with African immigrants and organizations. A steering committee was formed to bring together African immigrants and other Washingtonians for exchange and dialogue between new and established African communities in the United States through research-based educational and cultural programs. The traveling exhibition "Creativity and Resistance: Maroon Cultures of the Americas" is organized jointly by the Center and the Smithsonian Institution Traveling Exhibition Service and is scheduled to begin traveling in the spring of 1999. The exhibition addresses five centuries of ideas and experience reflecting a legacy of freedom, survival, and self-determination through contemporary objects, photos, text, and quotes.

Collaboration with teachers, with Festival staff and participants, and with the Smithsonian Office of Education culminated in the fifth year of the Center's teacher's seminar. "Bringing Folklife into Your Classroom: A Multicultural Learning Experience" drew upon the Festival as a "living laboratory" for using multicultural resources and folklife techniques in the K-12 classroom. During the seminar, which is administered by the Office of Education and taught by Center education staff, Washingtonarea teachers tap their own cultural backgrounds, study the cultures featured at the Festival, and learn about the research-based methods of interpretation and representation presented at the Festival. By the end of the five days, teachers must outline a practical plan for using in their classrooms what they have learned. The seminar brought together a record number of teachers (18, in addition to several observers or auditors) and hopefully it will lead to the ultimate collaboration of teachers, tradition bearers, and students.

Hirshborn Museum and Sculpture Garden

James T. Demetrion, Director

The Hirshhorn Museum and Sculpture Garden, the Smithsonian Institution's museum of modern and contemporary art, is committed to increasing the awareness and understanding of art through acquisitions, exhibitions, publications, research activities, public programs, and the presentation of the collection in its galleries and outdoor exhibition spaces. The museum provides a public facility for the exhibition, study, and preservation of 20th-century art while presenting a spectrum of contemporary work.

Research by Hirshhorn scholars reaped particularly rewarding benefits during the year. The scholarly persistence of Judith Zilczer, Curator of Paintings, led to a discovery about the subject of a figurative composition by Dutch-born American artist Willem de Kooning (1904–1994) in the Hirshhorn's permanent collection. The painting's male figure had always been known by its descriptive title Reclining Man and assigned the date 1964, but after a Washington colleague pointed out that the face resembled that of President John F. Kennedy, Zilczer began piecing together archival evidence and recollections from de Kooning's intimates and associatesincluding artist Susan Brockman, sculptor Ibram Lassaw, and photographer Hans Namuth (who photographed the painting shortly after it was created)-which proved the painting represents the artist's personal response to the national tragedy of Kennedy's assassination on November 22, 1963. Both the New York Times and the Washington Post reported Zilczer's discovery in July, and she presented her research in a scholarly article for the summer 1998 issue of American Art, the journal of the Smithsonian's National Museum of American Art. As a result of Zilczer's research, the work has been retitled Reclining Man (John F. Kennedy) and assigned the earlier date of 1963.

In the conservation department, conservator Susan Lake also examined the work of de Kooning and other Abstract Expressionists, undertaking new research into the paints and pigments used by this group, for whom the descriptive nature of paint was an essential factor in communicating a message. Her analysis of de Kooning's work in the Hirshhorn's collection revealed various mixtures of housepaint, ground glass, plaster of paris, and chalk on several paintings and provided numerous other insights into the artist's studio methods. Lake's findings, which also touched on Jackson Pollock's work, were later published in the National Gallery of Art's conservation research journal.

Tapping Smithsonian resources, this year's installments of the "Collection in Context" exhibition series continued to reflect an interdisciplinary approach by using nonart materials to elucidate the form, content, and context of select objects in the Hirshhorn's collection. An exhibition on French Cubist sculptor Raymond Duchamp-Villon's 1914 bronze *Horse*, organized by curator Zilczer, dramatized the artist's pursuit of a machine-based style by displaying studies and contextual artifacts—period views of machinery expositions, examples of freeze-frame photography, and rare scientific treatises—as well as correspondence and documents. Material was borrowed from the Library of Congress, Smithsonian Institution Archives, Smithsonian Institution Libraries, and Archives of American Art. Next in the series was a summer exhibition, organized by Valerie J. Fletcher, Curator of Sculpture, on Henry Moore's seminal 1937 carved wood sculpture Stringed Figure No. 1, in which taut rows of string imbue an organic, natural composition with the logic of engineering—a fusion unprecedented in the history of modern sculpture. Pinpointing Moore's source, Fletcher borrowed two nineteenth-century mathematical models from the Smithsonian's National Museum of American History that matched those Moore saw 60 years ago at the Science Museum in London, thus spurring him to create this first in a series of sculptures. To demonstrate the relationship of the British artist's innovations to sculptures that preceded and followed it, works from the Hirshhorn's permanent collection by Constantin Brancusi, Naum Gabo, Barbara Hepworth, Alexander Calder, and others were also exhibited.

During the year, Fletcher continued her long-term research on evolving issues, practices, and ethical questions surrounding cast sculpture of the nineteenth and twentieth centuries. Her work took her to the archives of the Musée d'Orsay in Paris, the Henry Moore Foundation in Hertfordshire, England, and elsewhere to study a broad range of artists, techniques, and materials. In June, Fletcher's capsule history of the Hirshhorn's 4.2-acre garden and plaza complex and a work-by-work analysis of some 65 sculptures there appeared in A Garden for Art: Outdoor Sculpture at the Hirshborn Museum, copublished by the museum and Thames and Hudson. The 96-page guide, made possible by a generous gift from Board Chairman Robert Lehrman and supported by a grant from the Smithsonian Women's Committee, provided a clear, in-depth overview of the subjects, styles, materials, and conservation issues embodied by the museum's comprehensive collection of modern and contemporary sculpture, using clear language to foster understanding and appreciation of each work.

The Hirshhorn's exhibitions continued to provide compelling, diverse aesthetic and learning experiences for visitors. Stanley Spencer (British, 1891-1959), whose biblical scenes, nudes, portraits, allegories, and landscapes have been little exhibited or studied outside his native England, was the subject of "Stanley Spencer: An English Vision" (October 9, 1997-January 11, 1998), cocurated by Hirshhorn Director James T. Demetrion and Andrea Rose of the British Council, London. British writer Fiona MacCarthy contributed an essay to a fully illustrated 195-page catalog, and the show received major support from Howard and Roberta Ahmanson, Fieldstead and Company. Among numerous public programs was a Sundayafternoon lecture series (October 12-November 16) exploring Spencer's work from four distinct perspectives. "Stanley Spencer: A Modern Visionary" was the keynote presentation by Duncan Robinson, author of a seminal 1979 monograph on Spencer and Director of Fitzwilliam Museum in Cambridge, England, one of more than 30 lenders to the exhibition. Judith Collins, a curator of twentieth-century British art for the Tate Gallery in London, presented a lecture titled "Sacred and Secular: Stanley Spencer and His Contemporaries." Then came "Painting God in Our Village: The Religious Dimension of Spencer's Painting" by Nicholas P. Woltersdorff,

Professor of Philosophical Theology at the Yale University Divinity School. The series ended with "Stanley Spencer's Artistic Legacy," an exploration by Hugh Davies, Director of the Museum of Contemporary Art in San Diego. After closing in Washington, the exhibition further introduced non-Britons to Spencer's work at the Centro Cultural/Arte Contemporáneo in Mexico City (February 19–May 10, 1998) and the California Palace of the Legion of Honor, Fine Arts Museums of San Francisco (June 8–September 6, 1998).

"George Segal, A Retrospective: Sculptures, Paintings, Drawings," on tour from the Montreal Museum of Fine Arts in Canada where it was organized by guest curator Marco Livingstone, appeared at the Hirshhorn February 19 to May 17, 1998. This four-decade retrospective honored an American artist (b. 1924) whose evocative sculptures of everyday people in urban environments have become signature works of modern art. The show included such landmark works of the Pop Art era as Cinema, 1963, as well as single-figure reliefs, boldly expressive paintings and pastels, and the original, mixed-media version of Depression Bread Line, 1991, recently cast in bronze for Washington's new, much-visited Franklin Delano Roosevelt Memorial. Public programs included a dialog with the artist on March 9, an event so popular that some 200 people had to be turned away, as well as writers' workshops, two programs for families, and multiple screenings of a documentary in which Segal's singular working method is shown. Ads in subways and buses illustrating (appropriately) the Hirshhorn's Bus Riders, 1962, appeared as a public service by special arrangement with Washington Metropolitan Transit Authority. The 62-piece exhibition, which attracted sizable crowds and widespread local media coverage, including two television pieces, traveled after closing at the Hirshhorn to the Jewish Museum in New York and the Miami Art Museum in Florida.

"Triumph of the Spirit: Carlos Alfonzo, A Survey, 1975-1991," a large exhibition of paintings organized for the Miami Art Museum by Associate Curator Olga M. Viso of the Hirshhorn, came to Washington in a slightly abridged version, appearing June 18-September 13, 1998. Featuring the expressive, symbol-laden imagery of this Havana-born, Miami-based painter (1950-1991), the show went far in establishing a place for Alfonzo, who died at age 40 on the brink of broad recognition, within international art currents of the 1980s. A scholarly catalog with an essay by Viso and contributions from Giulio V. Blanc, Dan Cameron, Julia P. Herzberg, and Cesar Trasobares accompanied the show, and Hilton Kramer of The New York Observer, among others in the local and national press, wrote about Alfonzo's work with enthusiasm. The exhibition's Washington presentation received major support from the Smithsonian Latino Initiatives Fund, and because the show had a summer time frame, public programs were able to tie into the Smithsonian's "Art Night on the Mall" program of extended evening hours on Thursdays. Viso presented a three-part exhibition tour for Art Night. Most notable, however, was "Latin Music on the Plaza," an

outdoor concert series—the Hirshhorn's first ever—that attracted some 8,000 visitors over 11 weeks. The series was cosponsored with the Prince George's Arts Council and coordinated by Senior Educator Teresia Bush of the Hirshhorn.

The Directions series continued to introduce the diverse work of artists establishing international reputations. "Directions-Toba Khedoori" (November 20-February 22, 1998) presented three floor-to-ceiling wax-covered paintings on paper by this Los Angeles-based Australian-born artist (b. 1964). Organized by Associate Curator Viso, who discussed Khedoori's work in a gallery talk on December 4, the show revealed the artist's dexterous approach to phantom figuration, as one critic has coined a current trend, in enormous floating images of a rooftop railing, a cutaway view of a house, and a section of empty theater seats. In "Directions-Kiki Smith: Night" (March 19–June 21, 1998), an American artist (b. 1954) who energized figurative sculpture in the late 1980s with her expressively anatomical images of the human body revealed a new direction focused on nature. The show, organized by Associate Curator Phyllis Rosenzweig, featured a metaphorical, nocturnal ecosystem consisting of a dioramalike photo-etching of animals interacting at night and, filling the Directions Gallery's center, long platforms displaying literally dozens of silhouetted and three-dimensional sculptures of birds, stars, flowers, rabbits, cats, snowflakes, raindrops, eggs, and other natural elements. Bringing sound and movement into the space, "Directions-Tony Oursler: Video Dolls with Tracy Leipold" (July 2-September 7, 1998) created a lively, amusing, often unsettling environment in the first solo museum show in Washington for this innovative artist (b. 1957). Organized by public affairs head Sidney Lawrence, the show presented six of Oursler's unusual doll-like cloth figuresfrom puppet to effigy size---wherein talking heads in the form of live-action video projections of expressive, loquacious, anguished faces confront and amuse the viewer. The artist's most frequent model and collaborator, performer Tracy Leipold, was the focus of this group of works. In a series of public programs for Art Night, Oursler's interest in film, the media, and psychology (specifically a condition known as multiple personality disorder) was explored.

Notable acquisitions for the year included German artist Georg Baselitz's carved-wood sculpture, *Tragic Head*, 1988, exhibited on the lower level and featured in the Winter 1998 calendar. Also acquired but not displayed until later were American artist and MacArthur Prize recipient James Turrell's outstanding light installation, *Milk Run*, 1996, and Pop artist Claes Oldenburg's important early soft sculpture *Bathtub* (*Model*)—*Ghost Version*, 1966.

Public programs, some newly introduced, provided diverse opportunities for education and enrichment during the year. The 1997 Mordes Lecture in Contemporary Art, made possible by Board member Marvin Mordes of Baltimore and his wife, Elayne, featured Roberta Smith, longtime art critic for the *New York Times* and, in the early 1980s, the *Village Voice*, who gave a lecture on November 2, 1997, titled "On Becoming and Remaining a Critic." "New Voices," featuring the viewpoints of emerging art scholars on changing exhibitions, was developed by Senior Educator Teresia Bush and launched in the fall. A "Young Artist" program started in the spring with "Sketching and Music in the Garden" for all ages. The popular George Segal exhibition was enlivened by a gallery presentation by Argentine performance artist Guillermo Silveira and by a poetry workshop that attracted nearly 60 participants. "First Friday" gallery talks continued monthly, and the popular independent film series included a range of new and unusual works culled from international festivals and rarely, if ever, screened in commercial movie houses. A sampling includes Mat'i syn (Mother and Son), 1997, Alesandr Sagoruv's masterwork about a dying woman attended by her grown son (in Russian with English subtitles), and Quien diablos es Juliette? (Who the Hell Is Juliette?), 1997, Carlos Marcovich's offbeat Cuban hit about a friendship between a teenager and a model starring in a music video (in Spanish with English subtitles).

Trustee and staff changes for the year included the election of a new board member, businessman and collector Mitchell Rales, and the appointments of longtime Assistant Registrar Brian G. Kavanagh as Chief Registrar, and of Linda S. Powell, Curator of Education at the Kimbell Art Museum in Fort Worth, as the Hirshhorn's Education Program Director.

National Air and Space Museum

Donald D. Engen, Director

The National Air and Space Museum's attendance continued to climb in 1998, with over 10 million visitors. Five new exhibitions were opened, and progress continued on the planning and fund-raising for the Dulles Center, including the campaign to raise \$130 million to build the center, which is due to open in late 2003. The Dulles Center will house nearly 200 aircraft and 100 spacecraft, most of which will be on display to the public for the first time.

The museum also embarked on a major renovation project, which will be accomplished without ever completely closing the building. The project will replace all of the museum's "window walls," the large exterior panes that give the museum its distinctive look. All the skylights in the museums will also be replaced. The first and second floor ceilings will be replaced, and both the lighting and public address systems will be upgraded. Each of the museum's artifacts currently on display will need to be carefully protected ot relocated. The project will be done in 11 phases, ending in July 2001. Each area will be closed for approximately six months, during which all the work in that area will be completed. Only two areas (totaling up to 30 percent) of the museum will be closed at one time, and this for an overlap of only 40 days.

Collections and Research

In fiscal year 1998, the National Air and Space Museum revised its Collections Information System, converting to a system that will allow museum staff and eventually the general public access to collections information. Museum staff members have begun the process of taking digital images of collections objects that will be linked to the new system and made available on the Web site.

The Collections Division also introduced a bar-code system for NASM artifacts. As building 7 at the Garber Facility is being renovated, the thousands of artifacts stored in the building are being removed. As they are removed, all objects are being bar-coded. This will facilitate moving artifacts to Dulles when that move begins. Bar-code information will be integrated into the new collection information system and will eventually provide an accurate and immediate update of location of each artifact in the museum's collection.

Three aircraft that were on exhibit in the museum's west end (gallery 104) were removed, disassembled, and moved into storage at Garber. In their place, the Collections Division assembled and suspended a Beechcraft Kingair and assembled and positioned a Cessna Citation jet for the Business Wings exhibition. The "Enola Gay" exhibition in gallery 103 was taken down and the forward fuselage and other B-29 parts were stored in the gallery for the duration of the museum's renovation project.

Restoration continued on the Aichi Seiran, with the completion of both the aircraft's floats. Over 12,700 hours were put into this project during the year and it is approximately 90 percent complete. Restoration continues on the Hawker Hurricane with over 3,000 hours expended. Like the Seiran, it is approximately 90 percent complete. The Nieuport 28 restoration is approximately 75 percent complete, with the majority of the work being done by volunteers. The Soviet SA-2 Guidelines surface-to-air missile was completed during fiscal year 1998 and work continues on the restoration of the transporter. The restoration of the Pitts Special *Little Stinker* also continues with volunteers and is also approximately 90 percent complete.

Several other air and space artifacts were moved in and out of the Garber shop during the year for preservation work. These include World War II German aircraft, the Blohm & Voss BV-155, and the Folke-Wulfe Ta-152, with work also being done on the Dornier Do 335.

The NASM Engine Preservation Project also continued at an extremely effective pace. More than 135 separate aircraft power plants have been placed on mobile stands constructed within the shop and preservation of these engines proceeds.

The new conservation lab at the Garber Facility was completed during fiscal year 1998. The new lab gives the Division's conservation unit a suitable work space to continue the conservation of objects to prepare them for the move to the new Dulles Center.

In a ceremony on December 10, Museum Director Donald D. Engen accepted into the collection a backup "Iridium" spacecraft. This is one of the few "production" models in the collection, and represents achievements in space communications and applications for the public.

The Aeronautics Division produced a Collections Rationale (August 1998), which contains essays that relate to seven categories of aircraft, including helicopters and lighter-thanair craft and ten categories of non-aircraft artifacts in the collection. These essays set forth the rationale for collecting specific aircraft or classes of objects within each category, based on their significance.

Members of the Division worked collectively to produce the most recent edition of the Aircraft of the National Air and Space Museum, published by Smithsonian Institution Press and edited by curator Robert van der Linden.

Martin Collins of the Space History Division earned his Ph.D. degree in history from the University of Maryland. His dissertation was titled, *Planning for Modern War: RAND and the Air Force: 1945–1950.* John Anderson of the Aeronautics Division published A History of Aerodynamics and Its Impact on *Flying Machines* with Cambridge University Press. Von D. Hardesty of the Aeronautics Division continued to act as editor of the Smithsonian History of Aviation Series, published by Smithsonian Institution Press. Among the titles published during the year were Space and the American Imagination by Howard McCurdy, and *Eye in the Sky: The Story of the Corona Satellites*, edited by Dwayne Day.

With the aid of satellites, scientists in the Center for Earth and Planetary Studies continued their research on Earth and other planets. In August, Mark Bulmer, Andy Johnston, and Fred Engle made the second extensive field trip to the Sabancaya volcano in Peru, and used Landsat, Spot, and Radarsat data to determine the likely paths of rock slides caused by future volcanic eruptions. Such rock slides are similar to those found on Venus and Mars because of the dry soil types, which led to this research project.

Bruce Campbell of CEPS and co-workers have been studying surface properties of Venus using both fractal models of planetary roughness, as well as the polarization properties of Magellan radar, finding that the electrical properties of the Venusian surface materials vary with elevation.

Ted Maxwell and Andy Johnston continued work in southern Egypt, surveying an area to determine the depth of penetration of orbital radar through the dry sand, and discovering an ancient drainage network beneath the sand through the use of Space Shuttle radar data.

The National Air and Space Archives made two major additions to its collections. The Edgar Mix Glass Plate Stereograph Collection consists of 38 cases of glass slides taken by Edgar Mix, an internationally renowned early balloonist and the second American to win the Gordon Bennett Balloon Race. The slides reflect aeronautical themes, including both lighter- and heavier-than-air subjects from the early 1900s and various aeronautical events taking place near Paris during 1910–1911. The Malcolm D. Ross Collection contains photographs, handwritten notes, correspondence, medical flight records, reports, and articles relating to Ross's involvement with Project Skyhook and his initiation of the Strato-lab program for upper atmosphere research.

Exhibitions and Public Service

In March, the museum's annual "Mutual Concerns of Air and Space Museums" seminar, cohosted by the American Association of Museums, brought more than 130 Air and Space museum directors, curators, and other staff together for three days of trading ideas and information concerning our museums.

The Aeronautics Division continued its participation in the Curator's Choice lecture program. Curator's Choice is designed to spotlight significant artifacts in the collection with a brief weekly lecture, most often given by the curator of the object to visitors to the National Air and Space Museum. Among the Aeronautics Division lecturers for this period were Robert van der Linden (the X-1: the first aircraft to break the sound barrier), Dominick Pisano (the Fokker D.VII), Ron Davies (the Ford Trimotor), Alex Spencer (Wiley Post's pressure suit).

Robert van der Linden of the Aeronautics Division continued to administer the General Aviation Lecture Series and the annual Lindbergh Lecture. Some of the featured speakers during the year were David Lee "Tex" Hill ("The Flying Tigers"), Colonel Gail S. Halvorsen ("The Berlin Candy Bomber, Operation Vittles, and the Cold War"), and Richard King ("The Old Rhinebeck Aerodrome"). The Lindbergh Lecture was given by William H. Dana ("On the Fringes of Space: The X-15 and the Lifting Bodies").

Five new exhibitions opened at the Museum between October 1997 and September 1998. "Star Wars: The Magic of Myth," which opened in October 1997, examined the mythology beneath the Star Wars story and how the age-old tale of the "hero's journey" is brought to life in the film trilogy. This temporary exhibition proved enormously popular. In November the Venus section of "Exploring the Planets" was updated to include recent images of the surface of Venus. In December "The National Transportation Safety Board" opened. This temporary exhibition examined the role of the NTSB in investigating aviation accidents and fostering transportation safety.

"Business Wings," a temporary exhibit on business aviation, opened on June 10, 1998. Curator for the exhibition was Dorothy Cochrane of the Aeronautics Division. "Business Wings" explored the role of aircraft are used in the business community and showed the different ways that aircraft in their day-to-day operations. The exhibition was made possible through the support of the National Business Aviation Association and features two significant business aircraft, the Beech King Air Model 90 and the Cessna Citation 500.

In July "Earth Today: A Digital View of Our Dynamic Planet," was added to the newly renovated entrance area of the Rocketry and Space Flight gallery. The core of this exhibit is a theater that displays a computer-generated, rotating image of the Earth more than a meter across, on which is shown, in near real-time, data relayed to Earth by satellites. Curator for this exhibition was Thomas Watters of the Center for Earth and Planetary Studies.

In September the Museum unveiled "¡Arriba! The History of Flight in Mexico, Central America, South America, and the Caribbean," a temporary exhibition that examined aviation in Latin America during the first century of flight.

The Exhibits Division was involved in a number of other projects during 1998. The Apollo 11 command module in the Milestones of Flight gallery was recovered with Plexiglas, and the visitor information desk in the south lobby was renovated. Design was also completed for the redo of the Douglas World Cruiser exhibit in the Pioneers of Flight gallery. Exhibit team members developed a concept for the redevelopment of the Air Transportation hall, and a design firm was contracted to handle the exhibition design. A planning document was completed for "Explore the Universe," a major new permanent exhibition tentatively scheduled to open mid-2001. The exhibition will examine how our view of the universe and our tools for studying it have changed over time. The core of the exhibition relates how space-age technology has transformed our understanding of the universe and what scientists today believe the universe is like.

Planning and development of a new IMAX film, *Up*, *Up*, and Away, continued throughout the year. The film will explore all forms of vertical flight, from balloons and airships to vertijets, with its primary focus being the helicopter and its important role in modern civil and military aviation throughout the world.

Continuing work by exhibits staff on the Museum's future Dulles Center included the design of display cases and exhibit units and the creation of a preliminary layout of the artifacts for use by Museum staff and the contractor building the facility.

National Museum of African Art

Roslyn A. Walker, Director

The National Museum of African Art celebrates the rich visual traditions and extraordinarily diverse cultures of Africa and fosters an appreciation of African art and civilizations through its collections, exhibitions, research and public programs.

Acquisitions

Among the most significant artworks acquired by the museum in the past year were a selection of 14 sculptures from Central and East Africa and a rare Mbete reliquary figure from Gabon; two fine Urhobo and Igbo figures from Nigeria; the artist's book *Emandulo*, *Rereation*, created in Johannesburg, South Africa; and a sculpture, *The Ancestors Converged Again*, by Ghanaian artist El Anatsui. In addition, the museum's Eliot Elisofon Photographic Archives acquired two important albums. One, dating from ca. 1886, contains 53 vintage images taken in the then Belgian Congo. A second album presents 170 vintage prints from Uganda and Kenya, dating to 1897–1903.

Exhibitions

The first level of the National Museum of African Art houses several permanent exhibitions drawing on the museum's collection: "Images of Power and Identity," "The Art of the Personal Object," and "The Ancient West African City of Benin, A.D. 1300–1897." In addition, in collaboration with the Museum of Fine Arts, Boston, the museum offers "The Ancient Nubian City of Kerma, 2500–1500 B.C.," a loan exhibition of works from the permanent collection of the Museum of Fine Arts, featuring objects from Kerma, an ancient Nubian city that was located on the Nile River. The exhibition was organized by the Museum of Fine Arts, Boston, and its Department of Ancient Egyptian, Nubian, and Near Eastern Art; all objects are from the Harvard University– Museum of Fine Arts, Boston, Expedition.

Also located on the first level is the Sylvia H. Williams Gallery, which was the location of the exhibition "The Poetics of Line: Seven Artists of the Nsukka Group," showcasing the work of seven leading members of a group of artists who have studied or taught in the Department of Fine and Applied Arts at the University of Nigeria, Nsukka. In addition, on view in the gallery was the exhibition "South Africa 1936–1949: Photographs by Constance Stuart Larrabee," the first public presentation of an important collection of black-and-white photographs of South Africa given to the museum by the photographer in 1997.

The first level is the location of the Point of View gallery, which presents small temporary exhibitions that focus on specific themes or objects. This gallery was the site of two exhibitions this year. "A Spiral of History: A Carved Tusk from the Loango Coast, Congo" (February I–April 26) presented a single carved ivory tusk revealing an artist's conceptions about history and cultures in transition. "African Forms in the Fumiture of Pierre Legrain," (August 16–November 29) explored the influence African chairs and stools had on the work of Pierre Legrain (1889–1929).

The museum's second-level gallery was the site of the exhibition "Olowe of Ise: A Yoruba Sculptor to Kings," presenting more than 30 major works by the Yoruba sculptor.

Many of the ceramic works featured in the previous exhibition "Purpose and Perfection: Pottery as a Woman's Art in Central Africa" were reinstalled in the exhibition "Ceramics at the National Museum of African Art," on the third level.

Also this year, three contemporary works of art by Nigerian artist Sokari Douglas Camp were on view in the museum's pavilion.

Education and Outreach

The museum's educational offerings, which spring from the permanent collections and special exhibitions, provide audien-

ces with provocative and insightful views of the world of African art. An array of tours, workshops, and focus programs gave students of all ages their first encounters with real works of African art.

Highlights included a two-day symposium on the Nsukka Group, contemporary artists of southern Nigeria and its relationship to Nigerian art and culture, and a family day held in conjunction with the exhibition "Olowe of Ise."

The museum also participated in "Art Night on the Mall," offering a variety of programs during extended summer hours on Thursday nights.

In addition, workshops and demonstrations by practicing artists engaged attentive audiences eager to meet and talk with African artists. For example, artists-in-residence, Nassouko and Amidou Coulibaly, Malinke textile artists from Côte d'Ivoire, demonstrated how to spin cotton and weave on a strip loom.

The museum also continues to make itself accessible to people with special needs. Tours for hard-of-hearing visitors were made possible through a portable FM Assistive Listening System. This system also allowed hard-of-hearing visitors to participate in educational programs in the workshop and lecture hall. Sign-language interpreters for deaf visitors were available upon request for all museum programs.

Publications

Throughout the year, the museum published informational materials to accompany exhibitions. This included brochures relating to "The Poetics of Line," "Olowe of Ise," "A Spiral of History," "African Forms in the Furniture of Pierre Legrain" and "South Africa 1936–1949: Photographs by Constance Stuart Larrabee."

Photographic Archives and Library

The museum continues to be a leading research and reference center for the visual arts of Africa. The Warren M. Robbins Library, a branch of the Smithsonian Institution Libraries, contains more than 20,000 volumes on African art and material culture. The Eliot Elisofon Photographic Archives specializes in the collection and preservation of visual materials on African art, culture and the environment.

National Museum of American Art

Elizabeth Broun, Director

The 1998 fiscal year saw many happy developments at the National Museum of American Art. A dramatic increase in private funding revitalized the Museum's 30-year-old fellowship program. In addition to support from the Renwick Alliance and the Sara Roby Foundation, which supported two fellows, fellowships were underwritten by Patricia and Phillip Frost and Sheila W. and Richard J. Schwartz. Our widely recognized expertise in Latino studies led the Rockefeller Foundation to fund four Latino fellowships. An aggressive promotional campaign, which disseminated fellowship information through new brochures and the museum's Web site, produced many high-quality applications. Nineteen fellows, the largest number in the program's history, will pursue independent research based on the museum's collection in the 1998–99 academic year.

Attendance was up significantly, exposing larger audiences to special exhibitions. "Eyeing America: Robert Cottingham Prints" celebrated the acquisition of a set of the artist's photorealist prints spanning three decades that focus on signs, storefronts, and marquees, the emblematic details of the urban American landscape. The Museum premiered David Hockney's 24-foot painting of the Grand Canyon, titled "A Bigger Grand Canyon." The work, composed of 60 small canvases mounted as one continuous image, presents a sweeping, colorful view of one of America's most extraordinary topographical wonders. The Museum celebrated the final weekend of its most popular show ever, "Ansel Adams, A Legacy: Masterworks from the Friends of Photography," with extended evening hours until 11 p.m. on March 27 and 28. Both nights featured live jazz, café dining, and screenings of a video on Adams's career. More than 11,500 people took advantage of this opportunity, made possible by the generous support of the Monsanto Corporation, to see the exhibition, which attracted some 285,000 visitors in 18 1/2 weeks.

The Renwick Gallery, a department of the National Museum of American Art, introduced the work of a relatively unknown artist working with pure gold, steel, fossil ivory, and precious gems to create extraordinary objects featured in "Daniel Brush: Gold without Boundaries." Beautifully installed at the Renwick Gallery, it drew unusually large attendance (almost 50,000 in four months).

In July First Lady Hillary Rodham Clinton helped launch the second phase of SOS! (Save Ourdoor Sculpture), a \$1.4 million public-sculpture conservation program funded by generous grants from Target Store and the National Endowment for the Arts. SOS! is a nationwide public program cosponsored by the National Museum of American Art and the Heritage Preservation.

Several acquisitions by the National Museum of American Art focused on the museum's heightened involvement with contemporary art. The purchase of *Megatron/Matrix* (1995), a multimedia installation by pioneer video artist Nam June Paik, articulates the borderless reality of the contemporary world and the central role of technology in modern society. The museum's acquisition of Carlos José Alfonzo's painting *Where Tears Can't Stop* (1986) explores the personal iconography of his Caribbean heritage.

Of many exciting education programs held, perhaps most notable was the Museum's first high school poster competition and award ceremony in conjunction with the "Posters American Style" exhibition. The students' poster designs were so popular that the U.S. Department of Veterans Affairs reproduced several of them to display at their facilities in Veteran's hospitals nationwide.

Major planning was started at the National Museum of American Art for an upcoming renovation of its home in the Old Patent Office Building, the first in over 30 years, and on the quiet phase of a capital campaign to raise private funds for expansion space and new endowment for future programs and acquisitions. As a part of planning for the upcoming renovations, the Museum began making arrangements for an ambitious program to share masterpieces from the permanent collection with museums all over the nation while the Old Patent Office is closed to visitors in Washington. Eight thematic exhibitions were offered to dozens of museums and bookings began for the tours. The Museum also invested considerable effort in finding a corporate partner for the touring program to provide heightened visibility for this unusual opportunity for many Americans to see their national treasures at a museum close to home.

National Museum of the American Indian

W. Richard West, Director

The National Museum of the American Indian is dedicated to the preservation, study, and exhibition of the life, languages, literature, history, and arts of the Native peoples of the Western Hemisphere. In consultation, collaboration, and cooperation with Native peoples, the museum works to protect and foster their cultures by reaffirming traditions and beliefs, encouraging artistic expression, and providing a forum for Indian voices. Through innovative public programming, research, and collections, the museum works to fulfill its mission.

Construction of the museum's Cultural Resources Center in Suitland, Maryland, was nearly complete at the close of the 1998 fiscal year, with the museum preparing to occupy and begin moving the collection to the state-of-the-art facility in early 1999. The Cultural Resources Center, designed in collaboration with tribes and Native peoples, will house, protect, and care for the one-million-object collection; serve as a center of research, study, community service, and outreach; and support the museum's public facilities on the National Mall and the George Gustav Heye Center (GGHC) in New York City.

A \$500,000 challenge grant awarded by the Kresge Foundation in July 1997 was successfully met in April 1998 thanks to the generous support of individuals, corporations, and foundations. This response has raised more than \$1.6 million for the Cultural Resources Center's completion and surpassed the October 1998 deadline of approximately \$1.5 million set by the Kresge Challenge.

Plans are well under way for the move of collections into the new Cultural Resources Center. As collections are moved, they will be digitally photographed to allow increased access to the collections through the Internet.

In November 1997 the museum presented its biennial Native American Film and Video Festival at the Heye Center, offering screenings of 70 films, videos, radio programs, and multimedia products by 70 indigenous media makers from North America and Latin America.

More than \$1.1 million was contributed during this fiscal year to NMAI's endowment funds for the completion and financial stability of its facilities and programs. Much planning and other work was completed this year in preparation for the December 2, 1998, fund-raising gala supporting the George Gustav Heye Center Endowment Fund.

"Indian Humor," an exhibition of 87 paintings, photos, sculptures, and mixed media works that use humor and irony to dispel the stereotype of stoic and serious Indians, opened at the GGHC in May. The exhibition addressed stereotypes through sarcasm, irony, and humor. "Indian Humor" was developed by American Indian Contemporary Arts of San Francisco.

"The Art of Being Kuna: Layers of Meaning Among the Kuna of Panama" opened in September at the GGHC with Kuna tribal leaders in attendance. Featuring approximately 300 works of art, including vibrant molas (colorful, richly decorated applique blouses that express all aspects of Kuna culture), the exhibition illustrates contemporary and historical Kuna life. "The Art of Being Kuna" was organized by the UCLA Fowler Museum and features molas from the NMAI collection. Support for the GGHC exhibition was given by the Smithsonian Center for Latino Initiatives and the 1998 Latino Initiatives Fund.

The museum continues its commitment, under federal law and museum policy, to repatriate human remains and objects of religions and cultural patrimony to Native groups throughout the hemisphere. Among the most significant returns this year was to the Haudenasaunee (Iroquois Confederacy) in September.

National Museum of Natural History

Robert W. Fri, Director

Since the National Museum of Natural History first opened its doors in 1910, it has become the most popular museum in the world among young people, their families, and their teachers. More than 165 million visitors—almost 6.5 million in 1998—have seen the treasures of the U.S. national collections and learned about Earth and human cultures from the museum's exhibitions. Looking ahead to a new century, Natural History remained committed to offering visitors experiences that are both rewarding and fun. At the same time, the museum worked toward fulfilling its goal of becoming a museum without walls and the center of a national network for science education.

The historic gift of \$20 million dollars from the Kenneth E. Behring family to the National Museum of Natural History in the fall of 1997—at that time, the largest donation ever made to the Smithsonian—will further both these goals. When the museum's new Behring Family Mammal Hall opens in 2003, its exhibits will reflect contemporary understandings of the adaptation and interdependency of species. The Behring gift is also being used to fund two programs that introduce museum collections and research to schools and communities throughout the United States: Mammals in the Schools, which provides museum specimens to school science labs for study with the assistance of museum scientists, and Mammals on the Move, which offers lively, idea-rich small exhibits to airports, malls, and other public places.

Other wings to the museum without walls under construction in 1998 included programs that bring teachers and museum scientists together on the Internet to create, test, and disseminate middle-school science lesson plans, and the expansion of summer-school and intersession science courses offered in partnership with Voyager Expanded Learning. The museum also strengthened its ties to other institutions throughout the United States and around the world. In Anchorage, for example, a partnership that began with the establishment of the museum's Arctic Studies Center within the Anchorage Museum of History and Art has grown to encompass long-distance learning programs for Alaskan schools and collaborations with Native cultural centers to produce exhibitions seen around the world. In Texas, the museum and the Smithsonian Center for Latino Initiatives continued to share ideas in research, exhibitions, and education with the San Antonio Centro Alameda, the National Park Service, the Mission Trails Redevelopment Project, and the Mexico-North Research Network. Natural History has undertaken a similar partnership with the Miami Museum of Science to create research and public programs to explore South Florida's rich biological diversity.

Research was central to the museum's work in 1998, as it has been every year. Outstanding examples include the following.

Through the museum, the Smithsonian was one of eight international organizations to contribute to the International Conservation Union's *Red List of Threatened Plants*, the first global survey of diversity and extinction among flowering plants, conifers, and ferns. The Red List shows that more than 12 percent of species in these plant phyla are threatened with extinction or nearly extinct. Led by Jane Villa-Lobos, director of the Department of Botany's Latin American Plants program, museum staff compiled the *Red List's* data on North, Central, and South American species.

To test the theory that humankind's earliest hominid ancestors evolved in response to sudden environmental change during the Pliocene epoch, paleobiologist Anna Behrensmeyer, codirector of the Evolution of Terrestrial Ecosystems Consortium, and anthropologist Richard Potts, director of the Human Origins Program, and their colleagues analyzed records of more than 10,000 fossils from the Turkana basin in Ethiopia and Kenya. The fossils, representing 246 species and spanning 4.4 million years to the present, showed no evidence of rapid evolution during the key period between 2.8 million and 2.5 million years ago. The results suggest that from its earliest days, our genus has shown an ability to adapt to a variety of habitats.

Paleobiologist Doug Erwin was chosen to be a member of NASA's new virtual Institute of Astrobiology. Working together on the Next Generation Internet, Erwin and his colleagues will research the very early history of life on Earth and the possibility of life on Mars, Jupiter's moon Europa, and elsewhere in this solar system.

Botanist Elizabeth Zimmer of the museum's Laboratory for Molecular Systematics and colleagues completed sequencing DNA extracted from the leaves of a member of one of the first families of flowering plants, a small tree with button-sized flowers recently found on a remote ridge in Madagascar. The discovery and study of this primitive species will help botanists better understand how flowering plants came to flourish on Earth 100 million years ago.

National Portrait Gallery

Alan Fern, Director

The National Portrait Gallery is dedicated to the exhibition and study of portraits of people who have made significant contributions to American history and culture and to the study of the artists who created such portraiture. It collects, documents, and preserves portraits in all media as both historical and artistic artifacts.

"Celebrity Caricature in America," a widely reviewed exhibition and visitor favorite, featured cleverly stylized likenesses of colorful personalties from the 1920s through the 1940s. The exhibition will travel to the New York Public Library in 2000, and was made possible by the Smithsonian Institution's Special Exhibition Fund, the Smithsonian Institution Scholarly Studies Fund, the Marpat Foundation, the Max and Victoria Dreyfus Foundation Inc., Mrs. John Timberlake Gibson, The Kiplinger Foundation, and NationsBank. The catalog was published by Yale University Press, and went into a second printing.

For the 50th anniversary of the Marshall Plan, the National Portrait Gallery and the George C. Marshall Foundation in Lexington, Virginia, co-organized the exhibition "George C. Marshall: Soldier of Peace," sponsored by the Bayer Corporation Pharmaceutical Division. The accompanying catalog is distributed by John Hopkins University Press. "Faces of Time: Seventy-five Years of Time Magazine Cover Portraits" commemorates Time's 75th anniversary and its gift to the Gallery of original artworks for the magazine's covers. The exhibition and tour of four venues (including two presidential libraries) were sponsored by Canon U.S.A., Inc. The catalog was published by Bulfinch Press/Little, Brown & Company in association with the Gallery. Other exhibitions included "Making a Time Cover" and "Andy Warhol FLASH—November 22, 1963." Work is under way on 11 other exhibitions opening through 1999, and plans for touring exhibitions from the Gallery's permanent collection during the time the museum will be closed for renovation.

Approximately 300 acquisitions were added to the collections. Among them two drawings of Lincoln Kirsten by Jamie Wyeth, a pastel drawing of James Baldwin by Beauford Delaney, two watercolor sketches of Josephine Baker by Paul Colin, and a drawing of Ben Shahn by Alexander Calder. Two major bequests received were David Rittenhouse by Charles Willson Peale, and Daniel Webster by Francis Alexander. Other acquisition highlights included portraits of Edward Albee by Menden Hall, George Inness by G.P.A. Healy, Michael DeBakey by Peter E. Shapiro, a platinum print (ca. 1919) of Robert Frost by Doris Ulman, a color carbro photograph (1933) of Franklin Roosevelt's Second Inaugural Address by Harry Warnecke, and a series of seven photographs of American composers made in 1950 by Naomi Savage. Conservation of 14 sculptures in the collection was made possible by a generous grant from the Smithsonian Women's Committee.

A two-day symposium, "Caricature and Cartoon in Twentieth-Century America," was sponsored with the Library of Congress. The symposium "Portraiture in the Age of Photography," was organized with the Victorian Society in America. The Selected Papers of Charles Willson Peale and His Family. Volume 5 The Autobiography of Charles Willson Peale, was submitted to Yale University Press, which received a publication subvention from the National Historical Publication and Records Commission of the National Archives.

The newly named Center for Electronic Research and Outreach Services continued to bring the Gallery's collections, programs, and exhibitions to the public via its award-winning Web site (which received approximately 100,000 hits this past year). The new Collections Information System developed by Gallery Systems, Inc., and a joint initiative by six Smithsonian museums, was successfully installed. The Catalog of American Portrait's research records are included in the new CIS database as well as the Web site's collections search. More than 25,000 responses were made to researchers' queries this year.

Programs in conjunction with current exhibitions included one-man shows on Robert Benchley, H.L. Mencken, and Mathew Brady and demonstrations of 19th-century photographic processes. John S.D. Eisenhower's discussion of Agent of Destiny: the Life and Times of Winfield Scott was among the many lunchtime lectures and book presentations. The July series of Beatles tribute bands in the courtyard was sponsored by Time magazine, Canon U.S.A. Inc., and the Henley Park Hotel.

National Postal Museum

James Bruns, Director

The National Postal Museum, through its collections and library, is dedicated to the preservation, study and presentation of postal history and philately. The museum uses research, exhibits, education, and public programs to make this rich history available to a wide and diverse audience.

Remembering the Promise

Inscribed on the front of the National Postal Museum building is a message that aptly describes the mission and promise of this nation's mail service. The inscription reads in part:

Messenger of Sympathy and love Servant of Parted friends Consoler of the lonely Bond of the scattered family Enlarger of the common life Carrier of news and knowledge Promoter of mutual acquaintance Of peace and goodwill Among men and nations

The exhibits, programs, activities, and publications of the National Postal Museum are devoted to remembering that promise to the American people.

Exhibitions

In 1998 the museum opened several new exhibits that demonstrate the importance of that promise, including a display that celebrated the centennial of the Klondike/Alaska Gold Rush and highlighted the importance of mail to those who went in search of opportunity and adventure in the gold fields a century ago by creating an exhibit that focused on the role played by the U.S. Postal Inspection Service in safeguarding America's mail.

The National Postal Museum also furnished an exhibit entitled "Reinventing Government: The Transformation of the United States Postal Service" to the Spellman Philatelic Museum in Weston, Massachusetts, that celebrated the 25th anniversary of the creation of the U.S. Postal Service.

In honor of Franklin Delano Roosevelt's 116th birthday, the museum dedicated a new exhibition, entitled "Mail to the Chief: The Stamp Designs of Franklin D. Roosevelt." This exhibit was guest curated by Congressman Joseph Pitts of Pennsylvania. This exhibit included the President's personal sketches for postage stamps that were issued during his administration.

In cooperation with Pitney Bowes Inc., the museum assisted in creating "African Americans and their Contributions to Messaging," an exhibit that opened in Stamford, Connecticut, at the corporate headquarters of Pitney Bowes. This exhibit celebrates the scientific and social achievements of African Americans through their service and communications innovations.

Education

In conjunction with the Envelope Manufacturers Association Foundation, the U.S. Postal Service, and America's Promise: The Alliance for Youth, the National Postal Museum inaugurated a new series of educational activity kits that are aimed a promoting literacy, reading, and the history of written communication. The activity kits-called "classrooms in a can"-are provided free of charge to schools nationwide with student populations that are disadvantaged or at risk of failing. This five-year initiative was first envisioned in 1997 when General Colin Powell asked each museum director to consider what could be done to reach out to such at risk children. The National Postal Museum responded by pioneering the concept for a new educational activity kits that contain instructional materials that allow individual children to proudly create something themselves, while learning about our shared heritage. The museum, and its partners in this project, realized that something was needed that would entertain and stimulate an at risk fourth-to-sixth grader, which is the target point in many school curriculums where reading and writing skills are honed. This is also the point where many at risk children can be saved ... or lost! While the museum had the idea for these "classroom in a can" kits, the staff realized that it would require resources to turn this good idea into reality, so the museum turned to the Envelope Manufacturers Association and its Foundation and to the U.S. Postal Service for support, and they more than measured up to the challenge.

With the help of our longtime partners, the museum is committed to producing five different "classroom in a can" activity kits over the next five years. The first of these cans was released in 1998. The initial kit was devoted to cuneiform writing, the first form of written communication. The emergence of civilized society was characterized, in part, by the development of writing. The earliest written symbols, developed by the Sumerians, were pictographs impressed with a stylus in soft clay tablets. The writing, or cuneiform, was commonly inscribed on clay tablets about the size of a small bean bag. What could be called the world's first envelope was a outer wrapping of clay that covered the cuneiform tablet, safeguarding the message. Cuneiform was gradually modified and a phonetic alphabet was developed between 2500 and 2000 b.c. By 2000 b.c., cuneiform was sophisticated enough to allow for the expression of complex thought.

Each cuneiform kit includes all of the supplies needed to complete the lesson, self-contained in a decorative paint can. The cuneiform kit contained everything needed to create a cuneiform tablet: clay, instructional guides, activity cards, and a writing stylus.

Subsequent "classroon in a can" activity kits will highlight papermaking, colonial letter writing, envelope making, and contemporary letter writing. The kits will be given to schools that are financially strapped and in need.

International Outreach

The 1937 sketch by Franklin Delano Roosevelt for a postage stamp commemorating the 350th anniversary of the birth of Virginia Dare, the first known European child born in America, was exhibited at the Musee des Timbres et des Monnaies in Monaco. The sketch was donated to the Smithsonian in 1956 by James A. Farley, who served as FDR's postmaster general from 1933 to 1940. The three-day international philatelic exhibition in Monaco was organized as part of a yearlong celebration of the 700th anniversary of the Grimaldi dynasty in the tiny principality. In addition to the FDR sketch, the exhibition featured some of the world's best known philatelic rarities.

"Celebrate the Century" Stamp Launch

The U.S. Postal Service chose the National Postal Museum as the site for the national launch of its "Celebrate the Century" program. This stamp program features images reminiscent of each decade of the twentieth century on stamps that will be issued between 1998 and 2001.

New Web Page

In 1998 the museum redesigned its Web site to include an array of new categories of information and images, including a "What's New" section and features devoted to exhibits, educational programs, membership, library topics, events calendars and expanded general information.

Future plans call of the museum's Web site to include information about the collections and "virtual exhibits."

Smithsonian Center for Materials Research and Education

Lambertus van Zelst, Director

The Smithsonian Center for Materials Research and Education (SCMRE), formerly known as the Conservation Analytical Laboratory (CAL), is the Smithsonian's specialized facility dedicated to research and training in the area of conservation, analysis, and technical study of museum collection and related materials. Conservation and preservation research seeks to increase our understanding of the mechanisms that affect the preservation of materials in museum collections, in order to formulate improved exhibit, storage, and other use conditions, as well as to develop, test, and improve treatment technology. In collections-based research, objects from museum collections and related materials are studied to increase their contextual information value and address questions in archaeology, art history, and so on. Several of these research programs are conducted in collaboration with other institutions, notably the National Institute for Standards and Technology (NIST) in Gaithersburg, Maryland, and the Carnegie Institution of Washington.

In FY 1998, the Regents of the Smithsonian Institution approved a formal name change for the unit. The new name, Smithsonian Center for Materials Research and Education, is reflective of the mission of SCMRE as its programs have evolved since the 1980s, and recognizes its status as one of the Smithsonian research institutes.

Research at SCMRE covers an interdisciplinary area that connects the physical and natural sciences with the arts and humanities. Chemical, physical, and biological research on museum collection items and related materials serves to enrich our contextual understanding of objects in museum collections, or to improve our knowledge on how to preserve and conserve museum collections.

Chemical characterization of archeological materials and the raw materials from which they were made serves to identify objects with the source from which the raw material was procured. Thus one may draw conclusions regarding trade and exchange patterns and political and economical relationships. For trace element characterization of ceramics, SCMRE researchers applied neutron activation analysis at a special facility maintained and operated in collaboration with NIST, in studies involving archaeological ceramics from various Maya and Southwest sites. SCMRE researchers continued the coordination of an international collaborative research program, sponsored by the International Atomic Energy Agency (IAEA) on the applications of these techniques in Latin American archaeology. Also in this year, SCMRE organized an international symposium in honor of retired SCMRE staff member Dr. Edward V. Sayre, a scholar who is considered the pioneer in archaeological ceramic provenance studies using neutron activation analysis, as well as in numerous other studies in archaeometry and conservation science. In studies of historic and prehistoric technologies, researchers focused on the technology of Far Eastern ceramic glazes.

In the biogeochemistry program, SCMRE researchers study archaeological and paleological organic materials to extract and identify biomolecular information, including markers for dietary habits, disease parterns and genetic relationship. Work continued on a number of projects, including the study of preservation of biomolecular information in archaeological and paleological skeletal material. Of particular interest was the positive identification, through sequencing of extracted DNA, of venereal syphilis in a New World archaeological skeletal remain.

In the research on preservation of natural history specimens, the study on the influence of the formalin fixing process on the recovery of DNA from liquid-preserved fish specimens came to a conclusion. While specimens preserved only in alcohol offer a highly valuable resource for DNA baseline studies, those specimens fixed with formaldehyde will only occasionally yield DNA fragments with any research utility. Quick assay methods to distinguish alcohol-preserved specimens from formalin-treated specimens have been developed. A new project, concerned with the preservation of light element isotopic information, essential in such studies as ecological stressed systems, in herbarium specimens, yielded far more encouraging results: typically the information retrieved from archival collection specimens fully reflects the isotope ratios in the specimen at the time of collection.

SCMRE research on the mechanical properties of collection materials continued, with the observations on mechanical behavior being tied to the chemical changes that take place in materials as a consequence of aging and other agents of change.

SCMRE's education programs address the needs of a wide variety of constituencies, ranging from professional training for conservators and other museum professionals to outreach and information programs for high school and college students and the general public. The Furniture Conservation Training Program (FCTP) continued the training of the class of 2000. In the archaeological conservation training program, two conservators recently graduated from one of the graduate school training programs received practical training and field experience at two different archaeological sites in the Near East and Central America, as well as laboratory experience at SCMRE. However, as a result of a shift in programmatic emphasis for this program, the primary goal now is the education of archeologists to make them aware of the benefits of on-site conservation. This goal is pursued through demonstration projects, combined with field school teaching. RELACT, the training program for managers of paper-based archival research collections, organized several workshops/seminars for a large audience of Smithsonian staff, and coordinated demonstration projects within various Institutional research collections.

By the end of this fiscal year, the newly developed SCMRE program in optical microscopy, which endeavors to combine technique development and research application with training activities for professional audiences, presented its first course offering. Applied Optical Microscopy, an introductory course, provided classroom and practical training to an audience of conservators, archaeologists, and materials scientists on subjects ranging from system specification to sample preparation, photomicrography, and image analysis. It is the intention to widen the range of course offerings in this specialty area to meet the needs of a large and wide-ranging audience.

After the highly successful workshop "Preservation of Imágenes: Hispanic American Religious Images on Wood" in FY 1997, SCMRE staff, in collaboration with the Universidad del Sacrado Corazón in San Juan, Puerto Rico, organized two workshops in Puerto Rico that, like the previous one in Washington, attracted large and wide-ranging audiences, including curators, conservators, collectors, and artists. "La Preservacíon de Santos," a three-day workshop with laboratory exercises, held on the campus of the university, attracted a local audience of 55 registrants, consisting of museum professionals, university scholars, students, artists, collectors, and dealers. A one-day workshop, hosted by the Museo del Arte in Ponce, was intended specifically for artists who still continue the tradition of *santos* making. Consisting of lecture and discussion sessions, it attracted an audience of 120 persons, about 65 percent of whom were actual practicing *santeros* and *santeras*.

In the collaborative program with the Suitland High School, a local magnet school for the arts, SCMRE staff continued to develop and test materials for eventual inclusion in a high school curriculum for an interdisciplinary arts and science course.

In the rechnical information program, SCMRE continued to provide technical advice and expertise on preservation-related subjects in answer to questions received from museum professionals as well as the general public. An important mechanism for educating the general public in preservation issues is provided with the "Guidelines" which, intended for distribution to a wide audience, provide background information and tips on the care and maintenance of a variety of collectibles. In this respect, SCMRE's regularly updated Internet Web page also continues to serve an essential role.

Smithsonian Environmental Research Center

Ross B. Simons, Director

SERC research continues to focus on four major themes: effects of global change, landscape ecology, coastal ecosystems, and population and community ecology. During 1998, SERC scientists published high-quality papers on topics ranging from species descriptions to global change. A major article by SERC's Dr. Patrick Neale appeared in the prestigious international journal *Nature*. SERC's principal investigators were awarded more new external research grants and contracts than any other biological unit of the Smithsonian, all of which are several times larger than SERC.

More than ever, SERC scientists are reaching out to present their work in national and international scientific meetings. SERC played a key role in organizing the annual meeting of the Ecological Society of America and American Institute of Biological Sciences in Baltimore in August. At that meeting, four SERC scientists presented papers at a special session devoted to SERC's unique work on the Chesapeake Bay. In addition, SERC hosted a major national meeting on invasive species for the U.S. Fish and Wildlife Service and a national meeting on global change for the U.S. UV Monitoring Work Group.

SERC scientists and educators extended significant new outreach to a variety of public audiences during the past year. In June, SERC scientists began a new program of adult education consisting of a series of evening lectures on popular environmental topics to adults in the neighboring communities. In addition, SERC's professional training program grew to support more than twice the number of work/learn interns of recent years.

A major loss to SERC this past year was the death of longtime principal investigator, Dr. James Lynch. Dr. Lynch pioneered research in several areas that are now hot topics in the technical literature and which are often featured in the news media as environmental concerns. His research investigated the effects of habitat fragmentation on animals, the indirect effects of trophic interactions, the landscape requirements of migratory animals, the evolution and population ecology of amphibians, and the conservation biology of birds and of tropical habitats. Importantly, Lynch led SERC's efforts in international research and global environmental problems.

The addition of Drs. Ilka Feller and Catherine Lovelock to SERC's team of principal investigators has greatly enhanced SERC's breadth of research. They contribute to the understanding of plant ecology and plant-animal interactions with wide-ranging projects in polar, temperate, and tropical environments. Feller also serves as the Smithsonian's scientific coordinator for the Mpala Research Centre in Kenya.

SERC's program in invasions biology continues to develop at a remarkable rate. This program now supports more than 20 technicians and advanced students. The problem of invasive species is increasingly recognized as a global issue worthy of major funding from many governments. SERC's invasion biology program leads national and international research on biological invasions of coastal ecosystems. The program, headed by Drs. Gregory Ruiz and Anson Hines, is the largest group in the United States to study patterns and impacts of marine and estuarine invasions while seeking strategies to limit them.

Ballast water of commercial ships is currently the greatest source of coastal species introductions, releasing larval stages and other planktonic organisms from distant ports that are able to colonize new bays and estuaries. SERC technicians are sampling ballast water in tankers arriving to Port Valdez, Alaska, to measure temporal (seasonal, annual) and spatial (source port) variation in associated plankton communities. This study, the most comprehensive of its kind worldwide, shows that a rich diversity and high abundance of coastal plankton is being transported and released by the tankers. SERC has also been conducting experiments aboard oil tankers on voyages from California to Alaska to test the effectiveness of ballast water management in reducing unwanted transfer of organisms.

SERC's research in the Chesapeake Bay now provides the most comprehensive assessment of coastal invasions for any region of the nation. The study includes an intensive analysis of the 400-year history of species introductions, the ecological impacts of alien species and the delivery patterns and characteristics of ballast water. Chesapeake Bay, through the ports of Baltimore and Norfolk, receives more ballast water of foreign origin than any other port system on the Atlantic or Pacific coasts.

The invasion biology program involves extensive collaboration, most recently with the U.S. Coast Guard to establish the National Ballast Water Information Clearinghouse at SERC. As an integral part of the national effort to prevent and control coastal invasions, the clearinghouse will measure the changing patterns of ballast water delivery and management by ships arriving in all U.S. ports from overseas. SERC scientists synthesize the national data on ballast water delivery patterns and relate these patterns to invasions by alien species in coastal ecosystems.

Several SERC projects are exploring the critical role of forests in the nitrogen cycle. In many parts of the world, forests are becoming nitrogen-saturated, losing their ability to absorb nitrogenous pollutants deposited from the atmosphere. Research directed by Dr. David Correll measured atmospheric nitrogen deposition and nitrogen discharges from an oldgrowth deciduous hardwood forest for 20 years. The measurements indicate that the forest still retains 85 percent of its atmospheric inputs of total nitrogen. Moreover, SERC's broad survey of subwatersheds throughout the Chesapeake Bay drainage basin showed that nitrate concentrations in streams draining forested subwatersheds were very low, suggesting that nitrogen saturation of forests is not yet a widespread problem in the Chesapeake Bay watershed.

SERC studies were among the first to show that riparian (streamside) forests can intercept nitrogen released from adjacent croplands and thereby protect streams and estuaries from nitrogen pollution. Recently Dr. Donald Weller of SERC developed heuristic models to predict the effects of spatial arrangements of riparian forests on nutrient discharge from complex landscapes. The simple mathematical relationships can be used extrapolate results to broader landscapes.

Nitrogen taken up in riparian forests can be converted to gases, including nitrous oxide, which is increasing in the armosphere and contributes to global warming and the destruction of stratospheric ozone. One SERC project, directed by Dr. Thomas Jordan, studied nitrous oxide releases from riparian forest soil. Emitted nitrous oxide was sampled with tent-like chambers and analyzed with a unique laser spectrophotometer. Less than 1 percent of the nitrogen taken up by the forest was converted to nitrous oxide. Nitrous oxide releases were limited by the supply of soil moisture, nitrate, and organic carbon.

Like riparian forests, wetlands can play a key role in reducing non-point nutrient runoff into Chesapeake Bay. SERC scientists, Drs. Dennis Whigham, Thomas Jordan, and Donald Weller, together with collaborators from the National Resource Conservation Service and the Chesapeake Wildlife Heritage, measured nutrient flow through wetlands that were restored in agricultural watersheds. They found that the wetlands could trap high percentages of the nutrients they receive from surrounding croplands while also providing important wildlife habitats that enhance the species diversity in agricultural landscapes.

SERC continued the global expansion of its wetlands research program. In collaboration with the National Institute for Environmental Studies (Japan), and the University of Utrecht (the Netherlands), SERC began comparative studies of important bog and fen wetlands on Honshu and Hokkaido in Japan. The five-year project will focus on aspects of nutrient cycling and will be directed toward helping Japan develop methods for assessing wetland function. SERC scientists also completed editorial work on a series of papers on nutrient-use efficiency in boreal, temperate, and tropical werlands. SERC scientists and Japanese collaborators from Kyoto University and Tokyo Metropolitan University finished one of the first studies in which seed transportation by water has been shown to play a key role in the development of genetic patterns in populations of a widespread wetland plant species.

A SERC study by Dr. Ilka Feller focused on mangrove forests, the dominant coastal wetland type throughout the tropics. Nutrient availability in mangrove wetlands effects internal nutrient cycling and nutrient conservation. Feller's research showed that soil fertility can switch from nitrogen to phosphorus limitation across narrow ecotonal gradients in red mangrove forests. Phosphorus limitation was found to be a major factor responsible for the widespread occurrence of dwarf mangrove forests in the Neotropics. Experimental increases in nutrient availability to mangroves increased herbivory by specialist herbivores but had no effect on generalist herbivores. Feller has also discovered that herbivory by wood-boring insects adds a major grazing step to the mangrove food web. Previously, this food web has been assumed to be almost exclusively detritus-based. Wood borers also modify canopy architecture and create cavities in the wood that are used by numerous other species.

Increases in atmospheric carbon dioxide are expected to cause unprecedented changes in climate and ecosystems around the world. A SERC study directed by Dr. Bert Drake is running two long-term field experiments to discover the effects of projected increases in atmospheric carbon dioxide. In a Florida scrub-oak forest, increased carbon dioxide has increased water-use efficiency, nitrogen fixation, and carbon assimilation. In a Maryland salt marsh, a decade of exposure to increased carbon dioxide has caused a persistent increase carbon assimilation. A new study is now investigating the fate of the extra carbon assimilated.

Depletion of stratospheric ozone is increasing the penetration of harmful ultraviolet (UV-B) solar radiation to the Earth's surface. Measuring the intensity and ecological effects of UV-B radiation is the focus of SERC's photobiology and solar radiation laboratories, directed by Dr. Patrick Neale. From October to December, 1997, Neale's group traveled to Palmer Station on the Antarctic peninsula for the first application of methods developed at SERC to track the varying sensitivity of phytoplankton to UV-B radiation, in particular to the increase in UV-B during springtime ozone depletion. In addition, the SERC-developed instrument to monitor UV-B radiation (the SR-18 spectroradiometer) documented increases in UV-B that occurred as the ozone hole moved over the station. On the other side of the globe, in the Arctic, where a second ozone hole has been developing, Neale's laboratory has been examining the UV-B sensitivity of Arctic kelps (*Laminaria spp.*). In SERC's home waters, the Chesapeake Bay, a new project has begun to determine whether increased nutrients, related to eutrophication of coastal waters, increase the resistance of dinoflagellates in the bay to UV-B. Such increased resistance may be a factor in formation of red tides. Finally, during 1998, an SR-18 was installed on the new SERC research tower, continuing the long-term monitoring of UV-B by Smithsonian since the mid-1970s.

Increasing concern over the global spread of toxic and nontoxic red tides has focused research interest on physical and biological interactions that influence the accumulation, persistence, and demise of dinoflagellate blooms. The harmful effects imposed by red tides on marine fauna and associated risks to public health and commercial fisheries have also prompted interest in means to detect, predict, and potentially control harmful algal blooms. Recent studies by Dr. Wayne Coats of SERC have shown that microparasites can kill redtide dinoflagellates and change host abundance on time scales of hours to days. His research has also shown that parasites of bloom-forming dinoflagellates have a high degree of host specificity, an observation that may lead to the use of parasites as biological controls of harmful algal blooms. Dr. Coats, in conjunction with scientists at the University of Maryland, Center of Marine Biotechnology, is also studying dinoflagellates in Chesapeake that resemble the toxic Pfiesteria species.

SERC's education department continues to train teachers and parents in the popular Teacher-led Activities for elementary students. The summer and fall seasons brought a diverse audience to SERC from the Washington, D.C. area. More than one hundred middle-school students participated in Anne Arundel County's annual Envirothon, at SERC and two other county sites. The Envirothon taught students basic environmental principles and ways to apply them to real-world problems in their communities. Anne Arundel County again collaborated with SERC to conduct three teacher workshops that expose teachers to SERC's research and lab facilities. Participants experience the creeks, river, and Bay by learning water sampling techniques and analysis. Once again Gallaudet University brought deaf teachers from all over the United States to SERC for a two-day intensive training on the ecology of the Chesapeake Bay region. This is part of a five-year National Science Foundation program (Summer Institute in Biology) in which SERC has actively participated. In addition to the teacher workshops, SERC continues to host undergraduate classes from Gallaudet. Each year several classes come to SERC to learn about wetland ecology, field research techniques, and internship opportunities.

Smithsonian Tropical Research Institute

Ira Rubinoff, Director

The tropics are home to the greatest diversity of organisms on Earth, many of which developed very complex interactions over millions of years. Research on the ecology, evolution, and behavior of tropical organisms is the primary mission of the Smithsonian Tropical Research Institute (STRI) based in the Republic of Panama. STRI supports 35 permanent scientists and hundreds of visiting scientists and students from around the world each year who work at its terrestrial and marine research facilities.

During FY 1998, Barro Colorado Island, the Smithsonian's oldest research station in the New World Tropics dedicated to tropical research, celebrated its 75th anniversary on April 23. There are now more than 1,500 publications resulting from research on the island.

STRI acquired a new site for a field station in Bocas del Toro on the Caribbean coast of Panama and initiated plans to construct a research and educational outreach center. A small office/laboratory and dock currently exist on the site. This facility will replace the one in the San Blas Islands, whose contract ended this year.

Renovation of the Molecular Biology Research Laboratories at Naos Island was completed. This building, dating from 1914, previously housed STRI's general services and maintenance division that was moved to the Ancon area of Panama City, adjacent to the Earl S. Tupper Research and Conference Center.

A major new research project was initiated by the construction of the first Free Air Carbon Dioxide Enrichment Project (FACE) in the tropics, in collaboration with the Brookhaven National Laboratories, McGill University, the University of Georgia, the Universidad Santa Maria La Antigua and the University of Panama. The project, funded by the U.S. Department of Energy, aims to establish the scientific foundation for understanding the consequences of increased concentrations of carbon dioxide on the growth of tropical forests.

Books by STRI authors published this year dealt with a broad range of subjects, including the social regulation of competition and aggression in animals (by the late Martin H. Moynihan); the natural and cultural history of Central America (edited by Anthony G. Coates of STRI); the origins of agriculture in the lowland neotropics (by Dolores Piperno of STRI and Deborah Pearsal); the history, economy, and land use of the Peruvian Amazonia (by Fernando Santos-Granero of STRI and Federica Barclay); naturalists of Panama (by Stanley Heckadon-Moreno of STRI); and methods and results from tropical forest census plots (by Richard Condit of STRI). Two important compendiums that included numerous publications based on research by STRI scientists were published also: *Proceedings of the 8th International Coral Reef Symposium*, published by Harilaos Lessios of STRI and Ian Macintyre of the National Museum of Natural History; and Marine-terrestrial flora and fauna of Cayos Cochinos Archipelago, Honduras, edited by Hector M. Guzman of STRI.

Since its opening in 1990, STRI's Earl S. Tupper Research and Conference Center has become a major venue for scientific conferences. From January 26 through 31 the International Bryozoology Association held its meetings at the Tupper Center gathering 75 participants from 15 nations. From March 29 through April 3 the Tupper Center served as venue for the First International Workshop on Sustainable Cocoa Growing, organized by STRI, the Smithsonian Migratory Bird Center and the Institute for Conservation Biology. The conference gathered experts from the leading cocoa producing countries and major chocolate manufacturers. The workshop centered around discussions on the global state of scientific knowledge on cacao and its role in improving the conditions of small farmers and protecting tropical biodiversity.

Another major meeting organized by STRI was held at the Smithsonian Institution in Washington from July 30 through August 2, and brought rogether biologists working on the various forest plots sponsored by the Center for Tropical Forest Science (CTFS), a collaborative research project among STRI and Princeton and Harvard Universities. Researchers from 11 countries working at the 13 forest dynamic sites, presented their results to other network members and developed collaborative projects.

Princeton University, in coordination with STRI, held a full-semester program in Panama for 18 undergraduate students in biology, that lasted from February 1 through May I. The program consisted of courses in tropical ecology and conservation taught by Princeton's Stephen P. Hubbell; on pre-Columbian peoples and their environments taught by Richard Cooke and Dolores Piperno of STRI, and two electives: tropical marine invertebrates, taught by Penelope Barnes from STRI, and genetic diversity of tropical populations, taught by Hope Hollecher from Princeton.

Beginning January 1998, staff scientist A. Stanley Rand became senior scientist emeritus. Based now in the Washington area, Rand continues to spend four months of the year conducting research and advising students at STRI. Paleoecologist Paul Colinvaux retired from STRI on September 30 to take up an appointment as visiting scientist at the Marine Biological Laboratory, in Woods Hole, Massachusetts. Biologist Llewellya Hillis also departed from STRI at the end of this fiscal year. Staff scientists Nancy Knowlton and Jeremy B.C. Jackson initiated their appointments as professors of marine biology and oceanography of the Scripps Institute of Oceanography in California. They will continue to maintain part-time positions and research programs at STRI. Lucy Dorick, STRI's Development Director resigned to accept a new position as vice president for Development of the World Resources Institute.

The Center for Museum Studies facilitates learning about museum theories and practices. Using the Smithsonian's unique resources, the center provides training and research opportunities to museum professionals, students, volunteers, and cultural resource specialists.

Collaborating with the Inter-University Program for Latino Research (IUPLR), the center developed a new Rockefeller Humanities Fellowship Program with the theme "Latino Cultural Research in a National Museum Context: Issues of Representation and Interpretation." The fellowships, a mix of residencies for scholars and museum professionals, will be interdisciplinary and will support Latino/a focused scholarship using the extensive cultural, archival, historical, and professional resources that only the Smithsonian can offer. Projects will link art and the politics of public display, encompass indepth and advanced research in the museum and curatorial fields, and contribute much-needed Latino-focused perspectives and interpretations to topics within many Smithsonian collections. A different theme will be explored each year. In 1998-1999, residencies will be hosted by the National Museum of American Art and will focus on Latino art interpretation and representation. The 1999-2000 year span will be hosted by the National Museum of American History, with residencies focusing on Latino history. Residencies for 2000-2001 will focus on cultural studies and community-based research and will be hosted by the Center for Folklife Programs and Cultural Studies, the Anacostia Museum, the Center for African American History and Culture, and the National Museum of Natural History Department of Anthropology.

The Center initiated a collaboration with Montgomery Community College, Rockville, Maryland, to establish the Montgomery College Humanities Institute. The Institute will host a wide range of scholarly and community-focused activities, including an annual faculty seminar led by a Smithsonian scholar-in-residence, museum-based faculty research fellowships, student internships at the Smithsonian, public lectures and symposia, and an enhanced Humanities Honors Program. The National Endowment for the Humanities awarded the college a \$500,000 challenge grant and fund-raising is well under way for the Institute. In working systematically with Montgomery College, Maryland's largest and one of the nation's best community colleges, the Center for Museum Studies hopes to develop a model for museums across the nation to collaborate with their local community colleges in using museum resources to strengthen the teaching of humanities.

The Center for Museum Studies, with the Program for Asian Pacific American Studies, presented "Diversity, Leadership, and Museums: The Representation of Asian Pacific American Communities" at the Japanese American National Museum (JANM), May 6–9, 1998, in Los Angeles, California. The seminar, a pilot program funded by the Anheuser-Busch Companies and the Smithsonian Institution Educational Outreach Fund with additional support from the Hawaii Museums Association, explored diversity issues in museums and examined current issues affecting Asian Pacific Americans in the museum profession. The curriculum emphasized problem solving strategies, team building techniques, and communication skills. Faculty included Irene Hirano, Director, and Akemi Kikumura, Curator at JANM; and Marshall Wong, Art Initiative Director for the L.A. County Museum of Art. Participants represented museums and cultural institutions in California, the District of Columbia, Hawaii, New York, and Washington.

The Center for Museum Studies and the Inter-University Program for Latino Research hosted "Interpreting Latino Cultures: Research and Museums," June 29 through July 10. This annual seminar offers hands-on training in methods of researching and interpreting museum and archival collections. This year's program challenged students to develop strong research skills while exploring issues of interpretation and representation of cultural materials and traditions in museums. Practicums in conducting object-based research and in accessing and using the collections of the Smithsonian, the National Archives, and the Library of Congress were key components of the program. This year's faculty included Gerald Poyo, St. Mary's University; Refugio Rochin, SI Center for Latino Initiatives; and Tamas Ybarra-Frausto, Rockefeller Foundation. A highlight of the program was the keynote presentation, "The Culturally Specific Museum: Trap or Treasure," delivered by Susana Torruella Leval, Director of El Museo del Barrio in New York.

The Center for Museum Studies, in collaboration with the Fundacion Antorchas and the University of Buenos Aires, began a professional development training project, based in Argentina, designed to ensure that the cultural patrimony of South American museums will not disappear as a result of neglect or lack of resources. A series of three conservation and exhibition development workshops, using Smithsonian specialists and local conservators as faculty, concluded in November at the University of Buenos Aires Museo Etnografico.

The conclusion of 1998 witnessed the beginning of a merger of the Center for Museum Studies with the Smithsonian Office of Education. The new alignment will preserve the center's mission to advance and enrich knowledge about museum theories and practices. It will also serve to enhance the capabilities of both offices to build a rich mix of constituencies for the Smithsonian.

Office of Exhibits Central

Michael Headley, Director

One of the Smithsonian's largest and most comprehensive exhibit producers, the Office of Exhibits Central (OEC) provides high-quality products and services to nearly every museum, office, and research program in the Institution. In 1998, OEC's 40-person staff performed consulting, design, editing, graphics, modelmaking, fabrication, crating, and installation services for about two dozen Smithsonian clients and affiliates.

Consultation

Consulting services are a growing and important component of OEC's work. Sharing their expertise with Smithsonian clients and a number of affiliate and outside organizations, OEC staff have helped define the content, execution, and even feasibility of several proposed exhibitions over the past year. OEC has also been at the forefront of training programs designed to benefit museum practitioners in the United States and abroad. Examples of this assistance include:

- Editorial and content development services for a written proposal for How We Discover, a joint SI-National Science Foundation exhibition/educational outreach project. The How We Discover project aims to engage "participants" in the scientific as well as creative processes applied by researchers in their work. The Office of the Provost requested OEC's help in developing the proposal and related material.
- Conceptual design services for the National Museum of Natural History on a proposed exhibition on the Vikings scheduled to open in 2000.
- Conceptual design services for Mammals on the Move, a series of small-scale traveling components related to the renovation of the Mammal Hall at the National Museum of Natural History.
- Design consulting services to Arizona's Bisbee Mining and Historical Museum, a Smithsonian affiliate, for an exhibition on the Bisbee copper mines and mineralogy.
- Development, management, and ongoing support for an object handling, packing, and shipping training program for members of the National Museum of Natural History's MOVE team. The MOVE project involves the transfer of objects and artifacts (ranging from elephant skulls to plaster casts of ancient Roman bas reliefs) from the National Museum of Natural History to the SI Museum Support Center in Suitland, Maryland.
- Training in graphics and fabrication procedures for three museum technicians from Cape Coast, Ghana, as part of a collaborative effort between the Smithsonian's Office of International Relations and the nation of Ghana.

Design, Editing, and Graphics

Exhibit designers at OEC are responsible for all aspects of visual presentation, from gallery configuration and case design to text panels, banners, and fund-raising packages. Exhibit editors collaborate with designers and curators to ensure that text, design, objects, and graphics work together to create a cohesive, informative presentation. Graphics staff provide silk-screening, photo mounting, archival matting and framing, exhibit refurbishment, and other graphic art services. Among the year's highlights were:

- "Between a Rock and a Hard Place: A History of American Sweatshops" for the National Museum of American History.
- "The Jewels of Lalique" for International Gallery.
- "The Art of Jack Delano/El Arte de Jack Delano" for International Gallery and SITES.
- "We Shall Overcome: Photographs from America's Civil Rights Era" and "Going Strong: Older Americans on the Job" for SITES.
- A small-format version of "The Jazz Age in Paris, 1914– 1940" for circulation by SITES and the American Library Association.
- "Pomo Indian Basket Weavers" at the National Museum of Natural History.
- "Speak to My Heart" for the Anacostia Museum and on view in the Arts and Industries Building.
- "Three Generations of African American Women Sculptors: A Study in Paradox, Resonant Forms," and "In Search of Balance: The Artist Scholar" for the Center for African American History and Culture.
- "Frontier Photographer: Edward S. Curtis" for the Smithsonian Institution Libraries.
- "Orchids of the World" for the Office of Physical Plant's Horticulture Services Division and U.S. Botanic Garden.
- Design of a new desk for the Visitor Information and Associates' Reception Center in the Arts and Industries Building.

Modelmaking

The modelmaking unit creates scientifically and historically accurate dioramas, models, and mannequins. From the galloping stagecoach horses at the National Postal Museum to the trees and mining environments in the Hall of Geology, Gems, and Minerals, the Model Shop can literally reproduce any animal, vegetable, or mineral. It had a particularly active year with a number of high-profile projects under way and completed. Examples include:

- Creation of Jabba the Hutt's cave palace, the centerpiece of "Star Wars: The Magic of Myth" at the National Air and Space Museum.
- Creation of mannequins, trees, artificial food, and the taxidermy of a life-size buffalo for the National Museum of American History's "Communities in a Changing Nation" exhibition opening in 1999.
- Creation of a scale model of a traditional ocean canoe, lifesize Ainu traditional house (*chise*), and diorama with four mannequins of Ainu elders conducting the sacred bear ceremony for the "Ainu: Spirit of a Northern People" exhibition opening in 1999 at the National Museum of Natural History. An Ainu exhibits specialist spent six months at OEC carving a scale model of a traditional Ainu canoe as well as fabricating other Ainu artifacts.
- Taxidermy support, site photography, and specimen collection from the African savanna in preparation for the renovation of the National Museum of Natural History's Rotunda and Mammal Hall.

- Creation of surroundings, termite mounds, and a tree for the tiger habitat diorama, one of the few exhibitions on view during the renovation of the National Museum of Natural History's Mammal Hall.
- Creation of a cave interior and the naturalistic elements of a rock outcropping for the final phase of the National Museum of Natural History's Janet Annenberg Hooker Hall of Geology, Gems, and Minerals.

Fabrication

The fabrication Unit builds fine cabinetry and display casework, as well as Plexiglas vitrines, object mounts, fixtures, signage, and heat-formed elements. Its finishing shop provides services ranging from quick turnaround painting jobs to restoration work and faux finishes. Packing and crating, installation and deinstallation services, and the coordination and lending of exhibit cases are other unit specialties. These in-house services have enabled SI bureaus and outside organizations to mount exhibitions that might otherwise not be economically feasible.

Major projects completed during the year include:

- Installation and deinstallation of numerous exhibitions for the National Museum of the American Indian, Center for African American History and Culture, International Gallery, and Smithsonian Institution Libraries.
- Fabrication of a new desk for the Visitor Information and Associates' Reception Center in the Arts and Industries Building.
- A temporary exhibition on Filipino Americans organized by Honolulu's Bishop Museum and on view at the U.S. State Department (OEC's work was coordinated through SI's Asian affairs liaison).
- "Beyond the Maine: Imaging the New Empire," a National Anthropological Archives exhibition at the Ripley Center.

Miscellaneous Services

OEC also provides a number of "spot services" for various Institution bureaus. These range from specialized framing assignments for clients throughout the Institution to signage and banners for the Smithsonian Crafts Show and Folklife Festival.

Office of Fellowships and Grants

Roberta W. Rubinoff, Director

Support from the Office of Fellowships and Grants (OFG) enhances the quality, quantity, and diversity of research conducted at the Smithsonian. Each year, nearly 800 students and scholars come from universities, museums, and research institutes throughout the United States and abroad to use the Institution's collections and facilities. OFG manages centralized competitive internship and fellowship programs, as well as competitive grant programs that support Smithsonian staff research. This office also administers all stipend appointments offered by the Institution.

This year, for example, Clara E. Rodriguez of Fordham University did research on Latino images in the media, working at the National Museum of American History with Fath Davis Ruffins, historian in the Archives Center. Rodriguez was a senior fellow in the Latino Studies Fellowship Program, which broadens and increases the body of Latino-related research.

Under the Scholarly Studies Program, Richard Potts, director of the Human Origins Program at the National Museum of Natural History, is leading a project to study fossil records of early ancestors of humans in the African Rift using stable isotope analysis. This research will increase the understanding of how vegetation and climatic changes in the environment affected the evolution of early humans.

Kathleen Ash-Milby of the National Museum of the American Indian received a grant from the Collections-Based Research Program, which supports research on significant Smithsonian collections. Ash-Milby studies the life and the paintings of Bonita Wa Wa Calachaw Nuñez (1888–1972) in the museum's collection. Referred to by her pen name "Wa Wa Chaw," Nuñez was a self-taught painter, poet, and Indian rights activist raised in New York City.

National Science Resources Center

Douglas Lapp, Executive Director

The National Science Resources Center, operated jointly by the Smithsonian Institution and the National Academy of Sciences, collects and disseminates information about science teaching resources, develops innovative science curriculum materials, and sponsors activities to help teachers and school district administrators develop and sustain effective hands-on science programs. The National Science Resources Center advocates an inquiry-centered, hands-on approach to science education. In inquiry-centered science, students learn to ask questions, gather information, develop theories, plan and carry out investigations, and communicate their ideas. Scientists and engineers from academia and the business community, as well as educators, play a strong role in the development and implementation of National Science Resources Center programs.

The National Science Resources Center supports systemic science education reform efforts in communities across the nation through its materials development, information dissemination, and outreach programs. All National Science Resources Center programs stress the involvement and collaboration of teachers and scientists. Scientists and engineers from business and industry, as well as academia, play a strong role in the development and implementation of National Science Resources Center programs.

Knowledgeable, committed leaders are needed to improve the quality of science education in our nation's school districts. In response to this need, the National Science Resources Center hosted two K-8 Science Education Leadership Institutes in 1998: July 18–23 and July 25–30. At these leadership institutes, teams of teachers, school administrators, and scientists worked with nationally recognized experts to develop plans for implementing an inquiry-centered science curriculum in their communities. The 1998 leadership institutes brought together 29 teams from school systems in 18 states, and Sweden. The U.S. teams represented 66 school districts that serve more than 340,000 K-8 students.

Since 1989, the National Science Resources Center has sponsored 27 Science Education Leadership Institutes that have been attended by educational leaders representing more than 400 school districts located in 45 states and Puerto Rico. Together, the participants in these institutes have helped initiate science education reforms in school districts that serve more than seven million K-8 students.

The National Science Resources Center has now begun a five-year Leadership and Assistance for Science Education Reform initiative. The National Science Foundation, a group of philanthropic and corporate foundations, and several publishers are supporting this program. Through this initiative, National Science Resources Centers is establishing partnerships in eight regions across the U.S. and with several major corporations to provide a comprehensive program of science education leadership training, publications, and technical assistance to 300 school districts nationwide. This assistance will enable these districts to initiate and implement inquirycentered science curriculum programs for all their elementary and middle-school students.

During the past year, this initiative has organized ten "Building Awareness for Science Education Reform" conferences, six Strategic Planning Institutes, five Science Curriculum Showcases and one Advanced Leadership Development Conference. The Leadership and Assistance for Science Education Reform regional partners have been selected on the basis of their demonstrated commitment to educational excellence and their ability to provide resources and leadership in support of K-8 science education reform. This initiative will help the regional partnership institutions to enhance their capacity to serve as resources to school districts in their regions, thereby ensuring the sustainability of the project.

The National Science Resources Center has completed the development of a comprehensive science education program for grades 1 through 6, Science and Technology for Children. Focused on topics in physical science, life science, earth science, and technology, the 24 curriculum units in this program use simple, inexpensive materials to teach science through hands-on investigations. Each unit includes a comprehensive teacher's guide, a student guide, and a science kit designed to provide a class of 30 students with the materials needed for eight weeks of science investigations.

The National Science Resources Center has also developed a set of supplemental reading materials to complement the Science and Technology for Children units for grades 4 through 6, the Discovery Decks. The Discovery Decks are sets of large imaginatively illustrated cards that expand on the major topics introduced in each Science and Technology for Children unit. They include historical accounts of scientific discoveries, interviews with scientists, problem-solving scenarios, and information on recent breakthroughs in scientific research. The Discovery Decks are designed for use in classroom learning centers, libraries, and science centers.

The National Science Resources Center has initiated a Science and Technology Concepts for Middle Schools project to develop science curriculum materials for grades 7 and 8. This four-year project is supported by grants from the National Science Foundation, the Robert Wood Johnson Foundation, Dow Chemical Company, the DuPont Company, and Hewlett-Packard.

The Science and Technology Concepts for Middle Schools project is developing eight inquiry-centered science modules for students in grade 7 and 8. This program, when combined with the Science and Technology for Children elementary science program, will form a comprehensive, well-integrated program in science and technology for students in grades 1 through 8.

Expert science reachers, working in collaboration with academic experts in the earth, life, and physical sciences and technology, are developing the student source books and teacher's guides for the Science and Technology Concepts for Middle Schools modules. The content and pedagogy of this program will adhere to the content, teaching, and assessment recommendations of the National Science Education Standards developed by the National Academy of Sciences/National Research Council.

The Science and Technology Concepts for Middle Schools staff has begun to develop the first four modules: Human Body Systems; Properties of Marter; Energy, Machines, and Motion; and Catastrophic Events. These modules were initially trial-taught in classrooms within the Washington metropolitan area. They were then field-tested in middle-school classrooms in school districts located throughout the nation.

The National Science Resources Center's information dissemination activities are designed to make information on high-quality science curriculum materials and related resources accessible to teachers, school system administrators, and scientists working to improve science education in the schools. The National Science Resources Center is also working to develop effective ways to use electronic networks to facilitate communication among educational leaders and school districts involved in science education reform.

In 1998, the National Science Resources Center published the first edition of *Resources for Teaching Middle School Science*, a comprehensive guide to effective science curriculum materials and other resources for teaching middle-school science. Support for the development of this guide was provided by The Merck Institute for Science Education. *Resources for Teaching Middle School Science* contains reviews of more than 400 curriculum materials for the teaching of physical science, life science, environmental science, earth and space science, and applied science. The guide also contains chapters on teacher references, science resource guides and periodicals, and an ancillary resource section describing programs operated by museums, zoos, and science centers to enrich the teaching of science in the schools.

The National Science Resources Center has disseminated more than 7,000 copies of a similar guide for elementary school teachers, *Resources for Teaching Elementary School Science*, which was published in 1997. This guide is now available online in a searchable format. The Eisenhower National Clearinghouse On-line Catalog of Curriculum Resources uses the National Science Resources Center resource guides to identify materials for its collection and references National Science Resources Center reviews of curriculum materials in the evaluation section of the Eisenhower National Clearinghouse database.

The National Science Resources Center works with hundreds of school districts across the United States that are involved in science education reform. The National Science Resources Center is working to develop a Web site that will connect lead teachers, school administrators, scientists, and community leaders in eight regions of the United States. This Web site will provide local school districts with a means of accessing information and resources often not otherwise available to school districts outside major metropolitan areas.

In 1998, the National Science Resources Center, in partnership with the White House Office of Science and Technology Policy and the National Science Foundation, sponsored receptions for the recipients of the Presidential Awards for Excellence in Mathematics and Science Teaching. These awards are given annually to exemplary elementary and secondary math and science teachers from across the nation.

Smithsonian Institution Archives

Edie Hedlin, Director

Significant organizational changes occurred in FY 1998, perhaps the most obvious taking place in our name. We moved from "Office of" Smithsonian Institution Archives to simply Smithsonian Institution Archives (SIA). This marks a return to our former title, held until 1993 when the Joseph Henry Papers and the National Collections Program joined SIA. Organizational change marked two of SIA's divisions as well. The Archives Division formed into three teams: Reference, Records Management, and Arrangement and Description. In addition, some Archives staff moved to a newly formed Technical Services Division. The results of these changes have been positive, with staff productivity and accountability increased, and with it a willingness to test different methods and approaches to the archival mission.

The Institution's records storage facility at National Underground Storage (NUS) in Boyers, Pennsylvania, coordinated by Smithsonian Institution Archives, became fully operational during the year. SIA staff from the Technical Services and Archives Divisions supported this important effort, with over 3,300 cubic feet of SIA records shipped during the year. In addition, SIA coordinated the shipment of hundreds of feet of additional records and materials from other Smithsonian bureaus to NUS, often providing preservation rehousing and other preparatory support to those bureaus.

The Technical Services Division, created in October 1997, brought together the preservation team, electronic records program, and office-wide computer support services. The electronic records program (ERP) continued to provide the SI community with electronic records guidance. It initiated a "test bed" project with the Office of the Director, NMAH in which the office's e-mail messages are being stored in a virtual records center and will be transferred in electronic form to SIA at an appropriate point. The preservation team continued to implement the preservation plan initially developed during FY 1997. The team conducted preservation assessments of 470 collections, rehoused 73 archival collections into proper storage supplies, treated 5 collections identified as containing mold, and initiated a comprehensive pest monitoring program for all SIA storage facilities. In addition, the preservation team provided other Smithsonian bureaus with critical preservation services and technical advice.

The Archives Division placed a renewed emphasis on records appraisal and increased access to archival collections. Building on the refined appraisal criteria developed last year, the Division's records management team conducted important records surveys and schedules during the year while continuing to transfer and acquire records and papers. The team completed a comprehensive survey and schedule of the National Museum of the American Indian, the first museumwide survey and schedule to be carried out by SIA. The team also completed surveys and schedules for the Office of the General Counsel; the Office of the Director, Smithsonian Environmental Research Center; and Office of the Director and Central Files of the Smithsonian Institution Archives. The Archivist/Division Director surveyed approximately 1,300 cubic feet of the records of the Department of Anthropology and the National Anthropological Archives (NAA) of NMNH during a six-month detail to NAA. While records appraisal dominated the year, other services continued as well. SIA serviced a total of 2,981 reference inquiries during the year, an 11 percent increase over the previous year. Much of the increase was due to queries received via electronic mail. Efforts to make SIA holdings more accessible kept apace through additional work in the OPAC and WebPAC versions of SIRIS, the Smithsonian's online catalog. In addition, important testing of new systems took place with both local and shared databases. SIA added to its holdings during the year through the transfer and acquisition of 837 cubic feet of official Smithsonian records, personal papers, and professional organization records.

The Institutional History Division (IHD) culminated a year of multiple anniversary events in celebration of the 200th birthday of Joseph Henry. Media coverage of Henry's birthday commemoration was extensive in the Albany, New York area, and published articles about Henry appeared in such newsletters and journals as American Physical Society News and Issues in Science and Technology. A more permanent feature of the commemoration was the Henry Papers home page. Combining information about the project with information about Henry, the home page has served as a conduit for queries about Henry, Smithsonian history, the internship program, and the volumes. The Division's achievements, however, extended well beyond commemorative activity. Volume 8 of The Papers of Joseph Henry, covering the years 1850-1853, was submitted to Smithsonian Institution Press. In addition, the Joseph Henry Papers Project entered into the Model Editions Partnership, a cooperative effort by documentary editing projects and the National Historical Publications and Records Commission to establish standards for electronic publication.

The IHD established a significant presence on the Worldwide Web with virtual exhibitions, essays, and guides to historical resources. The IHD's Web site was chosen for participation in "Cybersurfari," an educational Web search activity for K-12 audiences. The "Historic Pictures" site proved to be of particular interest to Web users, receiving over 20,000 hits during the period May to October 1998. Electronic versions of the exhibitions From Smithson to Smithsonian: The Birth of an Institution and Artists at Work were placed on the Web during the year. In addition, the Division initiated a project to digitize the publications, The Smithsonian Institution: Documents Relative to Its Origin and History, by William Jones Rhees, published in 1879 and 1901, and to extend this compilation of legal documents on the Smithsonian from 1900 to 2000. Database development in several subject areas continued, special projects for senior administrators were completed, and several predoctoral, doctoral, and postdoctoral students and scholars were sponsored by the Division during the year.

Finally, the National Collections Program (NCP) continued to produce the Institution's annual *Collection Statistics* and, in addition, launched its Web site during FY 1998. The site features timely and informative guidelines, publications, and other resources for collections managers and administrators. The NCP continued to work with the Institution's large collections management community, the Office of General Counsel, the Provost's Office, and others in revising Smithsonian Directive (SD) 600, Collections Management Policy. Undergoing a metamorphosis, SD 600 is moving from a bulky collection of both policy and procedures to a succinct policy issuance supported by an implementation manual.

Smithsonian Institution Libraries

Nancy E. Gwinn, Director

The Smithsonian Institution Libraries established the Wineland Research Library Endowment on October 29, 1997, in conjunction with the Charlotte and Lloyd Wineland Collection of Native American and Exploration Literature. Income from the endowment will support study and research, as well as acquisitions and preservation of the collections. The Wineland Collection of 48 titles contains a number of gems, including the first edition of Prince Maximilian's beautifully illustrated Reise in des Innere Nord-America in den Jahren 1832 bis 1834 (1939-41), several rare items published between 1812 and 1891, and Theodor de Bry's seminal sixteenth-century threevolume work that formed the basis for identification of North American Indians for centuries, and three works published in the twentieth century. One of the latter volumes was displayed in the Libraries' exhibition "Frontier Photographer: Edward S. Curtis" (September 1998-September 1999), on view in the Libraries gallery (located in the National Museum of American History).

The Libraries appointed curators of rare books for two rarebook libraries this year. Leslie Overstreet was made Curator of Natural History Rare Books on October 1 and will be the librarian of the new Natural History Rare Book Library, now under construction and expected to open in 2000. Ronald Brashear was appointed Curator of Science and Technology Rare Books on June 1 and serves researchers working in the Dibner Library of the History of Science and Technology. Both Ms. Overstreet and Mr. Brashear are in the Libraries' Special Collections Department.

The Libraries began offering a number of research materials online this year. The Libraries home page (*www.sil.si.edul*) now carries the full-text contents of more than 175 science, medicine, and technical journals that are available to Smithsonian staff on their personal computers. The branch library home pages contain a variety of other subject-specialized databases for in-house researchers and for the general public.

To facilitate research in published literature about African art, the Libraries has entered information about more than 18,000 books, articles, reviews, and catalogs in the Libraries online catalog, which is accessible on the Internet (www.siris.si.edu/). The success of this effort is measured by the increasing number of interlibrary loan requests (45 to 65 monthly) for copies of these African art articles that are received by the National Museum of African Art branch. Funded by the Getty Grant Program, the online index will eventually include more than 28,000 records through the Libraries' catalog. Additions to the African art index, which was created by Librarian Janet L. Stanley in 1980, will be made as new literature is published.

To promote the preservation and accessibility of research materials, the Smithsonian Institution Libraries in cooperation with the Research Libraries Group (RLG) cohosted a three-day digital imaging workshop for library and information professionals and specialists, archivists, curators, and preservation administrators on "Managing Digital Imaging Projects." This October 27–29, 1997, workshop was the first of three on the topic, including one scheduled to be held in the United Kingdom. The Smithsonian Institution Libraries participates in the RLG Preservation Program, and several Smithsonian museums and archives are members of RLG.

To foster interest in the history of the Smithsonian, the Smithsonian Institution Libraries launched an online version of its 150th-anniversary exhibition, "From Smithson to Smithsonian: The Birth of an Institution," with lesson plans for grade 9–12 history classes prepared by the Smithsonian Office of Education. Providing full-text documents from Smithson's scientific articles and his will, as well as newspaper accounts of the debates leading to the Institution's establishment, and Joseph Henry's "Programme" and accounts of Spencer Baird's administration, the online show has won praise for its "music, images, pertinent text and clean design."

The Libraries brought three researchers to work in the Dibner Library of the History of Science and Technology this year. Sixteen researchers have been funded since The Dibner Fund began providing resources for the Smithsonian Institution Libraries Dibner Library Resident Scholar Program in 1992. Sarah Lowengard of the State University of New York, Stony Brook, studied color theory in the eighteenth century and its practical applications in the fields of textile dyes, ceramic glazes, and painters' colors for oils and watercolors. Harry Kitsikopoulos, New York University and New York Institute of Technology, researched the diffusion of steam engines and the timing of the British Industrial Revolution, 1770-1870. Shannon Allen Brown, University of California Santa Cruz, worked toward completing his research on the U.S. military's uses of electricity and its effects in shaping the modern infrastructure, using the Dibner Library's distinguished collection in the history of electricity.

Two distinguished professors discussed their research in public lectures this year sponsored by the Smithsonian Institution Libraries and funded by The Dibner Fund. Henry Petroski of Duke University, author of *The Pencil* and *To Engineer is Human*, spoke on "Pencils, Paperclips, and Invention" on November 18. The 1998 Dibner Library Lecture was delivered by Harvard University's Professor of the History of Science and Women's Studies Katharine Park who spoke on "Visible Women: Anatomical Illustration and Human Dissection in Renaissance Italy" on May 20. The Dibner Fund has supported annual lectures in the History of Science and Technology since 1992. Valerie Wheat, Smithsonian Institution Libraries' branch librarian for the Museum Reference Center, completed a year's participation in a program to prepare librarians from a racial minority group for top leadership positions in research and academic libraries. Ms. Wheat was one of 21 librarians chosen from a competitive pool in this program sponsored by the Association of Research Libraries Leadership and Career Development Program and funded by the Department of Education. She adapted her completed research project, "Museum and Library Collaborations: A Natural Cultural Partnership," into a presentation at the American Association of Museums in May.

The Smithsonian Institution Libraries plays an essential role in the exhibitions, the programs, and in the research conducted at the Institution with its 18 branch libraries and electronic resources available at www.sil.si.edu. Its collections of 1.2 million volumes with 40,000 rare books include strong holdings in most of the Institution's historical disciplines, lending crucial support to founder James Smithson's mandate for "the increase and diffusion of knowledge." Particular collection strengths are in the fields of natural history, anthropology, and Native American history and culture to the history of science and technology, American history, aviation history and space flight, postal history, design and decorative arts, African art, museology, materials conservation research, tropical biology, and environmental management and ecology. The distinguished collection of manufacturers' trade literature (285,000 pieces representing 30,000 companies) and of world's fairs materials are used by scholars in many disciplines. The Libraries is actively building collections in Latino history and culture and African American history and culture.

Smithsonian Institution Traveling Exhibition Service

Anna R. Cohn, Director

The Smithsonian Institution Traveling Exhibition Service (SITES) is the largest traveling exhibition service in the world. Its mission is to extend the Smithsonian collections, research, and exhibitions to "sites" across the nation and beyond. SITES organizes and circulates exhibitions of all shapes and sizes on the arts, sciences, and humanities. Since the first exhibition went on the road in 1952, SITES has traveled thousands of exhibitions for the education and enjoyment of museum goers in every state and several foreign countries.

In order to expand the Smithsonian's outreach, SITES has continued to seek our alternative partners and spaces to create and host exhibitions. For example, throughout its tour, the exhibition "Vanishing Amphibians" traveled to science centers, conferences, and libraries in order to reach audiences that might not visit traditional science or natural history museums. SITES also continues to work the American Library Association to create poster versions of exhibitions to hang in libraries across the country. It began a strategic alliance with Silver Dollar City in order to insure wide visibility for Smithsonian exhibitions way beyond the Beltway.

Additionally, SITES continues to work with America's Jazz Heritage to create innovative exhibitions and programs to explore the historical and social impact of jazz music.

SITES' Rural Initiative Program is designed to reach underserved communities in rural areas throughout the United States. In addition to providing these venues with exhibitions, SITES works with the Federation of State Humanities Councils to provide the venues with professional development programs and training, as well as assisting in the development of site-specific public programming.

SITES also expanded its national outreach this year through the Internet by launching the online exhibition "Rotten Truth (About Garbage)" and by including new educational materials on its own newly redesigned Web site.

Smithsonian Office of Education

Ann Bay, Director

Web Sites for Young Researchers

In FY 1998 SOE created two Web sites for young researchers: "Migrations: People, Culture, Objects, Ideas" (launched fall 1997) and "Impacto, Influencia, Cambio: Science, Technology, and Invention in Latin America and the Southwestern United States" (launched September 28, 1998). Both sites contain primary source materials such as oral histories, patent drawings, photographs of objects, and documents from a variety of Smithsonian museums and archives. The Web sites (subareas of the Smithsonian Education Web site) have been designed for use by students in grades 6 through 12 who are doing projects for National History Day (about 500,000 students annually). Our purpose is to make Smithsonian resources as useful and accessible as possible to this audience.

Museum/School Conference

In September 1998 the SOE and the Institute for Museum and Library Studies are sponsoring a conference on the evaluation of museum schools. Participants will look at the impact of museum-based curricula on cognitive, emotional, and behavioral measures of student performance. At the conference the schools will share examples of instruments used to measure student growth including instructional rubrics, student and teacher surveys, and specific performance tasks.

Audience Research: Readers of Smithsonian in Your Classroom

The Smithsonian Office of Education joined forces with the Office of Institutional Studies to conduct a full-scale survey of

the reachers who subscribe to SOE's quarterly teaching guide for elementary schools, *Smithsonian in Your Classroom*. The offices designed a survey instrument and mailed 2,000 questionnaires in spring of 1998 (to about 15 percent of subscribers). An astonishing 80 percent of those questioned responded to the survey. Results indicated satisfaction with the publication and considerable use of it in classrooms. More than half of the publication's subscribers also read *Smithsonian* magazine and take advantage of Smithsonian outreach activities, and 90 percent use the Internet. Readers seek more materials in science and history and activities geared to the primary grades (K-3).

Teachers as Researchers

To promote the use of museum-based methodologies in classrooms, SOE conducted a seminar for teachers in the Washington, D.C. area on how to develop an exhibit. Teachers visited the Office of Exhibits Central, CAL, and met with museum curators to understand the processes involved in researching and building an exhibit. Teachers emulated these processes as they used primary sources within the Smithsonian to build protorype exhibits for their own classrooms. Based on this work and other research, the SOE will publish guidelines on classroom exhibit development in 1999.

Office of Sponsored Projects

Ardelle G. Foss, Director

The Office of Sponsored Projects served Smithsonian researchers and scholars by supporting the work of approximately 137 principal investigators who submitted 248 new proposals valued at \$63 million and by negotiating and accepting for the Institution 208 grant and contract awards valued at \$27 million.

Accessibility Program

Janice Majewski, Smithsonian Accessibility Coordinator

The Accessibility Program is a pan-Institutional resource for Smithsonian units to ensure that the Smithsonian's programs and facilities are accessible to people with disabilities. The Program collaborates with all Smithsonian organizations to improve access to existing resources, as well as to design each new program, exhibition, publication, media presentation, and building to be fully accessible to visitors and staff with disabilities. The Program's activities this year show the range of information and services it provides. A significant amount of Program time is spent on accessibility reviews of facilities and exhibitions to ensure that all new construction is fully accessible to people with disabilities. A close working relationship has been fostered through these reviews with the Office of Physical Plant and museum exhibition designers, thus increasing staff awareness of what accessible design entails and helping the Institution further its goals to become fully accessible to all visitors and staff.

In conjunction with its policy and implementation and guidelines writing responsibility, the Program conducted five seminars with staff and outside advisors with disabilities to Smithsonian staff and outside cultural organizations. Addressing cutting-edge issues in the areas of accessibility in museum settings, these sessions prepare staff to present better programs to the Smithsonian's entire public.

Support for Smithsonian units also included providing direct accessibility services for visitors (for example, sign language interpreters, real-time captioning, and translation of documents into Braille.) This year the Program arranged nearly 500 hours of services for visitors attending Smithsonian Associates courses, FONZ lectures, and docent-led tours of the museums.

Finally, the Program provides technical assistance on issues of museum accessibility to museum and Universal Design professionals around the world.

Institutional Studies Office

Zahava D. Doering, Director

The Institutional Studies Office (ISO) is a pan-Institutional resource for the systematic study of the characteristics, attitudes, opinions and experiences of Smithsonian constituencies. The small staff includes professionals with expertise in sociology, demography, research methods, survey statistics, and a variety of quantitative and qualitative data analysis and evaluation techniques.

Since its founding in 1987, ISO has conducted studies and applied research for Smithsonian administrators, curators, and programmatic staff. Areas of investigation include audience and membership profiles, background studies and assessments of SI exhibitions and public programs, and ongoing analyses of employee composition. For each study, ISO is responsible for all aspects of study or survey design, implementation of data collection, analysis, and report writing. Institutional clients are asked to assume the costs of data collection and data entry. In addition, the office provides some technical consultation to cultural organizations throughout the country and professional review of applied research conducted for them. The staff is also available, on a limited basis, to conduct seminars in various aspects of applied quantitative and qualitative research and program evaluation. The results of ISO studies are disseminated in several formats. The major vehicle is a report series; analyses include technical appendices that both document the work and can be used as methodological models. The Reports are distributed both within and outside of the SI. Publications also include research notes. Research notes have a more limited distribution, either because of the subject matter or because the results are not generalizable. Results are also presented at professional meetings or in journal publications. Finally, to ensure that clients have timely access to results while more formal documents are being prepared, memoranda are prepared for internal use.

The Office's 1997-98 activities included:

- (1) Background studies: (a) A background study of the attitudes of Mall visitors towards Native Americans. This study, in preparation for the new National Museum of the American Indian on the National Mall, was conducted in three different museums on the Mall. (b) The Star-Spangled Banner study-a background study designed to help in the preparation of a future display of this famous icon after conservation is completed. Smithsonian visitors in the National Museum of American History were surveyed regarding their use of flags, their preferences for display, and the values they associated with the flag and American history. (c) Interviews with engaged visitors in the National Museum of American Art and National Portrait Gallery. This qualitative study offered insight into the experiences of visitors in these two museums that share one building. It also provided information on which to base a subsequent survey study.
- (2) Formative evaluation: for example, audience research for "Bodyworks," a future exhibition on medicine in the National Museum of American History. ISO staff worked with members of the exhibition planning team in informal assessment of visitor responses to items proposed for the exhibition.
- (3) Assessments of major exhibitions and programs, including the following: (a) "Puja," an exhibition of Hindu art at the Arthur M. Sackler Gallery that was designed to be especially educational; (b) "Twelve Centuries of Japanese Art from the Imperial Collections," another exhibition at the Sackler Gallery, was studied because its style of presentation differed so significantly from that of the Puja exhibition, although the visiting audiences were very similar; (c) the Contributing Membership Program was studied through a mail survey in order to compare the present membership and their artitudes with those who were in the program ten years ago, the time of the last study.
- (4) Technical training: Three ISO staff members conducted a one-week course introducing the methods and potentials of visitor studies. The course was offered under the auspices of the Center for Museum Studies. Participants came from smaller museums from across the country.
- (5) Statistical information on Smithsonian constituencies for bureau and office development staffs and program personnel: for example, 1997 Visits to Smithsonian Museums.

- (6) Statistical analyses used by the Institution to meet its labor force reporting requirements to the Regents, the Congress, and other federal agencies.
- (7) Presentation of research results: (a) This year two ISO staff members made presentations at the annual meeting of the American Association of Museums and four ISO staff presented papers at the annual meeting of the Visitor Studies Association; (b) The director presented a paper on museum visitor research to a graduating class at the University of the Arts in Philadelphia.

Office of the Chief Financial Officer

Rick Johnson, Chief Financial Officer

The Office of the Chief Financial Officer was established by memo from the Under Secretary dated, July 17, 1996. The Chief Financial Officer is responsible for the Office of the Comptroller, the Office of Contracting, and the Office of the Treasurer. The Chief Financial Officer also provides oversight over the financial management of grants and contracts in the Office of Sponsored Projects.

During fiscal year 1998 there was continued development of the financial plan for the Dulles Center Project at the National Air and Space Museum. There was also a focus on improving the understanding of the Smithsonian's financial status with the issuance of a number of reports expanding upon the audited financial statements. Activities of the SI-wide indirect cost team led to a more equitable business activity rate.

Financial systems projects included the successful implementation of the new government travel card, stabilization of the processing of accounting data for payroll and planning for Y2K compliance.

Some additional activities are listed below:

- Managed the contract with the external auditors; assured an
 effective annual audit, which resulted in an unqualified
 opinion of the audited statements
- Prepared the financial report for Smithsonian Year 1997
- Served on the National Postal Museum Coordinating Committee
- Served on SI-wide internal control committee (FMFIA)

Office of General Counsel

John E. Huerta, General Counsel

The Office of the General Counsel (OGC) protects the legal interests of the Smithsonian Institution. In carrying out that mission, the OGC provides legal advice and counsel to the Smithsonian Board of Regents, Secretary, Provost, Under Secretary, and other managers on the administration of the Institution; represents the Smithsonian in litigation and other adversarial proceedings to which the Institution is a party and before federal, state, and local government entities on administrative matters; issues final determinations on administrative tort and personal property claims against the Smithsonian; and generally monitors developments in the law for application to the Smithsonian programs.

Office of Communications

David J. Umansky, Director

The Office of Communications is responsible for the public face of the Institution. Its Office of Public Affairs (OPA) is dedicated to media relations, publications, and public relations. The Visitor Information and Associates' Reception Center (VIARC) serves the 28 million people who visit the Smithsonian each year.

Office of Public Affairs

Linda St. Thomas, Associate Director, Media Relations Kathryn Lindeman, Associate Director, Publications

This year, Director of Communications David J. Umansky and staff in the Office of Public Affairs began implementing the Secretary's new visual identity program, designed by Ivan Chermayeff of Chermayeff & Geismar in New York City. The foundation of the program is a new logo, used with a sunburst symbol, that links the Smithsonian name with each museum, research institute, and office.

A major effort in implementing the visual identity was the preparation, printing, and distribution of the *Smithsonian Design Guidelines*, which governs use of the logo by staff and outside designers and printers. By the end of the fiscal year, the new identity was in place on many Smithsonian products, including stationery, Web sites, brochures, and reports.

A public service ad campaign put the Smithsonian in the public eye this year. The ad featured Larry Fuente's colorful *Game Fish*, from the Renwick Gallery's collection, with the line "Ever wonder who decides what the Smithsonian keeps?" It ran in *TV Guide*, *Latina*, the *New Yorker*, *Elle Decor*, and other magazines in free space provided to nonprofit organizations such as the Smithsonian. The ad received the Addy 98 Citation of Excellence from the Advertising Club of Washington, D.C.

Extensive media coverage followed the announcement of a three-year conservation project for the Star-Spangled Banner. The project is part of the White House Millennium Council's Save America's Treasures initiative, launched at the National Museum of American History on July 13 by President Bill Clinton and First Lady Hillary Rodham Clinton. OPA handled all media for the event and videotaped the ceremony.

OPA produced a 16-minute video for television news producers with exterior views of the museums and the National Mall, as well as shots of famous artifacts, including the Star-Spangled Banner. The staff also developed and produced a seven-minute film about education at the Smithsonian to be used by the Office of Membership and Development and other offices.

Two brochures in OPA's Resources series were updated this year: Native American Resources at the Smithsonian and African and African American Resources at the Smithsonian. The brochures are intended for teachers, students, and researchers interested in exploring Smithsonian collections, databases, publications, and other resources.

OPA also reestablished a full-time staff position this year to publicize and promote research at the Institution.

Visitor Information and Associates' Reception Center

Mary Grace Potter, Director

During fiscal year 1998, the Visitor Information and Associates' Reception Center (VIARC) continued to pursue its mission to broaden the public's knowledge, appreciation, and enjoyment of the Institution and to facilitate and promote participation in its programs and activities.

As a central support organization and the principal contact point for information about the Smithsonian, VIARC's work was carried out through the Smithsonian Information Center (SIC); 18 museum information/member reception desks; response services for public and member mail, telephone and electronic inquiries; outreach to the tourism industry; outdoor wayfinding stations; two large volunteer programs that provided primary support for the Institution's public information activities and for staff project assistance behind the scenes; and a docent program for the Castle.

Operating from 9:00 A.M.-5:30 P.M. daily, the Smithsonian Information Center attracted 1,890,838 visitors. Reception services were provided to 26,570 Associate members and their families; 3,735 memberships were sold representing \$131,841 in revenue. Docents led 300 tours of the Castle, which engaged 3,366 public and Associate participants.

Information desk services were provided daily in 13 museums by a corps of 676 Volunteer Information Specialists. During the year 1996 new volunteers were recruited, trained, and placed in desk assignments across the Institution; the *Info-Special* newsletter was produced and distributed quarterly; and 83 in-service enrichment opportunities were offered to volunteer participants as a means of increasing their knowledge and understanding of the Institution's work and collections.

Incoming public inquiry mail including electronic inquiries numbered 34,4II. Capability to respond online facilitated answers to some 4,7I0 inquiries originating primarily from The Worldwide Web. The latter represents more than a IOO percent increase in electronic inquiries. Fiftyfive new bibliographies, fact sheets, and leaflets were created and uploaded to the Web on subjects ranging from anthropology to zoology; 5I others were created or revised for individual responses. The *Sales Reference List* was updated and published three times. Outgoing mail in response to both mail and phone inquiries numbered over 74,000 pieces.

Public telephone inquiries documented by VIARC numbered more than 377,466, the heaviest volume experienced in the history of the program. Although this number is high, the actual number handled was even higher as phone data could not be retrieved during two when periods when the call management system crashed. To maintain service for Institution callers during these periods required labor intensive measures by staff and volunteers. Factors influencing the volume of calls included the "Star Wars" exhibition and the IMAX film Everest, both at the National Air and Space Museum; and Black History Month activities.

Total volunteers participating in the Behind-the-Scenes Volunteer Program during the year numbered 1,240. Translations completed by volunteer translators numbered 107 in 9 languages. These volunteers contributed over 176,000 hours of service to projects in departments, divisions, and programs across the Institution.

Efforts to address the Institution's accessibility and cultural diversity goals were ongoing. Eighteen percent of new Volunteer Information Specialists represented minority constituencies; 23 percent of new volunteers placed in projects behind the scenes were known to be minorities. Printed activity "Samplers" were produced for all Heritage Celebrations and 24-hour recorded information tapes were also provided. Telephone requests for Black History Month calendars were the highest ever received (4,512), a 52 percent increase over 1997's then record number of requests. The unprecedented volume of requests was attributed to a misunderstanding of the term "calendar" in promotional materials. As updates were required, publications were revised to reflect adherence to accessibility guidelines and primary publications were provided in alternate formats at all information desks for distribution to visitors. In addition, tours of the SIB were offered in Spanish during Hispanic Heritage Month and on a request basis throughout the year. The Tourism Outreach Coordinator artended Nuestra Gente, a U.S.-Latino Awareness Conference to enhance skills in marketing to Latinos and the annual LaCumbre marketplace to promote travel to the Institution/ D.C. from Latin America. Other efforts included the design and installation of the A&I information desk, production of an open-captioned version of the SIC video, supply of Braille Metro maps to all information desks, uploading all Heritage

Month activities to the Web, and promotion of same in the SIC theaters.

The Institution-wide volunteer survey conducted annually through VIARC counted a total of 5,724 volunteers who contributed some 495,551 hours of service during FY 98. Volunteer participation was acknowledged appropriately through appreciation events, service pins, the annual January supplement to *The Torch*, and inclusion in the various staff open houses sponsored through the Community Committee.

Appreciation events for participants in VIARC's two volunteer programs included remarks by Secretary Heyman at the spring event for behind-the-scenes volunteers when one of the Institution's oldest volunteer groups, the Ham radio operators, and one of the newest volunteer groups, Voices 2000 from the Accessibility Program, were awarded special service plaques. The Secretary also spoke at the holiday reception for Volunteer Information Specialists. Volunteers also received gift calendars, and NMAH and SIC volunteers were invited to the Secretary's Fourth of July picnic.

Work with the tourism industry continued through participation in major marketplace activities including the American Bus Association; National Tour Association; Travel Industry Association; and La Cumbre, the principal visit U.S. travel trade show for Latin American tour operators and travel agents. Liaison with local hospitality, convention, and visitors associations was ongoing, as was online promotion of the Smithsonian through TravelFile and NTA Online. To promote the Smithsonian as a major tourist destination, VIARC also assisted the Washington, D.C. Convention and Visitors Association in arranging a reception at the National Museum of African Art for African American Heritage tour operators. In addition, VIARC was instrumental in facilitating the display of SITES and Museum Shop items in the newly opened Reagan Building and hosted a monthly meeting of the D.C. Chamber of Commerce's Convention and Tourism Committee, at which NASM's Dulles Center Director of Major Gifts was the featured speaker.

Additional activities during Fiscal Year 1998 included creative and productive internal and external communication systems and networks that enabled VIARC to improve and enhance information services for all audiences. Highlights included, but were not limited to, the following initiatives: researching and contracting for replacement of the telephone system; completion of research for digitization of "Superguide" map and contracting for same; completion of the Exhibits Archives Project for ten museums (2,912 exhibits); content review of 36 SI and non-SI publications; redesign and updating of the Smithsonian convention display unit; finalization of new alternatives for outdoor wayfinding pylons; completion of site identification on SIC models; completion of Y2K changes to VIARC's custom database programs; configuration and installation of Pentium computers at information desks; cabling and connection of Sackler and NASM information desks to SINET; numerous office network and custom software improvements/enhancements including the

addition of new HP4000 printers for every unit; another major new project was initiated to replace the SIC info window program. Finalization is anticipated during FY 1999. In addition, integration of VIARC's Web pages in the redesign of the SI home page accompanied by improved graphics and many other enhancements resulted in a 400 percent increase in usage of our Web resources. (In September alone there were over 173,000 unique visitors to our pages.) "Encyclopedia Smithsonian" continued to expand, winning a number of awards from Internet Sites including "Links 2 Go" and "Study Web."

Office of Contracting

John W. Cobert, Director

The Office of Contracting continued to provide central contracting, business, procurement, and advisory services for all Smithsonian museums, research institutes, and offices. The office is responsible directly, through its staff, and indirectly, through the issuance and oversight of delegations of contracting authority to various offices, for the negotiation, contract formation, and continuing contract administration involving the expenditure of most of the Smithsonian's appropriated federal and Institutional trust funds. The Business Contracting Division manages and has oversight for contracting for income generating and special relationship business contracts. The Travel Services Division manages all of the Smithsonian's travel bookings and arrangements for worldwide activities. The Property and Inventory Management Branch has responsibility for the Institution's accountable property control system.

During Fiscal Year 1998, the office provided regular and ongoing support to the Institution's numerous exhibits, projects, design and construction activities, and programs, and continued carryover activities from 1997. The office negotiated and awarded contracts to restart the National Museum of the American Indian Mall Museum design project and also to design exhibits for the Museum.

The office acquired the Spacelab module, Igloo and its instrument pointing system from the National Aeronautics and Space Administration for accession into the National Air and Space Museum, through the General Services Administration federal excess program, at an estimated value of \$219,000,000.

The Office of Contracting added a fourth training course to its training program: "Simplified Acquisition," which was specifically created for Smithsonian Senior Procurement Officers. Training in Federal Contracting Basics (FCB), Contracting Officer's Technical Representative, (COTR), Project Management, and Simplified Acquisition was provided to 312 Smithsonian staff members. The FCB class was offered to the Cooper-Hewitt, National Design Museum and the National Museum of the American Indian, on site in New York. The Office of Contracting continued its ambitious training program for project and contract management.

Office of Equal Employment and Minority Affairs

Era L. Marshall, Director

In Fiscal Year 1998 the Office of Equal Employment and Minority Affairs (OEEMA) continued its successful program initiatives, refining and enhancing efforts that have produced marked successes in promoting EEO/Diversity and the use of small, disadvantaged and women-owned businesses.

OEEMA resolved an increased number of EO complaints in the informal stage through such methods as mediation and advice and assistance meetings with both employees and managers to focus on and resolve workplace issues. Results included responding to more than 648 contacts from managers and employees through in-depth counseling, various consultative advice and assistance efforts, and the efforts of our internal EEO counselors. Out of a total of 77 cases handled on the informal level, five were resolved through settlement agreements; and ten through intake counseling. The estimated cost avoidance to the Smithsonian was \$2,722,500. Five cases were settled through mediation, for a cost savings to the Smithsonian of \$22,500.

The investigative arm of OEEMA increased the number of EEO investigations conducted by internal staff. During the fiscal year, 43 investigations were closed; of these, 21 were closed using Smithsonian staff. Using a baseline of \$3,000 per case, the use of internal staff to conduct EEO investigations resulted in a cost savings of \$63,000 to the Institution.

OEEMA continued to institute a comprehensive training plan and program to educate and increase SI employees' awareness of Institutional policy regarding the Prevention of Sexual Harassment (POSH) and to help promote a working environment free of intimation, hostility, and sexual discrimination. A total of 1,070 employees participated in POSH training in FY 1998; a POSH policy statement was published and put on the SI PRISM Web site, and the POSH database continues to track Institution-wide employee attendance.

In the Special Emphasis/Affirmative Employment Program area, OEEMA broadened applicant flow information to provide underrepresentation data to management and OHR for use in targeted recruitment; maintained an automated tracking system to improve OEEMA's responsiveness to unit/management concerns; and prepared trend analysis reports on weekly, quarterly, and annual bases. The office advised and assisted units consisting of 25 or more employees, SI managers/supervisors, and OEEMA collateral-duty officials with diversity planning (recruitment, hiring, training) and evaluation. In FY 1998 OEEMA reviewed 1,041 selection certificates, certifying them with signature and through appropriate comments to management officials.

OEEMA held meetings and training programs for all unit Equal Opportunity officers and supervisors to provide current information on the changes in federal and Smithsonian equal employment programs. Additional training was also provided managers to increase their understanding of EEO laws, including the guidelines and issues resulting from the *Adarand* decision.

OEEMA's Diversity team collaborated with disabled employees, their unit managers/supervisors, the Ombudsman, and such organizations as the Employee Assistance Program (EAP) and Labor/Employee Relations (LER) to ascertain the need for, facilitate the use of, and provide guidance to such units as AA/PG, Museum Shops, OEMS, OFM-Quad, OPA, and NMNH.

OEEMA's internal Small and Disadvantaged Business Utilization (SDBU) outreach effort was highlighted by the very successful Small Business Procurement Fair, which featured eight small businesses specializing in office products. More than 150 SI staff were in attendance to meet and network with business representatives, resulting in subsequent SI contract awards in the amount of approximately \$150,000 to the exhibitors.

SDBU's outreach featured a significant coordination effort with the Small Business Administration (SBA) to develop a memorandum of understanding (MOU) between the Smithsonian and SBA. The MOU delegates to the Smithsonian direct authority to award 8(a) contracts, reducing processing time from two months to about two weeks.

OEEMA worked with numerous SI units to assist in identifying small businesses and encouraged them to set aside contractual requirements for small business and 8(a) programs. These efforts led to the awarding of at least eight major contracts, including three five-year open-term information technology services contracts to 8(a) firms with a potential maximum value of \$7.5 million each and five new construction 8(a) term contracts to be awarded in early FY 1999.

Our FY 1997 "Contracting Achievement Report" showed the Smithsonian met and significantly exceeded three of its four small business goals: percentage contract dollars to 8(a) firms were 13 percent, with a goal of 11 pecent; small disadvantaged businesses achieved 10 percent, with a goal of 3 percent; and women-owned businesses achieved 12 percent, with a goal of 5 percent. These results placed the Institution in the top ten federal agencies in these three main categories of procurement awards.

OEEMA, in collaboration with the EO Advisory Council, hosted its fourth Equal Employment Award Program on October 28, 1997. This key EEO awareness and appreciation activity has proven successful in gaining Institutional support for EEO initiatives. OEEMA created the concept and was the first office to employ the full support and involvement of the Secretary, the Under Secretary, and the Provost.

Several outstanding managers and employees were recognized for exceptional contributions to the Smithsonian's Equal Opportunity goals. The OEEMA Director represented the Smithsonian's programs, policies, and practices in discussions and meetings of the Equal Employment Opportunity Commission and the Interagency Council of EEO and Civil Rights Directors. We shared "lessons learned" as part of the national effort to improve the quality of EEO programming in the federal government.

OEEMA served as a principal participant in monthly meetings of the Employee Relations Working Group, which entertains the presence of the Deputy General Counsel, the Director of the Office of Human Resources, the Manager of Labor and Employee Relations, the Employee Assistance Program Manager, and the Ombudsman.

This collaborative effort ensures that all players in the dispute resolution business are kept informed of every case involving a dispute with the Smithsonian's policies, practices, or procedures—whether in the informal/formal stages of the EEO complaint process, in OHR/LER, MSPB, or in the District courts.

OEEMA's Director participated in meetings of the Smithsonian's Personnel System Reform Steering Committee, and staff members served on various subcommittees representing EEO goals and policies.

OEEMA continues to serve as a member of the Office of Small and Disadvantaged Business Utilization (OSDBU) Directors Interagency Council. The Council serves as a forum to inform and alert federal SDBU directors of trends and developments in the small business political and economic arenas.

OEEMA prepared reports to inform of diversity initiatives, efforts, and accomplishments. The annual *Smithsonian Institution Equal Opportunity Report* provided a detailed work force analysis and synopsis of Smithsonian museum exhibits and programs to the House and Senate Committees on Appropriations, setting forth in detail the Institution's commitment to celebrating our nation's diverse historical and cultural achievements. The annual Accomplishment Report for Diversity Action Plans informed senior management of each unit's diversity initiatives and its efforts to meet EO responsibilities. The annual Affirmative Action Plan for Minorities and Women and the annual Affirmative Action Plan and Accomplishment Report for Persons with Disabilities were prepared in accordance with EEOC directives.

OEEMA published the fifth edition of its office newsletter, "Opportunities," during this period. This publication assists employees and managers to deal with and resolve human relations issues. The current issue featured information on reasonable accommodation, sexual harassment, how to handle an EEO complaint, and an update on SDBU activities. The publication is distributed pan-Institutionally and has consistently received extremely positive reviews.

OEEMA has established and maintains effective lines of communication with major Smithsonian offices. Our work successes result from embracing a common vision "to be valued as a highly effective service organization that provides impartial, pro-active guidance and assistance to our customers."

85

Office of Environmental Management and Safety

F. William Billingsley, Director

The Office of Environmental Management and Safety continued to ensure a safe and healthful environment for all Smithsonian employees, volunteers, and the visiting public. The office provided consultation services, training, and technical support in the areas of environmental management, fire protection, and occupational health and safety. The office also informed the Smithsonian of applicable fire, safety, and environmental management laws and conducted inspections of all Smithsonian facilities. FY 1998 marked the seventh annual Secretary's Safety Awards Ceremony. The National Museum of American History won the large-facility award, and the Smithsonian Environmental Research Center won the smallfacility award.

Office of Physical Plant

Michael J. Sofield, Director

The Office of Physical Plant creates and maintains the infrastructure and environment within which the Smithsonian museums, research institutes, and offices pursue their goals. The work of the office includes capital construction projects; repair, restoration, and alteration of buildings; crafts and trade work to maintain facilities; operation of utilities systems; landscaping and gardening for Smithsonian properties, transportation and mail services; and architectural research and historic preservation. For the first time ever, the Office was able to commit more than \$50 million to support repair and restoration of Smithsonian facilities.

Office of Facilities Services

Richard H. Rice, Jr., Senior Facilities Services Officer

The Office of Facilities Services, along with other organizations in the Facilities Services Group, continued to focus on collaborative efforts to improve service to the Institution. Among these were several specific organizational development initiatives, focusing on internal relationships, communications and leadership. The Office also led the strategy to increase funding for repair of the Smithsonian's physical plant, which resulted in appropriation of \$40 million in FY 1999.

Office of Protection Services

David F. Morrell, Director

Deriving its legal authority from Title 40, United States Code, Section 193, the Office of Protection Services (OPS) has as its mission protecting and securing the National Collections and other properties entrusted to the Smithsonian Institution and ensuring the safety and security of staff and visitors, while permitting an appropriate level of public access to the collections and properties.

During this year, the Office of Protection Services recruited and hired 82 Museum Protection Officers (MPO). OPS continued its contract with Wackenhut Services Incorporated to train all 82 MPOs. The two-week training course focused on basic security operations within a museum setting. Wackenhut and OPS conducted seven in-service MPS training classes this year. Wackenhut also assisted OPS in providing nine basic supervisory training courses for sergeants and lieutenants. The focus of the supervisory class was the development of effective communication skills.

In addition, OPS also worked with Wackenhut in designing and implementing a "train the trainer" course. This course provided OPS employees with various training methods enabling them to train entry-level MPO's effectively.

Also this year, James J. McLaughlin was selected as Deputy Director of Operations on March 30, 1998; Douglas A. Hall was selected as Chief of the Technical Security Division on April 13, 1998; William Ruth was selected as Chief of the Central Information on August 3, 1998; and Beverly Johnson was selected as Chief of the Training Division on September 28, 1998. James Burford was appointed to the position of Special Assistant to the Deputy Director on April 13, 1998.

OPS staff developed 36 administrative and operational policies. These policies were distributed to all OPS security units and divisions. Security Managers and Division Chiefs were instructed to introduce and explain each of the new policies to their staff in order to ensure that all employees understand OPS-wide requirements and responsibilities.

In our continuing effort to upgrade and modernize security systems throughout the Smithsonian, OPS worked closely with the U.S. Army Engineering Support Center, Huntsville, Alabama, and developed a proposal title "The Smithsonian Security Modernization Program." This proposal provides the program objectives to replace the Smithsonian Institution Propriety Security System and the communications infrastructure to bring all Smithsonian museums and facilities to a consistent standard of electronic security application.

This year, like the two previous years, OPS staff worked closely with the staff of "America's Smithsonian" to ensure that the last exhibition in Scottsdale, Arizona, was a success. OPS staff monitored the security contract for the exhibition and ensured that artifacts were escorted from Scottsdale to Washington, D.C. without incident. The National Conference on Cultural Property Protection was held in Alexandria, Virginia, from February 9–12, 1998. The theme for the conference was Optimizing Security with Minimum Resources.ⁿ More than 150 people from museums, libraries, and cultural property institutions attended the conference.

Smithsonian Magazine

Ronald C. Walker, Publisher Don Moser, Editor

Since its founding in 1970, *Smithsonian* Magazine has extended the Institution's message, expanded its influence, and increased its public visibility throughout the United States and abroad. Considered one of the greatest success stories in magazine publishing history, *Smithsonian* is now the twentythird largest magazine in the country with a circulation of 2 million. It continues to generate revenue for the Institution.

Editorial subjects extend beyond the scope of the Institution's museums. Leading authors contribute articles about the arts, history, the environment, conservation, and the sciences, always written with the layperson in mind. Monthly features include "Phenomena, Comment & Notes," a commentary on nature and the natural world; "Smithsonian Perspectives," a column by the Smithsonian secretary; and reviews of recently released nonfiction books. Smithsonian Institution activities are covered in three regular departments: "Around the Mall & Beyond," "Smithsonian Highlights," and "The Object at Hand."

The awards won by *Smithsonian* this year include the Clarion Award for Best Overall External Magazine, sponsored by The Association for Women in Communications. Writer Scott Weidensaul won the Outdoor Writers Association of America, Inc. President's Choice award ("best of the best" of all winning magazine entries) for "The Belled Viper" (*Smithsonian*, December 1997).

Also this year, *Smithsonian*'s site on the Worldwide Web introduced a new home page design, creating opportunities for more editorial promotion and greater functionality than before. This year also saw the debut of Kids' Castle, a new educational area of the Web site featuring content and photographs drawn from *Smithsonian* editorial and geared toward kids ages 8–14.

In partnership with the American Society of Travel Agents (ASTA), *Smithsonian* awarded the eighth annual ASTA/ *Smithsonian* Magazine Environmental Award to Sustrans' Sea to Sea Cycle Route for the development of a cycling/hiking route in northern England, and to Monique Rodriquez and George Strand, Cortez Travel and Expeditions, for pioneering responsible environmental tourism practices in Madagascar. The award recognizes outstanding achievements and contributions by individuals, corporations and countries toward furthering the goals of environmental conservation.

The Smithsonian Associates

Mara Mayor, Director

The Smithsonian Associates (TSA) reached out in 1998 to Smithsonian members and the general public, offering a broad array of educational and cultural programs crafted to highlight and complement the work of the Institution.

Resident Associate Program

TSA's Resident Associate Program provided audiences in the greater Washington area with a "Campus on the Mall" that is truly unlike any other campus in the world. Participants selected from a dazzling array of courses and seminars that featured the world's leading scholars and experts. The "Distinguished Women" series featured Dr. Bernadine Healy, the first woman director of the National Institutes of Health, and Justice Sandra Day O'Connor, the first woman appointed to the U.S. Supreme Court. "The Outsider in Shakespeare" spotlighted actor Patrick Stewart, Shakespeare Theatre artistic director Michael Kahn, and designer Ming Cho Lee in a course devoted to two of the Bard's masterpieces, The Tempest and Othello. "Timeless Tuscany," cosponsored with the Embassy of Italy and the Italian Cultural Institute, gathered together leading experts who traced Tuscany's rich artistic and cultural heritage. In a continuing cosponsorship with the National Science Foundation, "Polar Connections: The Arctic and the Antarctic" assembled distinguished scientists to discuss the isolated polar regions and their tremendous influence on the rest of the globe.

TSA continued to collaborate with Smithsonian museums on cultural and educational programs. In January, TSA saluted the opening of the National Gem Hall when National Museum of Natural History (NMNH) curator Jeffrey Post spoke to a sellout audience about the spectacular, expanded Janet Annenberg Hooker Hall of Geology, Gems, and Minerals, after which participants were treated to a tour of the hall. In "A Farewell Tribute to the Star-Spangled Banner," TSA offered a patriotic salute in the Flag Hall of the National Museum of American History (NMAH) to mark the renovation of our treasured national icon.

Music again played an important part in TSA's Resident Associate programming. In collaboration with NMAH's Program in African American Culture and its exhibition "Wade in the Water," TSA presented a concert and master classes taught by extraordinary teachers of three sacred music genres: gospel hymns, congregational spirituals and hymns, and concert spirituals. TSA also produced its annual series of chamber concerts by the Emerson String Quartet, the 20th Century Consort, and the Smithsonian Chamber Music Society, whose performances continue to set standards for great musical performance.

TSA continued its "Radio Theatre—Live!" series with three new productions: *The Heiress*, based on Henry James' *Washington Square*; Arthur Miller's *All My Sons*; and *Working*, the musical based on Studs Terkel's best-selling book. The series, produced by the L.A. Theatre Works and presented by TSA in conjunction with the Voice of America (VOA), treats audiences to unique performances and a behind-thescenes look at radio drama in production. These worldclass productions are recorded for subsequent broadcast on public radio throughout the United States and abroad on VOA.

TSA presented a wide-ranging array of programs featuring individuals who are leaders in the arts, humanities, and science. Among these were world-renowned cellist Yo-Yo Ma, who discussed the creative process and played a short musical excerpt by Bach to the delight of the audience. Journalist Tad Szulc presented a lecture on composer Fryderyk Chopin, after which celebrated pianist Eugene Istomin performed several Chopin masterpieces. In another unforgettable evening, screen legend Fay Wray spoke of her life as an actress during a special presentation of the original, full-length adventure classic *King Kong.* The Honorable Newt Gingrich, Speaker of the U.S. House of Representatives, joined historian Paul Johnson in a unique dialogue on the history of America. Nadine Gordimer, 1991 Nobel laureate in literature, was featured in an interview in which she discussed her life as a writer.

TSA awarded two James Smithson Bicentennial Medals: one to John Hope Franklin in recognition of his outstanding contributions as a historian of American life, and another to filmmaker George Lucas for his outstanding contributions to the advancement of the art of motion pictures.

Discovery Theater presented an eclectic array of original plays and touring productions—on subjects ranging from apartheid to dinosaurs—to engage and educate children throughout the Washington area. TSA's summer camps again proved popular, as more than 600 area children enjoyed such programs as "Mornings and Afternoons with the Impressionists," "Dig Those Dinos!," and "TV Smithsonian: Journey to Outer Space." And the 32d Annual Smithsonian Kite Festival, entitled "Boxes in the Sky," appealed to children and kite aficionados of all ages.

TSA's studio arts classes in painting, drawing, photography, and various handicrafts continued to educate and entertain students from the beginner to the proficient. The numerous photography classes, in particular, proved especially popular, offering participants the opportunity to enhance their artistry, as well as to learn darkroom techniques.

TSA upgraded its Web site to include an e-commerce capability. Resident Associate memberships, program tickets, and U.S. and Canadian study tours (the catalogs for which were published for the first time on the Worldwide Web) could now be ordered online.

Smithsonian Study Tours

Forty-two Associates joined with members of the World Wildlife Fund, the California Academy of Science, the American Museum of Natural History, and the National Audubon Society aboard the expedition ship *Hanseatic* for a voyage to Antarctica and the Falkland Islands. NMNH curator Jeffrey Post joined experts from each of the other cosponsoring organizations to provide the onboard educational program.

Senegal and Mali were featured for the first time on a study tour designed to highlight the rich history of these two nations. Twenty-seven Associates, accompanied by study leader John Franklin of the Smithsonian Center for Folklife Programs and Cultural Studies, visited Dakar, Goree Island, and legendary Timbuktu.

TSA inaugurated the first in a series of American Snapshots study tours during a four-day program on Amelia Island, Florida. Snapshots feature smaller towns and regions renowned for their unique heritage. The Amelia Island program highlighted the area's well-preserved Victorian architecture. Other Snapshots featured the Amish community in Holmes County, Ohio, and the maritime heritage of Puget Sound, Washington.

Local tours lasting one to four days offered a wide and exciting variety of onsite learning experiences in the arts, sciences, and humanities, on subjects as varied as drama, geology, and history. Civil War programs are among the finest offered anywhere and feature outstanding study leaders who bring to life this important period in American history.

Master's Program in Decorative Arts

The third year of the Master's Program in the History of Nineteenth- and Twentieth-Century American Decorative Arts saw stronger ties forged with other divisions of the Smithsonian. Graduate students prepared the public lectures for "The Jewels of Lalique" exhibition at the International Gallery. Closer ties were also developed with the Renwick Gallery as classes for the new track in American craft were planned. A cooperative relationship also was established with several departments of George Washington University, allowing for exchange of students and a greater range of contextual classes.

The master's program welcomed its first visiting scholar, Tessa Murdoch, deputy keeper of furniture and woodwork for the Victoria and Albert Museum. Students in Dr. Murdoch's seminar visited the Smithsonian Castle's furniture collection, and interest in the Castle's collection was so strong that several students continued to study it in the spring term and chose summer internships there.

National Outreach

Smithsonian Institutes for Professionals

TSA formally introduced the Smithsonian Institutes for Professionals program. Geared to corporate audiences, the institutes include the Smithsonian Creativity Institute, which takes participants into Smithsonian collections, laboratories, and research facilities for customized hands-on workshops designed to introduce new ways of seeing, thinking, and understanding; the Smithsonian Signature Institute, which provides a unique behind-the-scenes look at the Smithsonian; and the Smithsonian World Affairs Institute, which uses Smithsonian connections within the Washington international community to examine a selected area of the world.

In April, TSA gave a World Affairs Institute on Eurasia for Indiana University as part of an ongoing relationship with that university. Forty-five participants and spouses were introduced to the region through lectures by notable international experts including former ambassadors, a senior associate from the Carnegie Endowment for International Peace, president of the Eurasia Foundation, and State Department officials. Embassies hosting events included Uzbekistan, Taiwan, and China.

A Creativity Institute for 100 employees from Commonwealth Equities in Boston occurred in May. Each participant attended two three-hour hands-on workshops. Workshop topics included exhibit design, entomology, forensic anthropology, animal behavior and intelligence, and African art. This collaborative effort with six Smithsonian departments engaged participants in activities that challenged them with real problems faced by designers, scientists, curators, and researchers.

Smithsonian Voices of Discovery

TSA's successful Smithsonian Voices of Discovery lecture series continued with presentations in Montgomery, Alabama; Scottsdale, Arizona; and Boone, North Carolina. Ten scholars spoke on diverse topics including forensic anthropology, contemporary American craft, Smithsonian horticulture, space exploration, textiles, Native American art, and Latino history. Fifty-five presentations were made to nearly 6,000 people, with thousands more reached via electronic media broadcasts.

Smithsonian Scholars in the Schools

The tremendous enthusiasm experienced by Smithsonian scholars while visiting schools as part of Smithsonian Voices of Discovery series led to the creation of a new program, Smithsonian Scholars in the Schools. This program takes Smithsonian specialists into schools around the country, where they share their expertise with students at all grade levels. Each program is tailored to support the individual school curriculum and includes hands-on classroom workshops, group presentations, teacher in-service training, and an evening public presentation for the greater school community. Additionally, students are given instructions for accessing additional information on the Smithsonian's Web site. The Spring Branch Independent School District in Houston served as pilot facility for the program.

Museum of Me

TSA, working with Educational Field Studies, Inc., launched a new program, the Museum of Me. Targeted to middleschool student groups visiting Washington, the two-part program introduces them to museums, collecting, museum careers, and exhibit design. Before their trips, teachers receive a preview packet that includes a CD-ROM about the Smithsonian and a learning guide with suggested activities to complement their museum visit.

Young Benefactors

The Smithsonian Young Benefactors entered its ninth year this year, continuing its mission of raising unrestricted funds for the Smithsonian Institution and increasing awareness among young professionals of the goals and objectives of the Institution. Among activities this year were a reception at the "Star War:" exhibit and screening of the IMAX film Special Effects at the National Air and Space Museum (NASM), a "reopening" reception at the newly christened Janet Annenberg Hooker Hall of Geology, Gems, and Minerals at NMNH, and the Ninth Annual Blast-Off Black-Tie Gala at NASM, which raised more than \$100,000.

Affiliated Organizations

The John F. Kennedy Center for the Performing Arts, the National Gallery of Art, and the Woodrow Wilson International Center for Scholars were established by Congress within the Smithsonian Institution under their own boards of trustees. The Institution provides administrative services on contract to Reading Is Fundamental, Inc., an independent organization.

John F. Kennedy Center for the Performing Arts

James A. Johnson, Chairman Lawrence J. Wilker, President

The Kennedy Center is America's living memorial to President John F. Kennedy, as well as the nation's busiest performing arts facility, presenting more than 3,200 performances each year for audiences of over 2 million people. More than 5 million people visit the center each year, and an additional 50 million people nationwide attend Kennedy Center touring productions or watch television broadcasts from the center. The Kennedy Center presents the finest in music, theater, and dance from this nation and abroad; makes the performing arts available to everyone through its free and discounted performances; nurtures new works and supports artists through its producing, commissioning, and training programs; and serves the nation as a leader in arts education.

Immediately following its successful tour of Europe in October 1997, the Kennedy Center's National Symphony Orchestra and Music Director Leonard Slatkin opened the newly renovated Kennedy Center Concert Hall, praised nationally and internationally for its accessibility and acoustics. The second season under Slatkin's leadership was highlighted by several festivals, including a Russian Festival under the direction of NSO Conductor Laureate Mstislav Rostropovich and a Latin-Caribbean Festival. Alabama was the site of the sixth American Residency, where the orchestra spent 10 days doing 15 concerts and 150 educational outreach events. The regular concert schedule concluded with the highest season sales in 20 years.

African Odyssey continued for a second season with a yearlong celebration of music, dance, and theater of the African Diaspora and featured the El Warsha Theatre of Egypt, the National Theater Guild of Uganda, and the Song and Dance Company of Mozambique. Nationwide, "Africa Fete," a celebration of African music toured 17 cities. Black traditions in modern dance were presented for the first time in the United States on Kennedy Center stages with 16 classical works by African American choreographers that will culminate in a television series to celebrate the new millennium.

The Kennedy Center American Dancing series was conceived as a five-year retrospective exploring American modern dance. In the spring of 1998, the Kennedy Center and the American Dance Festival announced a new commissioning project to create new works for modern dance and jazz music, supported by the Doris Duke Foundation with additional support from the National Endowment for the Arts.

A highlight of the year was the center's unprecedented monthlong residency of the Royal Shakespeare Company in five productions in June. Preserving the American musical theater tradition is one of the Kennedy Center's most important missions. In July, the center explored the extraordinary work that forms the basis of this essentially American art form in the Kennedy Center's Words and Music series, a trio of concert presentations of musicals from America's theater past. Faith Prince and Alan Campbell starred in *Bells Are Ringing;* Dorian Harewood, Stephanie Mills, Larry Storch, and Reginald Vel Johnson starred in *Purlie;* and James Brennan and Sally Ann Howes starred in *Where's Charley.*?

The festival "Art of the State: Israel at 50," which featured three American premieres, included Batsheva Dance Company, Israel's leading contemporary dance troupe, in a performance of Anaphase, and Kibbutz Modern Dance Company, which shed light on memories of the Holocaust with its Aide Memoire. Cameri Theater of Tel Aviv was represented by Rina Yershalmi's Va Yomer, Va Yelech, a theatrical presentation of the first five books of the Old Testament. Gesher Theatre's City was a haunting portrait of Jewish Odessa at the time of the Russian Revolution. Two of Israel's leading chamber music ensembles, the Hubermann Quartet, and Jerusalem String Quartet also appeared.

In a continuing effort to make the performing arts available to everyone, Chairman James A. Johnson and President Lawrence J. Wilker inaugurated the Millennium Stage on Capitol Hill, presenting lunch-hour concerts on Tuesdays and Thursdays throughout the summer; but all year long the center continued its free daily 6 p.m. concerts on the Millennium Stage.

National Gallery of Art

Earl A. Powell III, Director

The National Gallery of Art serves the nation by preserving, collecting, exhibiting, and fostering the understanding of works of art at the highest possible museum and scholarly standards.

One of the gallery's most exciting and provocative exhibition years included celebrations of the birth centennials of two contemporary artists, sculptor Alexander Calder and Dutch printmaker M.C. Escher; the first U.S. exhibition of paintings by Italian Renaissance master Lorenzo Lotto (ca. 1480– 1556/57); the first museum exhibition to examine Edgar Degas's lifelong fascination with the theme of the horse and racing subjects; an exhibition of works by Edouard Manet, Claude Monet, and other artists who lived in late-nineteenthcentury Paris in the district surrounding the Gare Saint-Lazare; the first comprehensive American retrospective in 20 years of the work of Mark Rothko; and a small exhibition in the Dutch Cabinet Galleries devoted to seventeenth-century collector's cabinets.

Purchases for the gallery's collections are made possible by funds donated by private citizens. Several northern European paintings were acquired this year: a member of the Haarlem civic guard in full regalia painted by seventeenth-century portraitist Johannes Cornelisz Verspronck; a Dutch coastal scene by seventeenth -century marine artist Simon de Vlieger; and a vibrant fifteenth-century triptych depicting *The Raising* of the Cross by an anonymous Nuremberg artist. Other acquisitions included a small open-air landscape by early-nineteenthcentury French artist Lancelot-Théodore Turpin de Crissé; an impression of Andrea Mantegna's engraving of *The Virgin and Child*; the gallery's first drawing by Han Holbein the Younger, a design for a piece of jewelry depicting the temptation of Tantalus; and four rare photographs by twentieth-century American artist Charles Sheeler.

The photography collection continued to be enhanced through gifts and purchases of works by Berenice Abbott, Eugène Arget, Ilse Bing, Brassaï, Horace Bristol, Harry Callahan, Roger Fenton, Charles-Victor Hugo, Lotte Jacobi, André Kertész, Richard Misrach, Humbert de Molard, Aaron Siskind, Alfred Stieglitz, Abraham Walkowitz, Max Yavno, and Alexander Zhitomirsky and four masters of nineteenthcentury British photography, Julia Margaret Cameron, Roger Fenton, David Octavius Hill with Robert Adamson, and William Henry Fox Talbot.

Outstanding among gifts were eight paintings by latenineteenth- and early-twentieth-century artists such as Vincent van Gogh (a self-portrait), Henri de Toulouse-Lautrec, Georges Braque, Henri Matisse, Raoul Dufy, Albert Marquet, and Kees van Dongen, bequeathed by Betsey Cushing Whitney; a five-panel screen by Edouard Vuillard showing a springtime park scene as seen from the artist's window, from Enid Haupt; 473 contemporary prints given by Kathan Brown and the Crown Point Press; a *Four-sided Pyramid* by contemporary artist Sol LeWitt from Mr. And Mrs. Donald G. Fisher; an ink drawing by Claude Lorrain of *The Judgment* of Paris from Mr. and Mrs. Eugene Victor Thaw; a partial gift of a Childe Hassam landscape from Mr. and Mrs. Raymond J. Horowitz; and a partial gift of a trompe-l'oeil painting by John F. Peto from Jo Ann and Julian Ganz Jr.

The Education Division completed work on gallery guides that provide commentaries in five languages on most of the works on view in the West Building. The guides have been converted to electronic form for availability on the gallery's Web site, *www.nga.gov.* Fifty thousand children were given tours and 1,000 teachers participated in workshops and the Teacher Institute. Digital images of European paintings that were made for the National Gallery's European art videodisc are also being used for the computerized collections management system and for the Web site. The Department of Adult Programs offered symposia in conjunction with the special exhibitions on Lorenzo Lotto, Thomas Moran, Edgar Degas, Mark Rothko, and Manet and Monet and the Gare Saint-Lazare.

Reading Is Fundamental, Inc.

Lynda Johnson Robb, Chairman William E. Trueheart, President and CEO

Reading Is Fundamental, Inc. (RIF) is the nation's leading literacy organization for young people. In 1998, the volunteer services of 240,000 local citizens brought books and reading motivation activities to some 3.5 million young people, from infancy to age 18, at more than 17,000 sites in all 50 states, the District of Columbia, Puerto Rico, the Virgin Islands, and Guam.

RIF reaches young people in all kinds of settings—schools, libraries, day-care centers, Head Start and Even Start Centers, migrant worker camps, housing developments, Boys and Girls Clubs, schools for children with disabilities, hospitals, and clinics. RIF also provides books and reading activities for young people from dozens of Narive American tribes, including Native Alaskan and Pacific Island children living in Guam and Hawaii.

Over the past year, RIF board and staff members developed a strategic plan to continue services to 3.5 million children while adding at least 700,000 high-risk children to its rolls over the next three years. The plan calls for increased emphasis on early intervention programs, program leader and volunteer training, development of intensified motivational methods, and collaboration with selected national organizations.

In 1998, RIF continued to expand its program for children from infancy to age five. By midyear, one in every five children served was a preschooler. Partners in this growth included the National Head Start Association and civic groups such as Kiwanis International. RIF's work with preschoolers has also received impetus from recent research by neuroscientists demonstrating that reading and talking to a child reinforces complex connections in nerve cells and stimulates brain development. The growing interest of pediatricians and nurse practitioners in early literacy development has resulted in the establishment of RIF programs for preschoolers at hospitals, community health centers, and pediatric clinics.

The spotlight was on RIF's 240,000 volunteers last spring when RIF announced the Volunteer of the Year Award to honor the lifetime dedication to literacy of RIF Chair Emerita Anne Richardson. The winner was Alison Cruise of Lansing, Michigan, a RIF volunteer for 22 years who has played a key role in making Lansing RIF one of the largest programs in the country, serving 14,000 young people at 39 schools.

In January, RIF President and CEO William Trueheart launched an initiative that will bring the award-winning Running Start program to every first-grader in Delaware, as well as to preschoolers in Head Start, Even Start, and Parents As Teachers settings that serve disadvantaged children. Delaware businesses and the Delaware State Department of Education have banded together to support this statewide initiative, which will serve 80,000 first-graders and preschoolers by 2001.

As children across the country were celebrating Reading Is Fun Week in April, an awards ceremony to honor the RIF National Poster Contest winner and the National RIF Reader was held at the National Sports Gallery in Washington, D.C.'s MCI Arena. The children who attended the ceremony were entertained by RIF Ambassador John McDonough, better known as Captain Kangaroo, and Snoopy, the popular mascor of the Metropolitan Life Foundation, sponsor of both the poster contest and the national reading celebration.

On March 2, 1998, in partnership with the National Education Association's Read Across America campaign, RIF invited children to celebrate the life and works of Dr. Seuss (Theodor S. Geisel). In Fort Worth, Texas, RIF Chairman Lynda Johnson Robb joined Texas Senator Kay Bailey Hutchison in reading and then eating green eggs and ham with children at the J.A. Cavile Branch Boys and Girls Club.

RIF gained public support for children's reading through a new series of public service announcements, produced by the National Basketball Association and aired regularly during the NBA season, playoffs, and championship game.

Woodrow Wilson International Center for Scholars

Dean W. Anderson, Acting Director

The Woodrow Wilson International Center for Scholars is a nonpartisan institute for advanced research in the humanities, social sciences, and public policy. Created by Congress in 1968 as the nation's living memorial to Woodrow Wilson, the center is a meeting ground between the worlds of learning and public affairs. It is the capital's only independent, wide-ranging institute for advanced study, where vital current issues and their historical background are explored through research and dialogue by the center's professional staff and visiting scholars to date, more than 1,500 academics, public leaders, and journalists from around the world.

The center informs the public through open meetings, publications, and electronic media. Every year, more than 200 meetings at the Wilson Center give the public a chance to ask questions and explore new ideas with academic and policy experts. *The Wilson Quarterly*, a journal of ideas and information, reaches more than 60,000 subscribers. The award-winning radio program "Dialogue" is produced in association with Smithsonian Productions and broadcast nation-wide by the Armed Forces Radio Network.

In August 1998, the center moved from the Smithsonian Castle to its distinctive new home in the Ronald Reagan Building and International Trade Center at One Woodrow Wilson Plaza. Designed by James Ingo Freed of Pei Cobb Freed & Partners, the building fulfills the congressional mandate of a presence for the center on Pennsylvania Avenue. A memorial space on the ground floor is marked by passages from Wilson's speeches and writings and a bronze bas relief of Wilson by sculptor Leonard Baskin. Next to the memorial is a small theater where a film about Wilson's life, ideas, and accomplishments runs continuously. The center's ambitious schedule of lectures, conferences, and symposia will have room to expand in this new space, which includes a board room, conference rooms, and the Joseph H. and Claire Flom Auditorium.

Scholars and staff of the center's Cold War International History Project are serving as academic consultants to the CNN television documentary series on the Cold War, which began airing in September 1998. The center's expanded Cold War Web site, *cwihp.si.edu*, provides direct access to previously classified documents from Soviet and Eastern Bloc archives, as well as to in-depth information on the issues, events, and individuals presented in the series. A link from the CNN site will bring thousands of new electronic visitors.

Wilson Center scholars and staff led numerous briefings for members of Congress and their staffs on nonproliferation, Ukraine and the former Soviet Union, drug certification in Latin America, United Stares-China relations, and other issues.

Edward O. Wilson, renowned scientist and author of two Pulitzer Prize-winning books, spoke about his latest book, *Consilience: The Unity of Knowledge.* He proposes a new phase in one of Western civilization's greatest driving concepts: that the world is orderly and can be explained by a small number of natural laws. When we have unified enough certain knowledge across all so-called divisions of human inquiry, writes Wilson, we will understand who and why we are. Excerpts from the book, as well as essays by Paul Gross and Richard Rorty, both of the University of Virginia, were published in the winter 1998 *Wilson Quarterly*.

Among the workshops sponsored by the center, the Latin American Program hosted "Latin America's Role in the New International System," which examined the evolving international environment and its impact on the strategic options available to the nations of the region. The workshop convened experts on international relations from across the hemisphere with prominent analysts to test a range of strategic scenarios against the broader perspective of those who do not necessarily focus on Latin America.

Members of the Smithsonian Councils, Boards, and Commissions, September 30, 1998

Smithsonian Institution Board of Regents

The Honorable William H. Rehnquist, Chief Justice of the Supreme Court of the United States, Chancellor, ex officio

The Honorable Albert Gore, Jr., Vice President of the United States, ex officio

Members of the Senate

- The Honorable Thad Cochran, Senator from Mississippi
- The Honorable Bill Frist, Senator from Tennessee

The Honorable Daniel P. Moynihan, Senator from New York

Members of the House of Representatives

The Honorable Sam Johnson, Representative from Texas The Honorable Bob Livingston, Representative from Louisiana The Honorable Esteban Edward Torres, Representative from California

Citizen Members

The Honorable Howard H. Baker, Jr., Citizen of the District of Columbia The Honorable Barber B. Conable, Jr., Citizen of New York
Ms. Anne d'Harnoncourt, Citizen of Pennsylvania
Mr. Louis V. Gerstner, Jr., Citizen of Connecticut
Dr. Hanna Holborn Gray, Citizen of Illinois
Dr. Manuel L. Ibañez, Citizen of Texas
Dr. Homer A. Neal, Citizen of Michigan
Mr. Frank A. Shrontz, Citizen of Washington
Mr. Wesley S. Williams, Jr., Citizen of the District of Columbia

Senior Officers

I. Michael Heyman, Secretary Constance Berry Newman, Under Secretary J. Dennis O'Connor, Provost M. John Berry, Director of Government Relations Thomas D. Blair, Inspector General Miguel A. Bretos, Counselor for Community Affairs Robert V. Hanle, Executive Director for Development James M. Hobbins, Executive Assistant to the Secretary John E. Huerta, General Counsel

- Thomas E. Lovejoy, Counselor for Biodiversity and Environmental Affairs
- Marc J. Pachter, Counselor for Electronic Communications and Special Projects
- David J. Umansky, Director of Communications
- L. Carole Wharton, Director of the Office of Planning, Management, and Budget

Anacostia Museum Board

Mrs. Helen Allen Mr. Stanley Anderson Mr. Glover Bullock Ms. Irene Carter Ms. Dianne Dale Mrs. Marie Dale Mrs. Iris Harris Mrs. Concha Johnson Mrs. Theresa Jones, Chairperson Mrs. Della Lowery, Recording Secretary Mr. David Lyons Dr. Caryl Marsh, Vice Chairperson Mrs. Cynthia Clark Matthews Mrs. Alenitha J. Qualls, Corresponding Secretary

Archives of American Art Board of Trustees

Mrs. Otto L. Spaeth, Chairman Emeritus Mrs. Keith S. Wellin, Chairman Mr. Frank Martucci, President Mrs. Arthur A. Feder, Vice President Mrs. Joseph G. Fogg, III, Vice President Mr. Hugh Halff, Jr., Vice President Mrs. Richard Roob, Vice President Mrs. Dana M. Raymond, Secretary Mr. John R. Robinson, Treasurer Mrs. Jack S. Blanton Dr. Charles Blitzer Ms. Lori Blount Cucchiaro Mr. Gerald E. Buck Mr. Willard G. Clark Mrs. Francis de Marneffe Mr. and Mrs. Donald J. Douglass Ms. Barbara G. Fleischman Ms. Elizabeth Marsteller Gordon

Mr. Raymond J. Horowitz Mrs. Bruce Karatz Mrs. Dwight M. Kendall Mr. Werner H. Kramarsky Ms. Hilva Landsman Mr. Richard A. Manoogian Dr. Samuel Miller Mrs. John Murchison Mrs. John Murchison Mrs. Meyer P. Potamkin Mr. Jock Reynolds Mrs. Stephen Rubin Mrs. Christopher Stack Mr. A. Alfred Taubman Lady Judith O. Thomson

Trustee Council

The Honorable Max N. Berry Mr. Gilbert S. Edelson Mrs. Daniel Fraad Mr. John K. Howat Dr. Helen I. Jessup Mr. Alan D. Levy Mrs. Abbott K. Schlain Mr. Alan E. Schwartz

Honorary Trustees

Dr. Irving F. Burton Mr. Richard J. Schwartz

Ex Officio Members

Mr. I. Michael Heyman Mr. J. Dennis O'Connor Mr. William C. Agee

Cooper-Hewitt National Design Museum Board of Trustees

Mr. Harvey M. Krueger, Chairman Mr. Arthur Ross, Vice Chairman Mrs. Kathleen Allaire Mr. Jorge L. Batista Ms. Agnes Cowles Bourne Mr. Donald Bruckmann Mrs. Anne Ehrenkranz Mrs. Joanne Foster Mr. George J. Gillespie, III Ms. Elaine La Roche Mrs. Barbara Levin Mrs. Nancy A. Marks Mr. Richard Meier Mr. Kenneth B. Miller Mrs. Enid W. Morse Mr. William P. Rayner Mr. Harry G. Robinson, III Mr. Richard M. Smith Prof. Sue Jane Smock Mr. Edward A. Weinstein

Honorary Members

Mrs. Joan K. Davidson Mr. Harmon H. Goldstone

Ex Officio Members

Mr. I. Michael Heyman Mr. J. Dennis O'Connor

Council of Administrative and Service Directors

Mrs. Lori H. Aceto Mr. Sudeep Anand Ms. Francine C. Berkowitz Mr. F. William Billingsley Mr. Joseph Carper Ms. Mary Leslie Casson Mr. John Cobert Mrs. Laudine L. Creighton Mr. Lee Denny Ms. Ardelle G. Foss Mr. Mike Headley Dr Edie Hedlin Mrs. Chandra P. Heilman Mr. John E. Huerta Mr. Rick R. Johnson Ms. Nikki Krakora Ms. Era Marshall Ms. Anna B. Martin Mrs. Marie A. Mattson Mr. Patrick Miller Mr. David F. Morrell Mr. Richard H. Rice Dr. Michael H. Robinson Dr. Ira Rubinoff Ms. Cora Shores Dr. Barbara J. Smith Mr. Michael Sofield Mrs. Mary Augusta Thomas Ms. Aileen F. Wakefield Mr. James H. Wallace, Jr. Dr. L. Carole Wharton

Council of Bureau Directors

Dr. Milo Cleveland Beach Dr. Elizabeth Broun Dr. Spencer R. Crew Mr. James T. Demetrion Vice Admiral Donald D. Engen Dr. Alan Fern Mrs. Patricia L. Fiske Mr. Robert Fri Mr. Steven Newsome Ms. Dianne H. Pilgrim Dr. Michael H. Robinson Dr. Ira Rubinoff Dr. Irwin I. Shapiro Dr. Roslyn Walker Dr. Richard J. Wattenmaker Mr. W. Richard West, Jr.

Council of Information and Education Directors

Ms. Anna R. Cohn, Chair Ms. Ann P. Bay Ms. Nancy J. Bechtol Ms. Francine C. Berkowitz Mr. Joseph Carper Dr. Zahava D. Doering Ms. Anne R. Gossett Dr. Nancy E. Gwinn Mr. Mike Headley Dr. Ethel Hedlin Mr. Paul B. Johnson Dr. Richard Kurin Dr. Douglas M. Lapp Ms. Janice Majewski Dr. Mara Mayor Ms. Mary Grace Potter Mr. David J. Umansky Dr. Lambertus Van Zelst Mr. Ronald Walker Mr. James H. Wallace, Jr.

Folklife Advisory Council

Dr. Roger Abrahams Dr. Jacinto Arias Dr. Jane Beck Dr. Pat Jasper Dr. Barbara Kirshenblatt-Gimblett Dr. Bernice Johnson Reagon Dr. John Roberts Dr. Carol Robertson Dr. Gilbert Sprauve Dr. John Kuo Wei Tchen Dr. Ricardo Trimillos Dr. Carlos Velez-Ibanez

Folkways Advisory Board

Mr. Michael Asch Mr. Don DeVito Ms. Ella Jenkins Mr. Jon Kertzer Mr. John Nixdorf

Freer Gallery of Art Visiting Committee

Mr. Richard M. Danziger, Chair Dr. Gursharan Sidhu, Vice Chair Mrs. Jackson Burke Mr. Willard G. Clark Dr. Kurt A. Gitter Mrs. Richard Helms Sir Joseph E. Hotung Mr. Rogerio S. Lam Mr. and Mrs. Christopher Luce Mrs. Elizabeth Moynihan Prof. Martin Powers Ms. Elizabeth ten Grotenhuis Miss Shelby White

Hirsbhorn Museum and Sculpture Garden Board of Trustees

Mr. Robert Lehrman, Chairman Ms. Camille Oliver-Hoffmann Ms. Melva Bucksbaum Mr. Marvin Mordes, M.D. Ms. Ponchitta Pierce Mr. Mitchell Rales (from June 1998) Mr. Robert Rosenblum (through June 1998)

Ex officio Members

Mr. I. Michael Heyman The Honorable William H. Rehnquist

John F. Kennedy Center for the Performing Arts Board of Trustees

Honorary Chairs

Mrs. Hillary Rodham Clinton Mrs. George H. W. Bush Mrs. Ronald Reagan Mrs. Jimmy Carter Mrs. Gerald R. Ford Mrs. Lyndon B. Johnson

Officers

Mr. James A. Johnson, Chairman
Mr. Kenneth M. Duberstein, Vice Chairman
Ms. Alma Johnson Powell, Vice Chairman
Mr. Lawrence J. Wilker, President
The Honorable Jean Kennedy Smith, Secretary
Ms. Charlotte A. Woolard, Assistant Secretary
Mr. Paul G. Stern, Treasurer
Mr. Henry M. Strong, Assistant Treasurer
Mr. William Becker, General Counsel

Members Appointed by the President of the United States

Mrs. Anita Arnold Mr. Robert B. Barnett The Honorable Stuart A. Bernstein Mrs. Anitamarie Cafritz Mr. Ronald I. Dozoretz Mrs. Phyllis C. Draper Mr. Kenneth M. Duberstein Mrs. Marjorie M. Fisher Mr. Craig L. Fuller Mrs. Mary Galvin Mr. Lionel Hampton Ms. Phyllis Middleton Jackson Mr. James A. Johnson Ms. Ann Jordan Mr. Donald M. Koll The Honorable James A. McClure Mr. Cappy R. McGarr The Honorable William F. McSweeny, Jr. Mr. Frank H. Pearl Mr. Ronald O. Perelman Ms. Alma Johnson Powell Mrs. Casey Ribicoff Mr. Miles L. Rubin Ms. Joy A. Silverman The Honorable Jean Kennedy Smith Mr. Joshua I. Smith Mr. Jay Stein Mr. Jerry Weintraub Mr. Thomas E. Wheeler Mr. James D. Wolfensohn

Members Ex Officio Designated by Act of Congress

The Honorable Donna E. Shalala, Secretary of Health and Human Services The Honorable Richard W. Riley, Secretary of Education The Honorable Joseph D. Duffey, Director, U.S. Information Agency Senator Edward M. Kennedy Senator Max Baucus Senator John H. Chafee Senator Trent Lott Senator Ted Stevens Rep. Joseph M. McDade Rep. Sidney R. Yates Rep. Bud Shuster Rep. James L. Oberstar Rep. Newt Gingrich Mr. Marion Barry, Mayor, District of Columbia Mr. I. Michael Heyman, Secretary, Smithsonian Institution Dr. James H. Billington, Librarian of Congress Mr. J. Carter Brown, Chairman of the Commission of Fine Arts Mr. Robert Stanton, Director, National Park Service Founding Chairman Mr. Roger L. Stevens† Chairman Emeritus Mr. James D. Wolfensohn

†Deceased

Honorary Trustees

Mr. Philip F. Anschutz Mr. James H. Evans Mrs. Alma Gildenhorn The Honorable Melvin R. Laird Mrs. J. Willard Marriott The Honorable Leonard L. Silverstein Mr. Dennis C. Stanfill Mr. Lew R. Wasserman

National Air and Space Museum Advisory Board

Mr. Thomas L. Blair General John R. Dailey The Honorable Jane Garvey Vice Admiral Richard D. Herr Mr. I. Michael Heyman Mr. Thomas W. Hoog The Honorable Sam Johnson Captain David Kunkel, USCG Lieutenant General Frederick McCorkle, USMC Reat Admiral John B. Nathman, USN General Michael Ryan Brigadier General John K. Schmitt, USA Dr. Y.C.L. Susan Wu

National Gallery of Art Board of Trustees

Mr. Robert F. Erburu Mr. Julian Ganz, Jr.

Mr. Alexander M. Laughlin Mrs. Louise W. Mellon Mr. Robert H. Smith

Ex Officio

The Honorable William H. Rehnquist, Chief Justice of the Supreme Court of the United States
The Honorable Madeleine K. Albright, Secretary of State
Mr. I. Michael Heyman, Secretary of the Smithsonian Institution
The Honorable Robert E. Rubin, Secretary of the Treasury

National Museum of African Art Commission

Prof. David C. Driskell Mr. John A. Friede Mr. Joseph M. Goldenberg Dr. Joseph E. Harris Mrs. Frances Humphrey Howard Mr. Elliot Lawrence Mr. Brian S. Leyden The Honorable Frank E. Moss Mr. Robert H. Nooter Mrs. Frieda Rosenthal Prof. Robert Farris Thompson The Honorable Walter E. Washington

Ex Officio Member

Mr. I. Michael Heyman

National Museum of American Art Commission

Mr. Ronald D. Abramson Mr. Norman Bernstein Mr. Edwin I. Colodny Mrs. Ann Cousins Mr. James T. Demetrion Mr. Barney A. Ebsworth Mrs. Daniel Fraad Mrs. Patricia Frost Mrs. Shelby M. Gans Mr. Ken Hakuta Mr. Hugh Halff, Jr. Mr. Raymond J. Horowitz Mrs. Linda Lichtenberg Kaplan Mr. William G. Kerr Mr. Melvin Lenkin Mr. Henry Luce, III Mr. Peter H. Lunder Mr. Jesus Moroles Dr. Paul D. Parkman Mr. Gerald L. Pearson Mrs. Morris Pynoos Mr. Frank K. Ribelin Mr. Richard J. Schwartz Mr. Ferdinand T. Stent Mr. Wesley S. Williams, Jr.

Emeritus Members

Mr. Walker Hancock Mr. R. Crosby Kemper, Jr. Mrs. Nan Tucker McEvoy Mr. David S. Purvis Mr. Charles Sawyer

National Museum of the American Indian Board of Trustees

Mr. Manley Alan Begay, Jr. Mr. James A. Block Mr. Ellsworth Brown Mr. George L. Cornell Mr. Billy L. Cypress Mr. Vine Deloria, Jr. Dr. Catherine S. Fowler Mr. Doug George-Kanentiio Mr. Dwight Gourneau Mr. George Gund, III Mr. I. Michael Heyman Mr. Peter J. Johnson Mrs. Loretta Kaufman Mr. Albert Kookesh Ms. Henrietta Mann Ms. Linda Manzanilla Mr. Gerald R. McMaster Ms. Joann Sebastian Morris Mr. Jorge A. Flores Ochoa Mr. J. Dennis O'Connor Ms. Nancy Clark Reynolds Ms. Luci Tapahanso Mr. Bernard Julian Whitebear Ms. Phyllis Young Ms. Ofelia Zepeda

National Museum of American History Board

Dr. Ivan Selin, Chair Mr. Todd Axelrod Dr. Alison R. Bernstein Mr. Richard L. Cartion Mr. Peter Claussen Mr. Lester Colbert, Jr. The Honorable Thad Cochran Mr. George M. Ferris, Jr. Mr. Jerry Florence Mr. George C. Freeman, Jr. Prof. Neil Harris Mr. Robert F. Hemphill, Jr. Ms. Irene Y. Hirano Thomas W. Langfitt, M.D. Mrs. Dorothy Lemelson Mr. James R. Mellor Mr. Elihu Rose Seymour I. Schwartz, M.D. Mr. Marvin D. Williams

National Museum of the American Indian Board of Trustees

Mr. Manley Alan Begay, Jr. Mr. James A. Block Dr. Ellsworth Brown Mr. Duane Champagne Ms. Eloise Cobell Mr. George L. Cornell Mr. Billy L. Cypress Mr. Vine Deloria, Jr. Mr. Charles M. Diker Ms. Catherine S. Fowler Mr. Douglas George Mr. Dwight Gourneau Mr. George Gund, III Secretary I. Michael Heyman Mr. Peter J. Johnson Mrs. Loretta Kaufman Ms. Henrietta Mann Ms. Joann Sebastian Morris Mr. J. Dennis O'Connor Mr. Jorge Flores Ochoa The Honorable Ted Stevens Ms. Luci Tapahonso Mr. Bernie Whitebear Ms. Ofelia Zepeda

National Museum of Natural History Board

Mr. Kenneth E. Behring Dr. Isabella C.M. Cunningham Dr. David Dilcher Dr. Thomas Eisner Dr. William B. Ellis Mr. Robert Fri The Honorable William H. Frist Mr. Edward O. Gaylord Mr. Arthur Gray, Jr. Mr. John S. Hendricks Mr. David M. Hicks Dr. Stanley O. Ikenberry Mrs. Jean Lane Mr. Robert H. Malott The Honorable James A. McClure Mr. Jeffery W. Meyer

Dr. Nancy R. Morin Mr. James R. Patton, Jr. Mr. Paul Risser Ms. Desiree G. Rogers Mr. Alan G. Spoon Mr. Marshall C. Turner, Jr. Mr. Milton H. Ward Mr. Howard H. Williams, III

Emeritus

Mr. S. Dillon Ripley, II

Ex Officio Members

Mr. I. Michael Heyman Mr. J. Dennis O'Connor

National Portrait Gallery Commission

The Honorable Anthony C. Beilenson The Honorable Jeannine Smith Clark, Chair Prof. Stephen Jay Gould Ms. Julie Harris Prof. David Levering Lewis Prof. R.W.B. Lewis Ms. Bette Bao Lord The Honorable Robert B. Morgan Mr. Roger H. Mudd Prof. Barbara Novak

Ex Officio Members

Mr. I. Michael Heyman, Secretary, Smithsonian Institution Dr. Earl A. Powell III, Director, National Gallery of Art The Honorable William H. Rehnquist, Chief Justice, U.S. Supreme Court

National Postal Museum Advisory Commission

The Honorable Winton M. Blount Mrs. Lovida Coleman Ms. Amina Dickerson Ms. Meredith Fischer Dr. Manuel L. Ibanez Mr. Azeezaly Jaffer The Honorable John M. McHugh Mr. Arthur H. Morowitz Mr. Tim E. Needham Mr. James E. Pehra Ms. Elizabeth C. Pope Mrs. Jeanette Cantrell Rudy Mr. Edwin M. Schmidt The Honorable Robert Setrakian The Honorable Ted Stevens

National Postal Museum Coordinating Committee

Mr. Richard H. Arvonio Ms. Kathy Cunningham Ms. Ardelle Foss Mr. William Henderson Mr. Rick R. Johnson Dr. J. Dennis O'Connor

National Postal Museum Director's Circle

The Honorable Paul Carlin, Chairman Mr. Maynard H. Benjamin Mrs. Joan Berkley Mr. Thomas J. Berry Mr. Kieran A. Carracher Mr. Bruce Dobin Mr. Victor Forman Mr. James Forsythe Mr. Coleman Williams Hoyt Mr. Floyd Ivey Ms. F. Suzanne Jenniches Mr. Joe Monastro Mr. John Murchake Mr. John O'Dell Mr. James E. Pehta Ms. Joyce Reid Mr. Ernesto J. Rojas Mr. Thomas Stoneback Mr. Frederick Wolff, III Mr. John Zanchi

National Science Resources Center Advisory Board

Dr. Joseph A. Miller, Jr., Chair Ms. Ann P. Bay Ms. DeAnna Banks Beane Dr. Fred P. Corson Dr. Goéry Delacôte Ms. JoAnn DeMaria Dr. Peter Dow Dr. Hubert M. Dyasi Dr. Bernard S. Finn Dr. Robert M. Fitch

Dr. Jerry P. Gollub Dr. Ana M. Guzmán Dr. Anders Hedberg Dr. Richard Hinman Dr. David Jenkins Ms. Mildred E. Jones Dr. John W. Lavman Dr. Leon M. Lederman Ms. Sarah A. Lindsev Dr. Lynn Margulis Dr. Ted Maxwell Dr. Mara Mayor Dr. John A. Moore Dr. Carlo Parravano Dr. Robert W. Ridky Ms. Ruth O. Selig Dr. Maxine F. Singer Mr. Robert D. Sullivan Ms. Nancy Thomas Dr. Gerald F. Wheeler Dr. Richard L. White Dr. Paul H. Williams Ms. Karen L. Worth

National Zoological Park Advisory Board

Mr. Peter Andrews Mr. Robert A. Bartlett William H. Berman Dr. David Challinor The Honorable Jeannine Smith Clark Mr. George C. Didden, III Ms. Elizabeth B. "Barrie" Frazier Ms. Caroline D. Gabel Mrs. Laura Howell Mrs. Alberta Allen "Missy" Kelly III Dr. William Ramsay Mr. Jeffrey R. Short, Jr. Mr. Henry "Hank" Strong Mrs. Carole A. Valentine Mrs. Beatrix von Hoffmann

Honorary Members

Mrs. Joan Donner Mrs. Ruth S. Holmberg Mrs. Adrienne Mars

FONZ (Friends of the National Zoo) Board

Ms. Carole A. Valentine, President Ms. Susan B. Perry, Second Vice President Mr. David Perry, Treasurer Ms. Francisca B. Holland, Secretary

Ms. Jeanne Beekhuis Ms. Patricia A. Bradlev Ms. Miriam V. Carmack Mr. Paul B. Green Ms. Michele V. Hagans Mr. Mark Handwerger Ms. Betty Ann Kane Ms. Lori Kaplan Ms. Alberta Allen "Missy" Kelly Ms. Gloria Kreisman Mr. Harald R. Leuba Ms. Suzanne Mink Mr. Michael I. Rider Mr. Edward A. Sands Ms. Anne Schultz Mr. Ross B. Simons Mr. Robert L Smith Mr. M. Lee Sutherland Mr. Curtis N. Symonds

Smithsonian Environmental Research Center Advisory Board Members

Ms. Helen Delich Bentley Ms. Susan Hager Mr. Michael Hayman Mr. John Hobbie Mr. Norman Maneta Ms. Beth Stevens Mr. Richard P. Thornell Ms. Kathleen Wagner

Reading Is Fundamental, Inc., Board of Directors

Ms. Alexandra Armstrong Ms. Letitia Baldridge Mr. Jon E. Barfield Ms. Loretta Barrett Mr. Leo Beebe Mr. Christopher Cerf Mr. Robert W. Coy, Jr. Mr. James C. Curvey Mr. Basel Dalloul Ms. Patricia Diaz Dennis, Esq. Mr. Lloyd Derrickson, Esq. Mr. Robert S. Diamond Ms. Annette M. Felanzi Dwyer Mr. Lon Greenberg Mr. Lawrence A. Hough Ms. Pamela Koprowski

Mrs. Kathryn W. Lumley Mr. Claude A. Mayberry Ms. Nell Minow Mr. Richard J. Pinola Mrs. Lois D. Rice Mrs. Anne Richardson Mrs. Lynda Johnson Robb Mrs. Jean Head Sisco Dr. William E. Trueheart Mr. Arthur White

Smithsonian National Board

Mrs. Jean Mahoney, Chair The Honorable Frank A. Weil, Vice Chair The Honorable Max N. Berry Mrs. Laura Lee Blanton Mrs. John M. Bradley Mr. Stephen F. Brauer The Honorable Henry E. Catto Mr. Peter R. Coneway Mr. Thomas Edward Congdon Ms. Allison Stacey Cowles Mr. Frank A. Daniels, Jr. Baron Eric de Rothschild Mr. Archie W. Dunham Dr. Sylvia A. Earle Mrs. Jane B. Eisner Mrs. Patricia Frost Ms. Nely Galan Mr. Bert A. Getz Mr. Stephen W. Hamblett Mr. Paul Hertelendy Mr. S. Roger Horchow Mr. Robert L. James Mrs. James W. Kinnear Mrs. Marie L. Knowles The Honorable Marc E. Leland Mr. Donald G. Lubin Mrs. Elizabeth S. MacMillan The Honorable John D. Macomber Ms. Holly Madigan Mr. Frank N. Magid Mrs. John F. Mars Mr. Michael Peter McBride Mrs. Nan Tucker McEvoy Mr. Kenneth B. Miller The Honorable Norman Y. Mineta Mr. Thomas D. Mullins Mr. John M. Nelson Mrs. Lucio A. Noto Mr. Heinz C. Prechter Mrs. Charles H. Price, II Mr. A.R. Tony Sanchez Mr. David M. Silfen

The Honorable Alan K. Simpson Ms. Kathy Daubert Smith Mr. Kenneth L. Smith Mr. Clemmie Dixon Spangler, Jr. Mr. Kelso F. Sutton Mr. Jeffrey N. Watanabe Mrs. Frank A. Weil Mrs. Nancy Brown Wellin Mr. Anthony Welters Mr. Daniel W. Yohannes

Arthur M. Sackler Gallery Visiting Committee

Mrs. Hart Fessenden, Chair Mr. George J. Fan, Vice Chair Mrs. John B. Bunker Dr. Kurt A. Gitter Mrs. Richard Helms Dr. Florence Cawthorne Ladd Ms. Marie Lam Mrs. James R. Lilley Mrs. Jill Hornor Ma Dr. Kenneth X. Robbins Mrs. Arthur M. Sackler Mr. Sichan Siv Mr. Aboulala Soudavar Mr. Robert Ching Tang Mr. Paul F. Walter

Smithsonian Environmental Research Center Board of Advisors

The Honorable Helen Delich Bentley Ms. Suaun Hager Michael Hayman, M.D. John Hobbie, Ph.D. The Honorable Norman Y. Minera Beth Stevens, Ph.D. Prof. Richard P. Thornell Ms. Kathleen Wagner

Smithsonian Institution Archives and Special Collections Council

Mrs. Rachel M. Allen Mr. Alan L. Bain Mr. James B. Byers Mr. Timothy Carr Ms. Cecilia H. Chin Ms. Maygene Daniels Dr. John A. Fleckner Ms. Christraud Geary Ms. Marilyn Graskowiak Dr. Nancy E. Gwinn Mr. Robert S. Harding Dr. Edie Hedlin Ms. Colleen A. Hennessey Dr. Pamela M. Henson Mr. John Homiak Ms. Janet Kennelly Mr. Paul Kimberly Ms. Gail Lowe Ms. Lillian Miller Ms. Lauranne C. Nash Ms. Tammy Peters Mr. C. Jeffrev Place Dr. Marc Rothenberg Dr. Barbara J. Smith Dr. Thomas F. Soapes Ms. Joan R. Stahl Mr. William G. Tompkins Ms. Linda A. Thrift Mr. James H. Wallace, Jr. Mrs. Beverly Westermeyer Ms. Kathleen Williams Mr. Paul Wood Mr. Mark A. Wright Dr. Judith K. Zilczer

Smithsonian Institution Council

Dr. Robert McC. Adams Dr. Joyce O. Appleby Dr. Ellsworth Brown Dr. George R. Carruthers Dr. Linda S. Cordell Dr. Ruth Schwartz Cowan Mrs. Diane Frankel Mr. David R. Gergen Mrs. Kinshasha Holman Conwill Dr. Daniel H. Janzen Dr. Michael Kammen Ms. Akemi Kikurma Yano Prof. J. Jorge Klor de Alva Mr. John Wilbur McCarter, Jr. Ms. Cheryl McClenney-Brooker Dr. Clifton Arthur Poodry Mr. Richard J. Powell Ms. Mimi Quintanilla Dr. Lauren B. Resnick Dr. Jeremy A. Sabloff Mr. Igor I. Sikorsky, Jr. Ms. Beryl B. Simpson

Dr. Elizabeth S. Vrba Dr. John Walsh

Smithsonian Institution Libraries Users Advisory Committee

Dr. Gail S. Davidson Ms. Paula T. DePriest Ms. Patricia Gossel Dr. Nancy E. Gwinn Mr. Von D. Hardesty Ms. Elaine L. Johnston Dr. Thomas E. Lowderbaugh Dr. Nancy L. Matthews Dr. Sorena S. Sorensen Mr. Melvin J. Wachowiak, Jr.

Smithsonian Washington Council

Mr. R. Robert Linowes, Chairman Ms. Jin-Hyun Weatherly Ahn Mr. Oliver T. Carr The Honorable Elaine L. Chao Mr. Emilio A. Fernandez Mr. Donald Edward Graham Mr. J. Roderick Heller, III Mrs. Kathleen Mullins Hough Mr. Mario M. Morino Mrs. Irene Pollin Mr. John R. Risher, Jr. Mrs. Vicki Sant Mr. Ladislaus von Hoffman

Woodrow Wilson International Center for Scholars Board of Trustees

The Honorable Madeline K. Albright The Honorable James A. Baker, III Mr. Steven Alan Bennett, Esq. Mr. Samuel R. Berger Dr. James H. Billington Joseph A. Cari, Jr., Esq. The Honorable Joseph D. Duffey Mr. William R. Ferris Mr. Joseph H. Flom, Esq. Ms. Jean L. Hennessey Mr. I. Michael Heyman Mr. Eli S. Jacobs Mr. Paul Hae Park The Honorable Richard W. Riley The Honorable S. Dillon Ripley, II The Honorable Donna E. Shalala

Smithsonian Women's Committee

Mrs. Donald W. Jeffries, Chairman Mrs. James M. Beggs, Vice Chairman Mrs. J. Edward Day, Co-Secretary Mrs. Margaret Camp, Co-Secretary Ms. Cissel Gott Collins, Treasurer Ms. Allison Butler Herrick, Assistant Treasurer Mrs. Martin Atlas Mrs. Marilyn Barrett Mrs. Christine Blazina Mrs. Annelise Brand Mrs. I. Townsend Burden, III Mrs. Margaret Bush Mrs. Doniphan Carter Mrs. Frank B. Clay Mrs. Lloyd E. Clayton Mrs. Richard Cobb Mrs. Cissel Gott Collins Mrs. Margaret Collins Mrs. Willis D. Crittenberger, Jr. Mrs. Fritz Daguillard Mrs. Helen Davison Mrs. J. Edward Day Mrs. Jill Fri Mrs. Mary Goldberg Mrs. William F. Gorog Mrs. Karl G. Harr, Jr. Mrs. Henry L. Heymann Mrs. Stanford R. Hicks Mrs. George H. Hughey Mrs. Walter Innis Mrs. Ronald Ivey Mrs. Joanne Johnson Mrs. Berry Kadick Mrs. Parnela Kloman Mrs. Sherley Koreen Mrs. Carol Kuehl Mrs. Jane Kuuskraa Ms. Patricia Larkin Mrs. Bruce K. MacLaury

Mrs. William S. Mailliard Mrs. Alexander M. Maish Mrs. Martha Martin Mrs. Arthur K. Mason Mrs. Joan Lambert McPhee Mrs. Ruth Metcalf Mrs. Sarah Milam Mrs. Louise C. Millikan Mrs. I. Suzanne Moore Mrs. Horace White Peters Mrs. Charles L. Poor Mrs. C. Michael Price Mrs. Thomas Malcolm Price Ms. Judy Lynn Prince Mrs. James G. Randolph Mrs. Karen Rockwood Mrs. William C. Rountree Mrs. Arden Ruttenberg Mrs. John A. Sargent Mrs. Alice Sessions Mrs. Joy Vige Mrs. Sally Walker Mrs. Wendy Wall Mrs. James Bud Ward Mrs. Charles Swan Weber Mrs. John R. Webster Mrs. Jerome Weiss Mrs. Philip C. White

Smithsonian Internship Council

Ms. Pablita T. Abeyta Mrs. Lori H. Aceto Ms. Frederica Adelman Ms. Victoria Avera Ms. Lisa Bennett Ms. Ann M. Bissell Ms. Teresia Bush Ms. Faya Causey Ms. Anita Chapa Ms. Montrose R. Cones Ms. Deirdre Cross Ms. Georgina de Alba Ms. Kimberly L. Dow Ms. Berty Epps Mr. Brian Fair Ms. Paula Fletemeyer

Ms. Ann R. Garvey Ms. Jill Greenstein Ms. Marcia Gregory Ms. Joanie Heavey Mrs. Judith H. Houston Ms. Pamela Elizabeth Hudson Ms. Veronika O. Jenke Ms. Jean Kalata Mr. Peter Kibbee Mr. Bruce R. Kirby Ms. Elizabeth Kirwin Mrs. Sharon F. Leathery Ms. Jane LeGrow Ms. Cassandra Lewis Ms. Nancy Lewis Ms. Sherri Manning Ms. Cathy Maree Ms. Elena Mayberry Ms. Lisa Mazzola Mr. Richard Moll Ms. Dana Moreland Mr. Bruce Morrison Ms. Lauranne C. Nash Ms. Rachel Orgeron Ms. Karen Otiji Ms. Gloria Player Ms. Amy Putnam Ms. Arlene Reiniger Dr. Marc Rothenberg Ms. Niki Sandoval Ms. Mary Sangrey Mrs. Magdalene C. Schremp Ms. Heidi L.R. Schwartz Mr. Raymond Seefeldt Mr. Robert Shallcross Ms. Karen B. Smith Ms. Myrna Banks Smith Mr. Tim Smith Ms. Annie Teamer Mr. William G. Tompkins Ms. Esther Washington Ms. Jennifer Wheeler Ms. Allison Wickens Ms. Sabina Wiedenhoeft Ms. Andrea Williams Mr. Donald C. Williams Ms. Frances Yeh Ms. Alex Yi

Visits to the Smithsonian Institution Museums and Galleries in Fiscal Year 1998

Building	Oct	Nov	Dec	Jan	Fcb	Mar	Apr		Jun	Jul	Aug	Sep	Total
SI	192,607	IO7,573	85,262	75,256	25,009	141,735	228,262		213,006	258,543	194,061	110,087	1,890,838
A&I	89,207	63,423	53,545	40,367	43,380	57,688	84,997		99,682	121,308	91.489	<8.186	875.853
NASM	694,968	735,694	554,129	421,743	438,842	868,520	1,347,609		989,592	1.270.815	1.049.752	\$96.269	10.238.890
FREER	27,422	19,640	16,311	16,263	15,256	33,587	38,333		32,707	43,172	31.521	23.752	330.IOA
RENWICK	14,552	11,308	10,267	7,732	7,041	14,448	I3,IOI	II,509	10,590	IO,272	9.784	10,096	130.700
NPG	14,554	20,566	17,922	18,353	13,943	19,942	20,099		17,157	20,894	16,361	10,304	207,317
NMAA	20,553	35,086	30,599	36,025	33,825	59,335	24,992		22,435	24,471	19,546	13,929	342,770
NMAH	449,413	330,647	242,612	237,415	287,070	589,214	782,806		\$30,184	\$95,922	498.788	281.324	\$.\$79.030
HNMN	458,427	460,118	340,213	277,024	301,968	620,693	803,361		700,528	706,027	647.105	320.060	002.924.9
HMSG	73,684	55,984	42,456	40,746	40,737	69,123	84,128		84,014	102,981	89,163	\$6,921	829.782
AM	0	0	0	2,107	3,793	2,935	2,258		4,708	3,895	4,078	141	26,100
C/H	11,339	8,416	0,000	4,584	17,317	21,792	14,737		14,385	IO,154	8,190	7,354	131,949
NMAFA	16,122	13,902	11,989	11,172	15,761	23,485	27,657		22,745	28,918	24.034	12,070	232.030
SACKLER	13,525	11,985	16,685	17,768	18,448	17,585	16,245		15,821	16,985	35,449	11.289	207.653
RIPLEY	14,268	12,965	10,105	14,092	22,858	26,578	26,314		44,793	50,617	37,508	10.528	300,147
NMAI	60,780	56,062	47,670	43,504	39,499	48,411	52,673		47,393	\$7,073	\$8,183	49.363	615,697
SILVER HILL	1,052	750	463	355	524	290	954		5,160	716	666	698	12.903
MPM	35,756	31,220	29,528	26,038	28,150	34,683	44,950		38,889	44,528	40,863	31,642	423,760
Total	2,188,229	1,975,339	1,518,756	1,290,544	1,403,421	2,650,544	3,613,476		2,893,789	3,411,571	2,855,541	1,614,522	28,853,141

Museum and Sculpture Garden; NASM, National Air & Space Museum; NMAfA, National Museum of African Art; NMAA, National Museum of American Art; NMAH, National Museum of History; NMAI, National Museum of the American Indian; NMNH, National Museum of Natural History; NPG, National Portrait Gallery; NPM, National Postal Museum; RENWICK, Renwick Gallery; RIPLEY, S. Dillon Ripley Center; SILVER HILL, Silver Hill Storage Facility; SI, Smithsonian Institution Building (Castle).

undertaken at the Smithsonian; the Smithsonian advisor; and dates of residency.

Academic, Research Training, and Internship Appointments and Research Associates in Fiscal Year 1998

The first section lists recipients of fellowships and other appointments awarded to scholars and advanced students under the auspices of the Office of Fellowships and Grants. Students and museum professionals who held museum internships or participated in special projects administered by the Center for Museum Services are listed in the second section. The third section contains a listing of Smithsonian Research Associates.

Academic and Research Training Appointments

The Smithsonian offers, through the Office of Fellowships and Grants, research and study appointments to visiting scientists, scholars, and students. The appointees are provided access to the Institution's facilities, staff specialties, and reference resources. The persons listed by unit or office—in this Appendix began their residencies between October 1, 1997, and September 30, 1998, and have been in residence for three months or longer. Predoctoral and Postdoctoral Fellows, Visiting Scientists or Scholars, and other awardees and participants in special programs are so listed. Listed for each Fellow or Visitor is the institution where each received, or expects to receive, a degree or the home university or institution; a brief description of the project

Anacostia Museum/Center for African American History and Culture

- Audrey L. Brown, Predoctoral Fellow, American University. "African American Women's Participation in Cultural Politics and Transformative Social Action," with Gail Lowe from June 1, 1998 to November 30, 1998.
- Ginetta E.B. Candelario, Predoctoral Fellow in Latino Studies, City University of New York. "Dominicans at the Anacostia: 'Who's Passing Who?'," with Portia James from July 1, 1998 to September 30, 1998.
- Claudia Hernandez, Fellow in Museum Practice, Hunter College. "Education Outreach to Minority High School Youth Audiences through Museum-School Based Programming," with Sharon Reinckens and Nancy Fuller from November 1, 1997 to September 30, 1998.

Center for Folklife Programs and Cultural Studies

- Karl H. Miller, Predoctoral Fellow, New York University. "Playing Changes in the Southern City: The Creation of Blues, Country, and the American Folk," with Anthony Seeger from June 01, 1998 to August 31, 1999.
- Nilda C. Villalta, Predoctoral Fellow in Latino Studies, University of Maryland. "Testimonies, War and Survival: Representation and Creation in El Salvador and in the U.S. by Exiled Salvadorans," with Olivia Cadaval from September I, 1998 to May 31, 1999.

Conservation Analytical Laboratory

- Elizabeth Robertson, Postgraduate Fellow, Queen's University. "Postgraduate Fellowship in Archaeological Conservation," with Donald Williams from October 1, 1997 to September 30, 1998.
- Su-Fen Yen, Visiting Scholar, National Taiwan University. "Preservation of Museum Collections," with Donald Williams from December 1, 1997 to June 10, 1998.

Cooper-Hewitt, National Design Museum

- Laure Hug, Peter Krueger-Christie's Fellow, University of Paris IV Sorbonne, France. "Jean-Baptiste Huet's Graphic Work Related to the Decorative Arts," with Gillian Moss from September 15, 1998 to May 31, 1999.
- Cynthia Van Allen Schaffner, Graduate Student Fellow, Cooper-Hewitt, Nat'l Design Museum/Parsons School of Design. "The Artful Finisher: Painters', Stainers' and Varnishers' Manuals and Their Influences on Nineteenth-Century American Furniture," with Stephen Van Dyk and Maria Ann Conelli from August 17, 1998 to October 23, 1998.

Freer Gallery of Art/ Arthur M. Sackler Gallery

- Oya A. Pancaroglu, Predoctoral Fellowship, Harvard University. "The Content and Context of Figural Imagery in the Arts of the Seljuq Period (1100–1300)," with Massumeh Farhad from November 1, 1997 to October 31, 1998.
- Morgan J. Pitelka, Predoctoral Fellowship, Princeton University. "Unearthing History: Raku Ceramics, Cultural Production, and Coveted Objects in Medieval and Early Modern Japan," with Louise Allison Cort from March I, 1998 to July 31, 1998.

National Air and Space Museum

- Mary C. Bourke, Postdoctoral Fellowship, Australian National University. "Satellite Image Analysis of Catastrophic Floods on Earth," with James Zimbelman and Robert Craddock from May 1, 1998 to April 30, 1999.
- William F. Chana, Verville Fellow, San Diego Aerospace Museum. "Roger! Over and Out... An Autobiography," with Donald Lopez and Richard Leyes from April 1, 1998 to September 30, 1998.
- Anne F. Collins, Predoctoral Fellow, University of Texas, Austin. "The Relationship of Art to Science and Technology in the United States after Sputnik, 1957–1971," with Dominick Pisano and Jacquelyn Days Serwer from June 15, 1998 to September 14, 1998.
- Anne F. Collins, Guggenheim Fellow, University of Texas, Austin. "The Relationship of Art to Science and Technology in the United States after Sputnik, 1957–1971," with Dominick Pisano and Jacquelyn Days Serwer from September 15, 1998 to June 14, 1999.
- Howard E. McCurdy, Charles A. Lindbergh Chair in Aerospace History, American University. "Better, Faster, Cheaper," with Robert Smith and Thomas Crouch from September 1, 1998 to May 31, 1999.

- Marshall L. Michel III, Verville Fellow, New Orleans, La. "The Eleven Days of Christmas: B-52 Operations over North Vietnam During December 1972," with Peter Jakab from August 15, 1998 to August 14, 1999.
- David H. Onkst, Predoctoral Fellow, American University. "The Triumph and Decline of the 'Squares': Grumman Aerospace Workers and the Promise of the U.S. Space Program, 1957–1973," with Michael Neufeld from August 15, 1998 to August 14, 1999.
- Norman Polmar, Ramsey Fellow, Alexandria, Va. "Aircraft Carriers," with Thomas Crouch from October 1, 1997 to September 30, 1998.

National Museum of African Art

Amanda B. Carlson, Predoctoral Fellow, Indiana University, Bloomington. "Nsibidi: The Art of Constructing Social Identities: The Art of the Ejagham," with Roslyn Walker and Christraud Geary from July 1, 1998 to June 30, 1999.

Aboubakar Sidiki Sanogo, Visiting Scholar, University of Ouagadougou, Burkina Faso. "The State of African Cinema in the U.S.," with Veronika Jenke from April 20, 1998 to December 31, 1998.

National Museum of American Art

- Elissa A. Authur, Renwick Fellow, University of Maryland. "Material that Makes a Difference: Fiber in Art and the Cultural Hierarchy of Art and Craft in the 1960s and 1970s," with Jeremy Adamson from September 1, 1998 to August 31, 1999.
- Anna M. Fariello, Renwick Fellow, Radford University. "The Appalachian Craft Revival: Production and Distribution Model for American Craft," with Jeremy Adamson from September 1, 1998 to February 28, 1999.
- Emily J. Halligan, Predoctoral Fellow, University of Delaware. "Art Criticism in America before "The Crayon': Perceptions of Landscape Painting, 1825–1855," with William Truettner and Katherine Manthorne from September 1, 1998 to August 31, 1999.
- David B. Raskin, Predoctoral Fellow, University of Texas, Austin. "Donald Judd's Skepticism," with George Gurney and Stephen Polcari from June 1, 1998 to August 31, 1998.
- Kristin A. Schwain, Predoctoral Fellow, Stanford University. "Embodying the Spirit: American Art and Modern Piety, 1890–1917," with William Truettner from September 1, 1998 to August 31, 1999.
- Kathleen M. Spies, Predoctoral Fellow, Indiana University, Bloomington. "Burlesque Queens and Circus Divas: Images of the Female Grotesque in American Realist Art,

1900–1940," with Virginia Mecklenburg and Katherine Manthorne from September 1, 1998 to August 31, 1999.

Stephanie L. Taylor, Predoctoral Fellow, Boston University. "Constructing Cornell: Artistic Identity and the Invention of Joseph Cornell," with Lynda Roscoe Hartigan from September 1, 1998 to August 31, 1999.

National Museum of American History

- Shannon A. Brown, Predoctoral Fellow, University of California, Santa Cruz. "Conquering Time and Space: The Electrification of the U.S. Army, 1880–1920," with Bernard Finn and Elliot Sivowitch from September 15, 1998 to January 15, 1999.
- David A. Chang, Predoctoral Fellow, University of Wisconsin, Madison. "Race, Culture, and the Revolution in Land Ownership in Oklahoma, 1889–1940," with Pete Daniel from September 1, 1998 to November 30, 1998.
- Sharon L. Corwin, Predoctoral Fellow, University of California, Berkeley. "Studies in Precisionism, Consumerism, and Machine Age Culture," with David Haberstich and Peter Liebhold from August 1, 1998 to November 30, 1998.
- John J. Dettloff, Predoctoral Fellow, Princeton University. "Chemistry and Culture in France, 1750–1800," with Jon Eklund from September 15, 1998 to June 14, 1999.
- Debbie Ann Doyle, Predoctoral Fellow, American University. "Gender and the Leisure Industry in Atlantic City and the Miss America Pageant," with Ellen Roney Hughes from June 1, 1998 to August 31, 1998.
- Finis E. Dunaway, Predoctoral Fellow, Rutgers University. "Natural Visions: The Aesthetics of Conservation in American Culture, 1880–1940," with Jeffrey Stine from September 1, 1998 to November 30, 1998.
- Kathryn K. Fenn, Predoctoral Fellow, Duke University. "From Youth Culture to the Counterculture: Intersections of Gender, Culture and Politics during the 1960s," with Charles McGovern from September 1, 1998 to November 30, 1998.
- Michele A. Gates Moresi, Predoctoral Fellow, George Washington University. "Exhibiting Race, Creating Nation: Representations of Black History and Culture at the Smithsonian Institution, 1895–1996," with James Horton and Fath Davis Ruffins from September 1, 1998 to May 31, 1999.
- Catherine Gudis, Predoctoral Fellow, Yale University. "The Road to Consumption: Outdoor Advertising and the American Cultural Landscape, 1917–1990," with Charles McGovern from June 1, 1998 to February 28, 1999.
- Matthew Thomas Guterl, Predoctoral Fellow, Rutgers University. "Investments in Color Prejudice," with Charles McGovern from June 1, 1998 to December 31, 1998.

- Kathryn Henderson, Lemelson Center Senior Fellow, Texas A&M University. "Straw Bale Building: Reinventing an Old Technology for a Sustainable Environment," with Arthur Molella from June 1, 1998 to June 30, 1999.
- Dean Herrin, Lemelson Center Senior Fellow, National Park Service. "The Eclectic Engineer: Montgomery C. Meigs," with Arthur Molella from December 1, 1997 to October 31, 1998.
- Vicki J. Howard, Predoctoral Fellow, University of Texas, Austin. "The Wedding Industry: Educating Women into Consumer Society in the Twentieth Century," with Charles McGovern and Claudia Brush Kidwell from June 1, 1998 to August 31, 1998.
- David J. Howie, Predoctoral Fellowship, University of Pennsylvania. "Probabilistic Inference in the Physical Sciences During the 1920s and 1930s," with Paul Forman from May 1, 1998 to July 31, 1998.
- Colin R. Johnson, Graduate Student Fellow, University of Michigan. "Gender, Sexuality, and the Reformation of the Landscape in Turn-of-the-Century Rural America," with Pete Daniel and Barbara Clark Smith from June 29, 1998 to September 4, 1998.
- Sarah A. Johnson, Predoctoral Fellow, University of Brighton, U.K. "American Mail-Order Catalogues, Women's Middle Class Clothing, and the Context of Consumption, 1860– 1890," with Shelly Foote and Helena Wright from July 1, 1998 to March 31, 1999.
- J. Kehaulani Kauanui, Graduate Student Fellowship, University of California, Santa Cruz. "Historical Narratives of 'Progression' in the 'Undoing' of the Native Hawaiian: U.S. Blood Quantum Law, Sovereignty, and Self-Governance," with Rayna Green from October 14, 1997 to December 19, 1997.
- Phoebe S. Kropp, Predoctoral Fellowship, University of California, San Diego. "Making Memory in Southern California: The San Diego Exposition of 1915, Indian Display, Spanish Imagery, and Other Landmarks of a Fantasy Past," with Rayna Green from March 1, 1998 to May 31, 1998.
- T.J. Lears, Senior Fellowship, Rutgers University. "Luck and the American Imagination," with Charles McGovern and Barbara Clark Smith from January 1, 1998 to June 30, 1998.
- Katina L. Manko, Predoctoral Fellowship, University of Delaware. "The Tupperware Home-Party System," with Charles McGovern and Steven Lubar from January 15, 1998 to July 14, 1998.
- Carlos E. Martin, Predoctoral Fellow, Stanford University. "Constructed Histories: Technology, Work, and Progress in U.S. Building Codes, 1870–1930," with Steven Lubar and Stephen Van Dyk from June 1, 1998 to August 31, 1998.
- Julia L. Mickenberg, Predoctoral Fellow, University of Minnesota. "The Children's Front: 'Progressive' Children's Culture and the Unmaking of a Cold-War Consensus," with Charles McGovern from June 1, 1998 to August 31, 1998.
- David Lindsay Roberts, Postdoctoral Fellow, Johns Hopkins University. "Old Math, New Math, and Aftermath: Profes-

sional Agendas and Reform Initiatives in American Mathematics Education, 1945–1970," with Peggy Kidwell from June 1, 1998 to August 31, 1998.

- Clara E. Rodriguez, Senior Fellow in Latino Studies, Fordham University. "Uncovering the Buried History of Latino Images in the Media," with Fath Davis Ruffins from July 1, 1998 to December 31, 1998.
- Michael S. Rodriguez, Graduate Student Fellow, Temple University. "Race and Party Politics During the New Deal," with William Bird from May 18, 1998 to August 21, 1998.
- Nicholas S. Sammond, Predoctoral Fellow, University of California, San Diego. "Study of Advertising and Products for Children, 1920–1960," with Charles McGovern from June 15, 1998 to September 14, 1998.
- David H. Serlin, Predoctoral Fellow, New York University. "Civic Biology: Imagining the American Body Through Medical Science, 1945–1965," with Ramanus Kondratas and Fath Davis Ruffins from September 1, 1998 to February 28, 1999.
- Lourdes C. Sifontes Greco, Visiting Scholar, Simon Bolivar University. "Reshaping Knowledge and Education: Contemporary Museums and Media in the Diffusion and Narrative of History, Science, Art and Technology (from Interdisciplinary Thought to a Postmodern Material Culture)," with Steven Lubar from March 1, 1998 to August 31, 1998.
- John W. Troutman, Graduate Student Fellow, University of Texas, Austin. "Race, Gender, and Identity Through the Representations of American Indians on the Historic Frontier of American Popular Music," with Rayna Green from June I, 1998 to August 7, 1998.
- Aristotle Tympas, Visiting Student, Georgia Tech University. "The History of the Electrical Analyzer," with Bernard Finn from November 15, 1997 to August 31, 1998.
- Psyche A. Williams, Graduate Student Fellow, University of Maryland, College Park. "Black-eyed Peas and Sweet Potatoes: What Is African American about African American Foodways?," with Fath Davis Ruffins from June I, 1998 to August 7, 1998.

National Museum of Natural History

- Frank E. Anderson, Postdoctoral Fellow, University of California, Santa Cruz. "A Phylogenetic Analysis of Relationships Among Spiralian Metazoans Based on Multiple Nuclear Protein-Coding Loci," with Jon Norenburg and David Swofford from August 1, 1998 to July 31, 1999.
- Joaquin Arroyo-Cabrales, Visiting Scientist, Texas Tech University. "Mammals from the State of Narayit, Mexico," with Don Wilson from September 15, 1998 to September 14, 1999.

- Thomas A. Artiss, Graduate Student Fellow, Clark University. "Phylogeny, Patterns of Homoplasy and Character Evolution in Odonates," with Ted Schultz and Dan Polhemus from June 1, 1998 to August 7, 1998.
- Lynn Atkinson, Postdoctoral Fellowship, University of Rochester. "A Phylogenetic Study of the Termite Genus *Nasutitermes*," with Ted Schultz from January 1, 1998 to December 31, 1998.
- Rene Luis Bobe, Visiting Scientist, University of Washington. "Plio-Pleistocene Environments and Community Evolution in Africa," with Anna K. Behrensmeyer from September 1, 1998 to August 31, 1999.
- Emilio M. Bruna, Predoctoral Fellowship, University of California, Davis. "What Is the Effect of Habitat Fragmentation on the Foraging Patterns of Avian Pollinators?" with W. John Kress from January 15, 1998 to April 14, 1998.
- H. David Clarke, Visiting Scientist, University of Illinois, Urbana-Champaign. "Systematics and Evolution of Tribes Acacieae and Ingeae (Fabaceae: Mirnosoideae)," with Michael Braun from August 1, 1998 to December 31, 1998.
- Helen K. Coxall, Predoctoral Fellow, University of Bristol, U.K. "The Evolution and Taxonomic Status of Hantkeninid Foraminifera Morphospecies," with Brian Huber from August 1, 1998 to November 30, 1998.
- Gunther J. Eble, Postdoctoral Fellowship, University of Chicago. "Morphospace Occupation in the Class Echinoidea: Comparative Analyses of Disparity After the End-Permian Mass Extinction," with Douglas Erwin from October 1, 1997 to September 30, 1999.
- Debra Ellis, Visiting Scientist, University of Maryland. "Clarification of the Genetic Status of the Reindeer Lichens, *Cladina* Nyl. (Lichen-Forming Ascomycotina)," with Paula DePriest from February 15, 1998 to August 15, 1998.
- Peter G. Foster, Postdoctoral Fellowship, University of Ottawa. "Use of Non-Stationary Models in Non-Homogeneous Protein-Based Phylogenetic Reconstruction," with David Swofford from October 1, 1997 to September 30, 1999.
- Stephen Frost, Visiting Student, City University of New York. "Cercopithecid Evolution and Climatic Change in the Afar Depression, Ethiopia," with Anna K. Behrensmeyer from September 1, 1998 to December 31, 1999.
- Leticia del Socorro Gonzalez, Senior Fellow, Instituto Nacional de Antropologia e Historia. "Walter W. Taylor's Archaeological Work in Coahuila, Mexico," with J. Daniel Rogers from September 15, 1998 to July 14, 1999.
- Dennis G. Griffin, Predoctoral Fellowship, University of Oregon. "Nunivak Island, Alaska: Changes in Cupiit Lifeways as Documented through an Analysis of the Collins and Dall Ethnographic/Archaeological Collections, Smithsonian Institution," with Stephen Loring from November 15, 1997 to March 31, 1998.
- Yunbin Guan, Visiting Scientist, Washington University. "Isotopic Studies of the Earliest Solar System: Where and

How Did Preplanetary Dust Form?," with Glenn Mac-Pherson from June 1, 1998 to May 31, 1999.

- Jill L. Heilman, Graduate Student Fellow, Arizona State University. "Quantification of Musculoskeletal Stress Markers in an Urban Population," with Donald Ortner from June 8, 1998 to August 14, 1998.
- Yolanda Herrera Arrieta, Short-Term Visitor. Instituto Politecnico Nacional. "Anatomical Study of the Genus *Mublenbergia* (Poaceae)," with Paul Peterson from July 1, 1998 to September 30, 1998.
- Roger William Hutchings, Visiting Student, University of Maryland, College Park. "Curation of the Mimallonidae in the NMNH Collections," with Robert Robbins from April 1, 1998 to September 30, 1998.
- Kati Karkkainen, Visiting Student, University of Helsinki. "Synopsis of the Cladoniaceae (Lichen-Forming Ascomycetes)," with Teuvo Ahti and Paula DePriest from September 1, 1998 to August 31, 1999.
- Mzalendo Kibunjia, Short-Term Visiting Student, Rutgers University. "The Archaeology of Lokalalei," with Richard Potts from January 1, 1998 to June 30, 1998.
- Hyi-Gyung Kim, Postdoctoral Fellowship, University of Texas. "Phylogenetic Studies of the Guayana Highland Mutisieae (Asteraceae)," with Vicki Funk and Elizabeth Anne Zimmer from January 1, 1998 to December 31, 1998.
- Heather A. Lapham, Predoctoral Fellow, University of Virginia. "Evaluating Early-17th-Century Siouan Responses to an Emerging European Market Economy in the Virginia Interior," with Bruce Smith and Melinda Zeder from September 1, 1998 to August 31, 1999.
- Niels Lynnerup, Visiting Scientist, University of Copenhagen. "Research in Physical Anthropology: Age Determination and Identification of Human Remains," with Bruno Frohlich from February 1, 1998 to August 31, 1998.
- Svetlana Maslakova, Visiting Student, Moscow State University. "Preliminary Cladisitc Analysis of Pelagic Nemerteans," with Jon Norenburg from May 23, 1998 to August 31, 1998.
- Lisa G. Materson, Predoctoral Fellowship, University of California at Los Angeles. "Constructing 'Black Womanhood': African American Women's Missionary Work at Home and Abroad, 1880–1920," with Robert Leopold from February 15, 1998 to July 14, 1998.
- Leslie J. Newman, Postdoctoral Fellowship, The University of Queensland, Australia. "Biodiversity and Phylogeny of Polyclad Flatworms (Platyhelminthes) from Western Atlantic and Caribbean Coral Reefs," with Jon Norenburg from January I, 1998 to December 31, 1998.
- Michael P. Noll, Predoctoral Fellowship, University of Illinois. "Lithic Assemblage Variability During the Acheulean at Olorgesailie, Kenya," with Richard Potts from May 15, 1998 to February 15, 1999.
- Alexander Nuetzel, Visiting Scientist, University of Hamburg, Germany. "Evolution of Upper Paleozoic Gastropods," with Douglas Erwin from September I, 1998 to August 31, 1999.

- Ilona M. Oksanen, Visiting Student, University of Helsinki, Finland. "Synopsis of the Cladoniaceae (Lichen-Forming Ascomyceres)," with Teuvo Ahti and Paula DePriest from September 1, 1998 to August 31, 1999.
- Michele D. Piercey-Normore, Visiting Scientist, Memorial University of Newfoundland, Canada. "Molecular Systematics of the Cladoniaceae," with Paula DePriest from September 1, 1998 to August 31, 1999.
- Linda M. Prince, Visiting Scientist, University of North Carolina, Chapel Hill. "Molecular Systematics of Marantaceae and Zingiberaceae," with W. John Kress from June 1, 1998 to May 31, 1999.
- George R. Proctor, Mellon Senior Fellow, Department of Natural Resources, Puerto Rico. "Revision of the Monocotyledons of Puerto Rico and the Virgin Islands," with Pedro Acevedo from June I, 1998 to May 31, 1999.
- James R. Rougvie, Postdoctoral Fellow, University of Texas, Austin. "The Effects of Low-Temperature Potassium Metasomatism on Volcanic Rocks and Their Metamorphism: A Comparison of Textures and Geochemistry of Jurassic and Tertiary Volcanics, Western United States," with Sorena Sorensen from September 15, 1998 to September 14, 1999.
- Stephen A. Schellenberg, Predoctoral Fellow, University of Southern California. "Ecological and Evolutionary Response of Deep-Ocean Ostracodes to Paleogene Climate Events: The Late Paleocene Thermal Maximum and Eocene-Oligocene 'Greenhouse-Icehouse' Transition," with Richard Benson from June 1, 1998 to August 31, 1998.
- Vira Panteleivna Semenenko, Senior Fellowship, National Academy of Sciences of Ukraine. "The Nature of Graphitebearing Fragments in the Krymka Chondrite," with Glenn MacPherson and Eugene Jarosewich from October 1, 1997 to December 31, 1997.
- Laurel B. Sercombe, Predoctoral Fellow, University of Washington. "Songs in Coast Salish Myths and Folktales: An Investigation of the J.P. Harrington Collection and Other Relevant Holdings in the National Anthropological Archives," with Jane Walsh from September 1, 1998 to November 30, 1998.
- Nancy Sikes, Visiting Scientist (Co-Princ. Investigator/SSP), University of Illinois, Urbana-Champaign. "Early Hominid Paleoenvironments of the African Rift: Tests of Hypotheses Using Stable Isotopic Analysis," with Richard Ports from October 1, 1997 to September 30, 1999.
- Soili Kristina Stenroos, Visiting Scientist, University of Helsinki. "A World Monograph of the Cladoniaceae (Lichen-Forming Ascomycetes) with Special Emphasis to the Cladonia Section Unciales," with Paula DePriest from April 15, 1998 to November 30, 1998.
- Scott Steppan, Visiting Scientist, University of Chicago. "Molecular Phylogenetics of the Squirrels and Their Relatives," with Robert Hoffmann from November 1, 1997 to October 31, 1999.
- Youngbae Suh, Visiting Scientist, University of Texas, Austin. "Phylogenetic Relationships of Basal Angiosperms: Implica-

tions from 26S Ribosomal DNA Sequencing," with Elizabeth Zimmer from August 15, 1998 to December 31, 1999.

- Mikael Thollesson, Visiting Scientist, Goteborg University. "Molecular Phylogeny of Nemertea (Ribbon worms)," with Jon Norenburg from March I, 1998 to November 15, 1999.
- Susan C. Vehik, Senior Fellow, University of Oklahoma. "Plains Social Inequality," with J. Daniel Rogers from September 1, 1998 to May 31, 1999.
- Peter D. Wilf, Postdoctoral Fellowship, University of Pennsylvania. "Climatic Patterns of Insect Herbivory in the Fossil Record," with Conrad Labandeira from May 1, 1998 to April 30, 1999.

National Portrait Gallery

- Nola Anderson, Fellow in Museum Practice, Sydney University. "The Use of Archival Film and Photography in Museum Exhibitions," with Amy Henderson and Nancy Fuller from March 1, 1998 to December 31, 1998.
- Konstantin Dierks, Predoctoral Fellowship, Brown University. "The Iconography of Letter Writing in American Portraiture, 1750–1800," with Brandon Brame Fortune and Ellen Miles from January 1, 1998 to April 30, 1998.
- Leslie K. Reinhardt, Predoctoral Fellow, Princeton University. "The Use of Imaginary Dress in American Eighteenth-Century Portraiture," with Ellen Miles from September 15, 1998 to September 14, 1999.

Seals," with Daryl Boness and Robert Fleischer from January 1, 1998 to March 31, 1998.

- Stephen J. Insley, Visiting Scientist, University of California, Davis. "Competition, Cooperation, and the Evolution of Complex Communication: Adult Male Northern Fur Seals," with Daryl Boness from May 1, 1998 to April 30, 1999.
- Rachel Moreland, Visiting Student, Clemson University. "Cryopreservation of Spermatozoa for Enhancing Reproduction in Rare Felids," with JoGayle Howard from September 1, 1998 to August 31, 1900.
- Trevor Pitcher, Visiting Student, York University, Canada. "Breeding Synchrony and Extrapair Mating Systems in the Tropics," with Eugene Morton from May 1, 1998 to August 31, 1998.
- David M. Powell, Predoctoral Fellow, University of Maryland, College Park. "Modes of Reproductive Competition Among Female Feral Horses (*Equus cabullus*)," with Devra Kleiman from July 1, 1998 to December 31, 1999.
- Laura K. Richman, Visiting Scientist, Johns Hopkins University. "Characterization and Epidemiology of a Newly Recognized Fatal Herpesvirus in Asian and African Elephants," with Richard Montali from October 1, 1997 to September 30, 1999.
- Leo Shapiro, Visiting Scientist, State University of New York, Stony Brook. "Hybridization and the Decline of the Golden-winged Warbler," with Robert Fleischer from September 1, 1998 to August 31, 1999.
- Karen Wolf, Visiting Student, University of Maryland. "Cryopreservation of Spermatozoa for Enhancing Reproduction in Rare Felids," with JoGayle Howard from September 1, 1998 to August 31, 1999.

National Zoological Park

- Mindy Ann Babitz, Visiting Scientist, University of St. Andrews, Scotland. "Object Manipulation and Tool Use in Sulawesi Crested Black Macaques," with Lisa Stevens from September 1, 1998 to August 31, 1999.
- Dina M. Fonseca, Postdoctoral Fellowship, University of Pennsylvania. "Avian Malaria in Hawaii: The Effect of Vector Dispersal on the Evolution of Parasite Pathogenicity in Endangered Hawaiian Honeycreepers," with Robert Fleischer and Dan Polhemus from January 1, 1998 to March 31, 1998.
- Brian T. Henen, Visiting Scientist, University of California, Los Angeles. "Reproductive Nutrition of Female Desert Tortoises (*Gopherus agassizii*): Isotope Methodology and Porassium Effects upon Egg Production," with Olav Oftedal from September 1, 1998 to August 31, 1999.
- Stephen J. Insley, Postdoctoral Fellowship, University of California, Davis. "Competition, Cooperation, and the Evolution of Complex Communication in Northern Fur

Smithsonian Institution Archives

- Pedro M. Pruna Goodgall, Visiting Scholar, University of Habana, Cuba. "Relations Between U.S., Cuban and Other Caribbean Naturalists in the Nineteenth and Twentieth Centuries," with Pamela Henson from June 1, 1998 to October 31, 1998.
- Patrick H. Wirtz, Predoctoral Fellow, University of Southern California. "The National Zoological Park: The Evolving Nineteenth-Century Context," with Pamela Henson and Cynthia Field from September 1, 1998 to April 30, 1999.

Smithsonian Astrophysical Observatory

Lori Allen, Postdoctoral Fellow, University of Massachusetts. "Star Formation in Nearby Molecular Clouds," with Philip Myers from July 1, 1998 to June 30, 1999. Aldo J. Apponi, Visiting Scientist, Arizona State University. "Molecular Spectroscopy/Astrophysics," with Patrick Thaddeus from July I, 1998 to September 30, 1998.

Christopher Ball, Visiting Scientist, Ohio State University. "Carbon-Based Molecules in Interstellar Clouds and Circumstellar Shells," with Patrick Thaddeus from September 1, 1998 to August 31, 1999.

Marco Barbera, Visiting Scientist, University of Palermo, Italy. "Participation in the Development Program for Microcalorimeters X-ray Detectors," with Eric Silver from October 15, 1997 to September 30, 1998.

Patrick Boyle, Short-Term Visitor, University College, Dublin, Ireland. "Development of a Raster Search for Counterparts to Classical Gamma Ray Bursts," with Trevor Weekes from September 7, 1998 to January 7, 1999.

Robert J. Buenker, Visiting Scientist, Bergische Universitat. "Quantum Chemistry," with Eric Heller from August I, 1998 to April 30, 1999.

- Michael Carson, Visiting Student, University College, Dublin. "Time-Series Analysis of AGN Light Curves," with Trevor Weekes from October 1, 1997 to December 31, 1997.
- Hyun-Kyung Chung, Visiting Scientist, University of Wisconsin, Madison. "Theoretical and Experimental Studies of Line Broadening in Plasmas for Lighting," with James Babb from June 1, 1998 to May 31, 1999.

Doron Cohen, Visiting Scientist, Israel Institute of Technology. "Quantum Chaos, Brownian Motion and Localization," with Eric Heller from August 1, 1998 to July 31, 1999.

Wesley N. Colley, CfA Postdoctoral Fellow, Princeton University. "Gravitational Lenses and Cosmology," with John Huchra from November 1, 1997 to October 31, 1999.

Hagai El-Ad, Predoctoral Fellow, The Hebrew University. "Study of Voids Using the VOID FINDER Algorithm," with Myron Lecar from October 1, 1997 to September 30, 1999.

Brett Esry, Postdoctoral Fellow, University of Colorado. "Few-Body and Many-Body Systems in Atomic Physics," with Eric Heller from November 15, 1997 to November 14, 1999.

Stephen Fegan, Visiting Student, University College Dublin, Ireland. "VERITAS TeV Gamma Ray Astronomy," with Trevor Weekes from September 1, 1998 to August 31, 1999.

Piotr Froelich, Visiting Scientist, Uppsala University, Sweden. "Exotic Atomic and Molecular Physics," with Eric Heller from February 1, 1998 to August 31, 1998.

Jiang-Ping Gu, Visiting Scientist, Wuppertal University, Germany. "Charge-Transfer Processes in Ion-Atom Collisions of Heavy Atoms of the First and Second Rows with H and He Ions," with Eric Heller from September 1, 1998 to December 31, 1998.

Saiyid Sirajul Hasan, Visiting Scientist, University of Oxford. "Excitation of Oscillations in Solar Flux Tubes," with Wolfgang Kalkofen from March 15, 1998 to July 14, 1998.

You Qiu Hu, Visiting Scientist, University of Science and Technology of China. "The Development of Multifluid Time-Dependent Numerical Codes Pertaining to the Study of the Solar Wind," with Shadia Habbal from September 27, 1998 to March 31, 1999.

Adrian Ivan, Predoctoral Fellow, Massachusetts Institute of Technology. "Development of Multilayer Optics for Hard X-ray Astronomy," with Suzanne Romaine from September 1, 1998 to August 31, 1999.

Rolf Jansen, Predoctoral Fellow, Kapteyn Astronomical Institute. "Star Formation History of Nearby Field Galaxies," with Daniel Fabricant from January 1, 1998 to July 31, 1998.

Per O.J. Jarlemark, Visiting Scientist, Chalmers University of Technology, Sweden. "Construction of a Multipath Calibration System for the Global Positioning System," with James Davis from February 1, 1998 to July 31, 1999.

Svante Jonsell, Visiting Student, Uppsala University. "Formation of Meta Stable PPpi Molecules," with Eric Heller from January 15, 1998 to July 15, 1998.

Edisher Kaghashvili, Predoctoral Fellow, Georgian Academy of Sciences. "Dynamical and Compositional Properties of the Solar Wind," with Ruth Esser from August 1, 1998 to July 31, 1999.

Jung-Hoon Kim, Short-Term Visitor, Korea Advanced Institute of Science and Technology. "Classical-Quantum Correspondence," with Eric Heller from April 13, 1998 to July 13, 1998.

Youngung Lee, Visiting Scientist, University of Massachusetts. "Analysis of the Bell Laboratories 13CO Survey of the Galactic Plane," with Antony Stark from September 1, 1998 to January 15, 1999.

Xing Li, Visiting Scientist, University of Science and Technology of China. "Observational Study of the Inner Corona and Multi-Fluid Solar Wind Modeling," with Shadia Habbal from August 1, 1998 to July 31, 1999.

Kevin L. Luhman, Postdoctoral Fellow, University of Arizona. "The Substellar Mass Function," with Robert Kirshner from August 15, 1998 to August 14, 1999.

Mikhail Lukin, Postdoctoral Fellow, Texas A&M University. "Atom-Field Interactions Involving Atomic Coherence and Interference," with Eric Heller from August I, 1998 to July 31, 1999.

S. Thomas Megeath, Visiting Scientist, Cornell University. "A Detailed Study of Molecular Gas and Star Formation," with Patrick Thaddeus from October 9, 1997 to September 30, 1998.

Glenn Milne, Postdoctoral Fellow, University of Toronto. "Numerical Modeling of Crustal Deformation Rate Data Obtained from the Fennoscandian Region," with James Davis from January 10, 1998 to January 9, 1999.

Perer W. Milonni, Short-Term Visitor, Los Alamos National Laboratory. "Casimir-Type Effects in Rydberg Atoms," with Eric Heller from March 15, 1998 to June 15, 1998.

Martin Naraschewski, Visiting Scientist, Universitat Munchen. "Bose-Einstein Condensates as Sources of Coherent Atoms," with Eric Heller from October 15, 1997 to September 30, 1998.

- Michael Pahre, Hubble Postdoctoral Fellow, California Instirute of Technology. "A Multi-Color Search for Distant Clusters of Galaxies," with John Huchra from February 1, 1998 to January 31, 1999.
- Jesus Pelaez Alvarez, Visiting Scientist, Polytechnical University of Madrid, Spain. "Dynamics/Electrodynamics Coupling in the Bare-Tether System ProSEDS," with Enrico Lorenzini from December 15, 1997 to August 31, 1998.
- Rosalba Pema, Predoctoral Fellow, Harvard University. "Searching for Gamma-Ray Burst Remnants," with John Raymond and Avi Loeb from August 1, 1998 to May 31, 1999.
- Raymond Piccoli, Visiting Scholar, Barles Nature Assocation, France. "The Relationship Between Radio and Optical Astronomical Techniques," with Raymond Blundell from January I, 1998 to September 30, 1998.
- Jorge Sanz, Predoctoral Fellow, Complutense of Madrid, Spain. "Multiwavelength Spectroscopy of Active Binaries," with Andrea Dupree from September 1, 1998 to August 31, 1999.
- Francesca Scire-Scappuzzo, Visiting Scientist, Massachusetts Institute of Technology. "Multipath in High-Accuracy GPS Positioning for Geodynamic Studies," with James Davis from January 20, 1998 to January 19, 1999.
- Max Shurgalin, Visiting Scientist, Griffith University, Australia. "Experimental Studies of Line Broadening in Plasmas for Lighting," with Kate Kirby from March 23, 1998 to March 22, 1999.
- Rex T. Skodje, Visiting Scientist, University of Colorado. "Theoretical Studies of Low-Energy Atomic Collisions with Surfaces," with Kare Kirby from September 1, 1998 to February 28, 1999.
- Maarten C. Spaans, Hubble Postdoctoral Fellow, University of Leiden. "The Structure of the Interstellar Medium in the Milky Way and Distant Galaxies," with Alexander Dalgarno from October 1, 1997 to September 30, 1999.
- Vijaya Subramanian, Visiting Student, University of Colorado. "Characterization of Threshold Effects in Molecule-Surface Scattering," with Eric Heller from September 1, 1998 to December 31, 1998.
- Ching-Hua Tseng, Visiting Scientist, Harvard University. "Applications of Laser-Polarized Noble Gases for Quantum Information Processing and Material Science," with Ronald Walsworth from February 1, 1998 to January 31, 1999.
- Alberto Vasquez, Predoctoral Fellow, University of Buenos Aires. "Coronal Streamers and Slow Wind: UVCS Observations and Theoretical Modeling," with John Raymond from November 1, 1997 to October 31, 1999.
- Barbara Whitney, Visiting Scientist, University of Wisconsin, Madison. "Radiative Transfer Models of Pre-Main Sequence Images and Spectral Energy Distributions," with Scott Kenyon and Kenneth Wood from January 1, 1998 to August 31, 1998.
- Jian-Min Yuan, Short-Term Visitor, Drexel University. "Classical and Quantum Behavior of Few-Body Atomic and

Molecular Systems," with Eric Heller from April 15, 1998 to July 15, 1998.

Bernard Zygelman, Visiting Scientist, University of Nevada, Las Vegas. "Effective Gauge Potentials in Atomic Systems," with Eric Heller from August 1, 1998 to July 31, 1999.

Smithsonian Center for Materials Research and Education

Angel D. Santiago-Torres, Senior Fellow in Latino Studies, Museo de Arte de Ponce. "Analysis of Materials and Techniques in Puerto Rican Santos," with Donald Williams and Marvette Perez from June 1, 1998 to August 31, 1998.

Smithsonian Environmental Research Center

- Eike Breitbarth, Visiting Student, Northeastern University. "The Role of Domestic Ballast Water Transport in the Transfer of Nonindigenous Aquatic Species," with Gregory Ruiz from April 15, 1998 to July 14, 1998.
- Cathleen A. Coss, Predoctoral Fellow, George Washington University. "Transmission Dynamics and Patterns of Perkinsus Infection in Chesapeake Bay Bivalves," with Gregory Ruiz from June 1, 1998 to August 31, 1998.
- Jill M. Juhasz, Visiting Student, Northeastern University. "Domestic Ballast Water Transport: A Potential Aid in the Transfer of Nonindigenous Aquatic Species," with Gregory Ruiz from June 15, 1998 to December 15, 1998.
- Romuald N. Lipcius, Senior Fellow, College of William and Mary. "Source-sink Dynamics in a Marine Bivalve," with Anson Hines and Gregory Ruiz from June 1, 1998 to November 30, 1998.
- Elena G. Litchman, Postdoctoral Fellowship, University of Minnesota. "Experimental Investigation of Factors Controlling UV Sensitivity of Phytoplankton in the Rhode River," with Patrick Neale from December 15, 1997 to January 14, 1999.
- Catherine E. Lovelock, Visiting Scientist, James Cook University. "Host and Environmental Controls on the Arbuscular Mycorrhize Symbiosis in Tropical Forests," with Dennis Whigham from March 1, 1998 to April 30, 1999.
- Anne S. Marsh, Visiting Scientist, Yale University. "Rising CO₂ and Long-Term Carbon Storage in Terrestrial Ecosystems: An Empirical Carbon Budget Validation," with Bert Drake from November 1, 1997 to July 15, 1998.
- Rochelle Seitz, Postdoctoral Fellow, College of William and Mary. "Top-down vs. Bottom-up Control in Clams and

Crabs in Marsh Ecosystems," with Anson Hines from April 15, 1998 to April 14, 1999.

- Ryouji Shimamura, Visiting Student, Tokyo Metropolitan University. "Effects of Water Dispersal of Seeds on Genetic Structure within a Population in a Werland Plant, *Hibiscus moscheutos*," with Dennis Whigham from October 1, 1997 to September 30, 1998.
- Evonne P.Y. Tang, Postdoctoral Fellow, Universite Laval, Canada. "Spectral Resonse of Dinoflagellates to Visible Light," with Patrick Neale from September I, 1998 to August 31, 1999.
- Heather Turner, Visiting Student, North Carolina State University. "Migration Dynamics in Female Blue Crabs in the Chesapeake Bay," with Anson Hines from June 1, 1998 to December 15, 1998.

Smithsonian Tropical Research Institute

- Yves Basset, Tupper Postdoctoral Fellow, Griffith University, Australia. "Vertical Gradients of Insect Diversity in Rain Forests: Communities of Insect Herbivores Feeding on Mature Trees vs. Seedlings," with S. Joseph Wright and Donald Windsor from August 15, 1998 to August 14, 1999.
- Reginald B. Cocroft, Postdoctoral Fellowship, Cornell University. "The Role of Communication in Social Behavior: Signals and Responses in Group-living Insects (Homoptera: Membracidae)," with A. Stanley Rand and John Christy from January 15, 1998 to January 14, 1999.
- Darren Crayn, Visiting Scientist, University of New South Wales. "The Evolutionary Origins of Epiphytism and Crassulacean Acid Metabolism within the Neotropical Family Bromeliaceae," with Klaus Winter and J. Andrew Smith from January 1, 1998 to December 31, 1999.
- Cameron R. Currie, Predoctoral Fellow, University of Toronto, Canada. "Parasitism of Attine Fungal Gardens," with William Wcislo from June 1, 1998 to May 31, 1999.
- Benoit Desjardins, Short-Term Fellow, Universite de Montreal, Canada. "Public Works or the Village Dump?" with Richard Cooke from July 10, 1998 to October 9, 1998.
- Elizabeth Dougherty, Short-Term Fellow, University of Pennsylvania. "The Dynamics of Modern Conservation and Community Development Practices in Rural Panama," with Olga Linares from February 1, 1998 to April 30, 1998.
- Jessica R. Eberhard, Postdoctoral Fellow, Princeton University. "Phylogeography of *Pionopsitta* Parrots and *Pteroglossus* Toucans: A Test of Haffer's Pleistocene Refuge Hypothesis," with Eldredge Bermingham from August 1, 1998 to July 31, 1999.
- John C. Griggs, Predoctoral Fellow, University of Texas, Austin. "Archaeological Excavations and Survey at a Shaft-and-Chamber Tomb Cemetery Site, Colon Province, Panama," with Richard Cooke from June 1, 1998 to May 31, 1999.

- Kristina Hufford, Short-Term Fellow, University of Georgia. "Demographic Genetics of *Platypodium elegans:* Selection at Three Early Life Stages," with E. Allen Herre from March 10, 1998 to July 11, 1998.
- Gwen Keller, Short-Term Fellow, University of Miami. "A Survey of Genetic Variation Among Population of *Chelymorpha alternans*," with Donald Windsor from December 15, 1997 to March 15, 1998.
- David M. Marsh, Predoctoral Fellow, University of California, Davis. "Effects of Breeding Pond Density on the Behavior and Population Dynamics of a Tropical Frog," with A. Stanley Rand from June 1, 1998 to September 30, 1998.
- Michael A. McCartney, Visiting Scientist (Co-Princ. Investigator/SSP), State University of New York, Stony Brook. "Evolution of Loci Controlling Gametic Isolation in Sea Urchins Separated by the Isthmus of Panama," with Harilaos Lessios from February 1, 1998 to December 31, 1998.
- Susan B. McRae, Postdoctoral Fellow, University of Cambridge, U.K. "Ecological Factors Affecting Reproductive Strategies in a Tropical Population of Moorhens," with William Wcislo and Eldredge Bermingham from May 15, 1998 to December 15, 1999.
- Drude Molbo, Short-Term Fellow, Universite de Lausanne, Switzerland. "Genetic Mating and Sex Ratio of Fig-Associated Wasps," with E. Allen Herre from August 1, 1998 to November 1, 1998.
- Steven M. Phelps, Predoctoral Fellow, University of Texas, Austin. "Vestigial Preferences in the Tungara Frog and its Congener: Field Tests of Neural Network Predictions," with A. Stanley Rand from May 15, 1998 to August 14, 1998.
- Kendra Pyle, Short-Term Fellow, University of Pennsylvania. "Vocal Communication and the Maintenance of Social Relations in Coatis, Nasua narica," with William Weislo from June 1, 1998 to August 28, 1998.
- Sandra Ramirez, Short-Term Fellow, University of Costa Rica. "Large Seed Size in *Gustavia superba*: A Dispersal Reward or an Establishment Requirement," with S. Joseph Wright from May 15, 1998 to August 15, 1998.
- Oris Sanjur, Visiting Scientist, Rutgers University. "Molecular Systematics of Domesticated and Wild Species of Cucurbita," with Dolores Piperno from April 1, 1998 to May 31, 1999.
- Renate Sponer, Short-Term Fellow, University of Copenhagen. "Phylogeography, Population Structure and Asexual Reproduction in the Viviparous, Cosmopolitan Brittle Star *Amphipholis aquamata:* A Multidisciplinary Approach to Studying Evolutionary Processes in Marine Invertebrates," with Harilaos Lessios from December 1, 1997 to February 28, 1998.
- Gerald Urquhart, Visiting Scientist, University of Michigan. "The Quaternary Environmental History of Nicaragua: Reconnaissance Phase," with Paul Colinvaux from October 1, 1997 to September 30, 1998.
- Karen Warkentin, Short-Term Fellow, University of Texas. "Phenotypic Plasticity in Hatching of Amphibian

Embryos," with A. Stanley Rand from May 18, 1998 to August 17, 1998.

- Zhijun Zhao, Visiting Scientist, University of Missouri, Columbia. "Environment Reconstruction in the Middle Yangtze Region, China: An Application of Phytolith Analysis," with Dolores Piperno from November 1, 1997 to October 31, 1998.
- Kirk S. Zigler, Predoctoral Fellow, Duke University.
 "Reproductive Isolation in the Genus Lytechinus (Echinoidea: Toxopneustidae)," with Harilaos Lessios from August 15, 1998 to August 14, 1999.
- Simon W. Zipperlen, Visiting Scientist, University of Sheffield. "Integrating Canopy and Hydraulic Architecture of Psychotria spp Shrubs Across Gradients of Light and Moisture Availability," with S. Joseph Wright and Robert Pearcy from November 1, 1997 to October 31, 1999.

Internships and Other Appointments

The Smithsonian offers internships and other special appointments to undergraduate and graduate students and to museum professionals. The home institution, a brief description of the project undertaken at the Smithsonian, and the dates of service are given wherever possible.

Archives of American Art

- Susan Benz, Master's Candidate, University of Maryland. Intern will process papers of artist Albert Frueh and create a finding aid for these papers. 2/17/98 through 5/1/98.
- Noriko Masuda, Master's Candidate, Boston University. Intern will assist with handling archival materials prior to shipment to Washington, D.C. 1/12/98 through 4/15/98.

Anacostia Museum

- Adrian Loving, Master's Candidate, University of the Arts. Education. Create written materials and models geared to the educational and outreach needs of elementary school students and teachers, while considering simple construction, economical, lightweight and recyclable materials, and physical accessibility. 6/1/98 through 8/7/98.
- Katie Sell, Bachelor's Candidare, College of William and Mary. Registrar. Cataloging objects found in the "Alice Bell Finlayson Collections." This includes research into miscellaneous museum files, spanning a period of 20 years, in order to locate relevant object-related information. The process will include provenance research, cataloging, numbering, photo documentation, and filing. 6/8/98 through 7/31/98.

Arthur M. Sackler Gallery/Freer Gallery of Art

- Ava Alkon, Bachelor's Candidate, Yale University. Education. Intern will assist with the ImaginAsia program for children. 6/22/98 through 9/1/98.
- Augusta Babson, Bachelor's Candidate, Williams College. Education. Intern will prepare educational materials for compliance with ADA. 6/2/98 through 7/28/98.
- Jennifer Carnahan. Intern will assist with the Imaginasia program for families and programs for educators. 2/19/98 through 6/30/98.
- Joyce Chow, Bachelor's Degree, Amherst College. Chinese Art. Assist curator of Chinese art with research for upcoming exhibits. 6/19/98 through 8/31/98.
- Renee Ferrara, Master's Candidate, Georgetown University. Islamic Art. Research on Persian collection and other Islamic materials for the print catalogue and installation. 1/12/98 through 5/30/98.
- Rose Garbarino, High School Student, Oakton High School. Assist with the family program, ImaginAsia. 8/4/98 through 10/1/98.
- Jennifer Greenhill, Bachelor's Candidate, University of California—Los Angeles. American Art. Intern will work for curators, archivists, conservators for an upcoming exhibit of Whistler prints. 1/12/98 through 3/20/98.
- Tania Haddad, Graduate, University of Virginia. Co-teach ImaginAsia, work with all facets of education department; assist with the development and implementation of educational public programs. 9/30/97 through 9/30/98.
- Franak Hilloowala, Master's Candidate, University of Arizona. Islamic Collection. Intern will work with the manuscript collection, compiling bibliographies on the collection. 6/8/98 through 7/31/98.
- Amelia Kaplan, Bachelor's Candidate, American University. Working in photography lab doing digital imaging, printing and other activities. 10/9/97 through 12/31/97.
- Amy Kim, Bachelor's Candidate, Duke University. Education. Intern will prepare descriptions of the Asian art slide collection for use by teachers. 7/6/98 through 8/14/98.
- Tomoko Kojima, Master's Candidate, American University. Public Affairs. Intern will assist with projects in the public affairs office. 7/6/98 through 12/31/98.
- Mallica Landrus, Master's Degree, University of Louisville. Research. Working on material for Freer rotation in Gallery 18. 8/4/98 through 8/30/98.
- LeighAnne McNamara, Bachelor's Candidate, State University of New York—Oneonta. Education. Assist in Imagin-Asia program for children and their adult companions. 9/8/98 through 12/8/98.
- Duc Tai Nguyen, Bachelor's Candidate, Capitol College. Library. Intern will assist with slide library projects. 7/6/98 through 8/14/98.
- Nora Niedzielski-Eichner, Bachelor's Candidate, University of Chicago. Education. Assist with family program Imagin-Asia. 8/3/98 through 8/26/98.

Nicole Parfitt. Education. Intern will assist with the Imagin-Asia family program. 2/23/98 through 6/26/98.

- Sarah Quainton, Bachelor's Degree, Trinity University. Research for sources of Asian film, to be carried out on the Internet and the Library of Congress. Assistance in production of Asian film screenings. 10/1/97 through 6/1/98.
- Laura Rodini, Bachelor's Candidate, Providence College. Intern will learn about shop operation, including buying, selling, product development and design. 5/18/98 through 8/31/98.
- Alaoui Saida, Master's Candidate, George Washington University. Islamic Art. Intern will research the Charles L. Freer and private collections made in Paris in the early 1900s. 7/8/98 through 8/14/98.
- Theresa Sotto, Bachelor's Degree, St. Mary's College of Maryland. Education. Intern will assist public programs coordinator in producing summer films and concerts, and assist the photo dept. with the digitizing of the Asian collection. 6/9/98 through 8/27/98.
- Cara Starke, Bachelor's Candidate, Cornell University. Education. Intern will assist with the ImaginAsia program. 6/29/98 through 9/1/98.
- Kristina Stephens, Bachelor's Candidate, George Washington University. Photography. Organizing transparencies, printing, helping photographers in the studio. 1/15/98 through 5/15/98.
- Marinita Sciglitz, Bachelor's Degree, University of Rome. Intern will learn Chinese mounting techniques and will join the PritzRaff Paintings conservation project. 5/11/98 through 11/13/98.
- Rhoya Tocco, High School Student, West Nottingham Academy. Education. Intern will research and write descriptions for slides to be distributed to educators. 7/13/98 through 8/14/98.
- Kei Tokuhisa, Master's Degree, University of the Sacred Heart. Research towards the exhibitions "Arts of Kyoto in the Age of Koetsu," and "Japanese Buddhist Art," and research for publications. 1/5/98 through 12/31/98.
- Rebecca Whitin, Bachelor's Candidate, Smith College. American Art. Produce an edition of correspondence relevant to the portrait of Theodore Roosevelt by Gari Melchers. 9/8/98 through 12/18/98.
- Diana Yi, Bachelor's Candidate, Rutgers. Intern will assist Chinese Art curator with exhibit planning and responding to public inquiries. 6/1/98 through 8/2/98.

Center for Folklife Programs and Cultural Studies

- Barbara Barnett, Bachelor's Candidate, University of Maryland. Folklife Festival. Intern will work for with music groups, assisting with the Wisconsin Program at the 1998 Smithsonian Folklife Festival. 6/8/98 through 8/15/98.
- Lucy Bates. Folklife Festival. Development of programs for the 1998 Folklife Festival, including educational materials and a video documentary based on research from the "Cul-

ture and Environment in the Rio Grande Basin" project. 2/2/98 through 4/27/98.

- Jessica Becker. Bachelor's Degree, University of Wisconsin. Folklife Festival. Intern will be transcribing interview tapes that will be used for a Folkways release of South Texas Conjunto Music. Intern will work closely with CD producers on the logistical aspects of the release. 9/21/98 through 11/27/98.
- Deanna Bickerstaff, Master's Candidate, George Washington University. Archives. Intern will assist with a Web page for the 1998 Folklife Festival, and assist with researching and cataloging in the archives. 6/3/98 through 8/15/98.
- Ryan Boeding, Bachelor's Degree, College of Wooster. Folkways. Developed a system for tracking use of promotional CDs for Smithsonian Folkways. 6/15/98 through 8/15/98.
- Andy Bryan, Bachelor's Candidate, Boston University. Intern will assist with the Baltics Program for the 1998 Folklife Festival. 6/1/98 through 7/16/98.
- Rhona Campbell, Bachelor's Degree, Oberlin College. Folkways. Managed publicity and sales for Smithsonian Folkways at a Sterling Brown poetry conference and worked with promotional materials for Folkways and its artists. 9/1/98 through 5/31/99.
- Wendy Clupper. Intern will study the potential for staging national identity through performance (focus will be the Philippines program at the 1998 Folklife Festival). 6/15/98 through 7/15/98.
- Laura Collins, Bachelor's Candidate, Bucknell University. Intern will assist with the crafts exhibit in the Wisconsin program at the 1998 Folklife Festival. 5/20/98 through 8/15/98.
- Susan Dyer, Bachelor's Candidate, Hamilton College. Office of Public Affairs/ Folklife Festival. Intern for Folklife Festival, working with the Office of Public Affairs on festival publicity, press releases, and targeted mailings. Intern will assist with the 1998 Folklife Festival. 5/26/98 through 8/15/98.
- Ian Eagleson, Bachelor's Degree, Oberlin College. Folkways. Researching archival material and assisting in the production of recordings. 10/27/97 through 1/31/98.
- Katherine Eldridge, Bachelor's Candidate, W. Virginia Wesleyan. Desktop Publishing, scanning and digital manipulation for the Folklife Festival. 1/5/98 through 1/30/98.
- Pilapa Esara, Master's Candidate, Brown University. Intern will assist the production team with the documentation of the 1998 Folklife Festival. 7/18/98 through 8/24/98.
- Sarah Everett, Bachelor's Degree, Whitworth College. Folklife Festival. Intern will assist with the Baltics Program for the 1998 Folklife Festival. 6/1/98 through 7/16/98.
- Alistair Farrell. Folklife Festival. Worked on coordinating evening concerts at the festival, in addition to assisting with teacher seminars, children's activities, and cross-program sessions. 6/8/98 through 7/15/98.
- Meredith Forster, Bachelor's Candidate, Duke University. Intern will assist with the supervision of the Foodways par-

ticipants with the Wisconsin Program at the 1998 Festival of American Folklife. 5/26/98 through 8/15/98.

- Eric Gertner, Bachelor's Degree, Wesleyan University. Folklife Festival. Prepared materials for the Folklife Festival Web site and assisted with laying out the plan for the African Immigrant project's Web site. 6/15/98 through 7/15/98.
- Jennifer Graves, Bachelor's Candidate, VCU. Intern will assist the design team for the 1998 Folklife Festival. 6/1/98 through 7/18/98.
- Heather Harbaugh, Bachelor's Candidate, Bloomsburg University of Pennsylvania. Folklife Festival. Worked on Rio Grande/Rio Bravo Basin program for the festival, serving as an area coordinator. 5/18/98 through 7/31/98.
- Johan Horwitz, Bachelor's Candidate, Wesleyan University. Intern will assist with the preservation and organization of CFPCS archives. 5/21/98 through 8/21/98.
- Gisela Insuaste, Bachelor's Degree, Dartmouth College. Will work with Latin American Youth Center staff to document the D.C. Latino community. Will organize material and make selections for exhibit and will participate in exhibit installation. 8/5/98 through 12/4/98.
- Kristin Jansen, Master's Candidate, Georg August Universitat. Intern will aid with plans for the 1998 and 1999 Folklife Festivals, and conduct a follow-up on the African Immigrant program from 1997. 2/17/98 through 4/13/98.
- Melissa Jeffrey, Bachelor's Candidate, University of St. Andrews. Photographic and Web assistant with the Folklife Center Folklife Festival. 6/8/98 through 8/5/98.
- Ethan Johnson, Bachelor's Candidate, University of Michigan. Intern will conduct market research for Smithsonian Folkways Recordings. 6/30/98 through 8/13/98.
- Steffi Jost, Master's Candidate, University of Heidelberg. Worked with photo documentation in the archives and reorganizing archive materials. 3/16/98 through 4/10/98.
- Katherine Kowalski, Bachelor's Candidate, University of Notre Dame. Intern will assist with the 1998 Folklife Festival. 5/18/98 through 7/31/98.
- May Lee, Bachelor's Degree, Davidson College. Intern will assist with the Wisconsin Program at the 1998 Smithsonian Folklife Festival. 6/1/98 through 8/15/98.
- Lindsay Mayhood, Bachelor's Candidate, Colorado College. Intern will photograph Folklife Festival. 6/4/98 through 7/15/98.
- Heidi McKinnon, Bachelor's Candidate, University of New Mexico. Intern will conduct research for a program on the culture of the Rio Grande for the 1998 Folklife Festival. 6/1/98 through 8/7/98.
- Heidi McKinnon, Bachelors Candidate, University of New Mexico. Development of programs, educational materials and video documentary for the 1998–99
 Folklife Festival based on research from the "Culture and Environment in the Rio Grande Basin" project. 2/2/98 through 7/31/98.

- Kieran McManus, Bachelor's Degree. Assistant archiver at Folkways Archive. 9/8/98 through 12/31/98.
- Marla Mead, Bachelor's Candidate, University of Iowa. Intern will assist with the documentation of the 1998 Folklife Festival, as well as the production for two documentaries for the Festival. 6/15/98 through 8/14/98.
- Siv Kristin Ostlund, Bachelor's Degree, WWU. Intern will conduct research, write and edit publicity releases for Smithsonian Folkways Recordings. 7/1/98 through 8/26/98.
- Charles Paul, Bachelor's Candidate, University of Wisconsin— Madison. Worked on online Smithsonian Folkways catalogue and did audio file and encoding for Internet delivery. 6/1/98 through 8/1/98.
- Brian Pfeifer, Bachelor's Degree, Naropa Institute. Work with the music collection in the archives, primarily transferring reel-to-reel tapes of Pere Seeger material onto digital media. 6/1/98 through 8/30/98.
- Dagmar Pfensig, Master's Candidate, Washington University/FU Berlin. Intern will assist with the video documentation of the 1998 Folklife Festival. 6/1/98 through 7/30/98.
- Diana Robertson, Bachelor's Degree, University of California— Los Angeles. Development of programs for the 1998 Folklife Festival, including educational materials and a video documentary based on research from the "Culture and Environment in the Rio Grande Basin" project. 2/2/98 through 3/27/98.
- Sonya Salazar, Bachelor's Candidate, University of Missouri— Columbia. Folklife Festival. Worked on Rio Grande/Rio Bravo Basin program for the Festival, serving as an area coordinator. 5/18/98 through 8/21/98.
- Elizabeth Sheridan, Bachelor's Candidate, Wesleyan University. 6/1/98 through 7/9/98.
- Joanne Spafford, University of Utah. Audio/Visual. Worked with African Immigrant video material from the 1997 Folklife Festival program. 11/17/97 through 3/1/98.
- Christina Stensvaag, Bachelor's Candidate, Mary Washington College. Will conduct research for a publication and the Folklife Festival. 1/20/98 through 4/30/98.
- Annie Stone, Bachelor's Candidate, Kansas City Art Institute. Assist the design director with the Smithsonian Folklife Festival. 6/8/98 through 7/20/98.
- Natalie Swerye, Bachelor's Candidate, Colorado College. Intern will research and produce a program on the culture of the Rio Grande/Rio Bravo basin for the Folklife Festival. 6/1/98 through 8/7/98.
- Grace Wang, Master's Candidate, University of Michigan. Intern will assist with the "Pahiyas, A Philippine Harvest" for the 1998 Folklife Festival. 6/1/98 through 8/7/98.
- Barri Williams, Bachelor's Candidate, University of Maryland. Worked on coordinating evening concerts at the festival, in addition to assisting with teacher seminars, children's activities, and cross-program sessions. 6/1/98 through 7/15/98.

Center for Museum Studies

- Maria Alonso-Moreno, Montgomery College. Office of the Secretary. Assist in coordinating the Virgin Mary Conference. 2/25/98 through 5/15/98.
- Eliza Duerr, Bachelor's Candidate, West Chester University. Intern will assist with all aspects of the planning, coordinating and implementation of the eighteenth annual museum careers seminar. Intern will tabuluate evaluations and write final report. 6/2/98 through 7/31/98.
- Joy Foust, Montgomery College. Intern will work with the Workshop Series (Introduction to Visitor Studies) and work on Museum Studies database. 6/1/98 through 8/7/98.
- Kiyohito Hamada, University of Tokyo. Assist with coordinating CMS workshops. Conduct research on training and professional development, and research sources of community and corporate support. 1/6/98 through 3/6/98.
- Donna Weeks, Montgomery College. Research materials to be included in American Indian Museum Studies Program resource materials. 6/4/98 through 8/30/98.
- Danielle Winner, Bachelor's Degree, St Mary's College. Intern will aid with the Latino Graduate Training Seminar, 1998. 5/18/98 through 7/12/98.

Friends of the National Zoo

- Alison Emblidge, Bachelor's Candidate, Cornell University. Communications. Intern will write and research for Zoogoer magazine and assist with media relations. 6/1/98 through 7/31/98.
- Baiba Petersone, Bachelor's Candidate, Vidzeme University College. Public Affairs. Assist in Public Affairs office on a variety of projects. 9/21/98 through 12/11/98.
- Emily Schuster, Bachelor's Degree, Johns Hopkins. Communications. Intern will write and research for the Zoogoer magazine and assist with media relations. 6/8/98 through 9/30/98.
- Judy Tasse. Writer/editor in the Division of Exhibit Interpretation at the National Zoological Park. Includes researching, writing, and editing for a water exhibit scheduled to open in spring 2000. II/1/97 through II/30/98.

Hirshhorn Museum and Sculpture Garden

- Tracey Avant, Master's Degree, George Washington University. Education. Intern will assist with the research for and the development of didactic material for children and families for temporary exhibits at the Hirshhorn. 6/1/98 through 8/28/98.
- Elizabeth DiFebo, Bachelor's Candidate, Moravian College. Education. Gave numerous tours of the *George Segal Retrospective* exhibition, coordinated registration for the Writers' Workshop, "Using the Art of George Segal to Inspire Poetry," mailed applications to prospective interns as well as received, maintained, and managed summer inter-

nship applications, preparing and presenting the applications for final selection by museum professionals. 2/3/98 through 5/1/98.

- Victoria Durrer, Bachelor's Candidate, University of Maryland. Library. Worked in the library assisting with cataloging manuscripts and important documents. 6/1/98 through 8/28/98.
- Katherine Ebner, Master's Candidate, University of Oklahoma. Performed curatorial research for the Curator of Sculpture. 6/1/98 through 8/14/98.
- Portia Edwards, Bachelor's Candidate, University of California– Santa Cruz. Education. Research concerning postmodern deconstructionist theory relating to 2D art production. 4/6/98 through 6/15/98.
- Danielle Ezrin, Montgomery. Library. Intern will assist with library inventory and preservation needs. 7/22/98 through 8/31/98.
- Alice Farlowe, Bachelor's Candidate, University of Georgia. Performed curatorial research for future temporary exhibitions. 6/1/98 through 8/7/98.
- Sophie Fawcett, Bachelor's Candidate, Cambridge University, Trinity Hall. Education. Dissertation on the nature of private collections and the private collection in the public eye/arena. 8/24/98 through 9/24/98.
- Abigail Freeman, Bachelor's Candidate, Maryland Institute of Art. Conservation. Intern will assist the Sculpture Conservator with the summer cleaning and maintenence of the outdoor Sculpture Garden, the writing of condition reports, and structural repairs of objects. 6/8/98 through 8/28/98.
- Emily Hage, Bachelor's Degree, University of Maryland. Dept. of Public Programs/Curatorial Division. Research assistance. 9/9/98 through 12/31/98.
- Anna Herzlinger, Bachelor's Candidate, Haverford College. Education. Gave tours of the collections and special exhibition, organized education programs' report and researched and wrote training notes, on a future exhibition, for the docents. Volunteered with the conservation department to clean the outdoor sculpture. 6/1/98 through 8/15/98.
- Kimberly Kindelsperger, Bachelor's Candidate, University of Maryland. Research and observation of upcoming museum exhibitions, with a focus on Kiki Smith and Chuck Close in the "Directions" series. 1/20/98 through 5/29/98.
- Rachel Mayer, Bachelor's Candidate, Williams College. Education. Gave numerous tours of the special exhibitions Carlos Alfonzo and Directions: Tony Oursler, and the permanent collection, taught a four-week class, for children in conjunction with the Smithsonian Associates on the Hirshhorn's collection. Researched and prepared training notes for the docents on the Chuck Close exhibition, performed research on selected artists, assisted with press previews and volunteered with the conservation dept. to clean outdoor sculpture. 6/1/98 through 8/1/98.
- Laura Roulet, Bachelor's Degree, University of Maryland— College Park. Will be assisting Hirshhorn Museum contemporary curator Olga Viso. 9/24/98 through 6/30/99.

Heather Ruth. Curatorial. Performed curatorial research for temporary exhibitions. 2/5/98 through 5/3/98.

- Helen Schlabs, Bachelor's Candidate, Salem College. Conservation. Intern will assist the Sculpture Conservator with the summer cleaning and maintenence of the outdoor Sculpture Garden, the writing of condition reports, and structural repairs of objects. 6/8/98 through 8/28/98.
- Katharina Schmitt, Bachelor's Degree, Rheinische Friedrich Wilhelms Universtitat Bonn. Curatorial. Intern will assist with Touch for the Blind, and curatorial reseach. 6/4/98 through 6/5/99.
- Maria Shaw-Martos, Master's Degree. Registrar. Intern will work with the Tony Oursler exhibit and catalog/data reconciliations of the permanent collection. 6/22/98 through 9/3/98.
- Theresa Solury, Bachelor's Degree, University of Maryland— College Park. Conservation. Working in the conservation department to learn basic conservation techniques for various mediums. 9/17/98 through 5/31/99.
- Amy Stimmel, Bachelor's Candidate, University of California—Davis. Library. Library/Education Intern. 9/17/98 through 12/4/98.
- Meghan Tierney, Bachelor's Candidate, Smith College. Cataloguing of Olga Hirshhorn Photography Collection. 9/8/98 through 12/17/98.
- Amy Wolfe, Master's Candidate, University of Florida. Public Affairs. Worked in the Public Affairs Department, assisted with press previews, wrote press releases and announcements, and worked at the Information Desk for Art Night Programs. 6/1/98 through 8/1/98.

International Center

- Adam Goncalves, Bachelor's Candidate, George Washington University. Institute for Conservation Biology. Intern will research and maintain a listserve for the Center and will help with logistics for conferences. 1/20/98 through 5/15/98.
- Eric Holmes. Design Web page for SI-MAB; assist in updating mailing list, and help prepare for symposium. 7/30/98 through 12/31/98.
- Omotayo Orunla, High School Student, St. Andrew High School. Intern will work to close out project files and prepare them to be transfered to the Archives. 6/30/98 through 7/31/98.
- Elizabeth Seeger, Bachelor's Candidate, University of Chicago. Intern will coordinate Johns Hopkins course on biodiversity and maintain ICB listserve. 6/29/98 through 9/11/98.

Institutional Studies Office

- Eric Conrad, Bachelor's Candidate, Colgate University. Intern will interview, track and enter data for the Amazonia Project. 5/20/98 through 8/5/98.

museum visitors and program participants. 6/8/98 through 8/25/98.

- Anne Kazimirski, Bachelor's Degree, Oxford University. Qualitative and quantitative studies of museum visitors and program participants. 10/23/97 through 12/19/97.
- Eric Lagdameo, Montgomery College. Intern will assist with evaluation of Montgomery College Humanities Institute. 2/18/98 through 5/15/98.
- Susan Timberlake, Master's Candidate, Duke University. Qualitative and quantitative studies of museum visitors and program participants. 5/26/98 through 8/21/98.
- Kaya Townsend, Bachelor's Degree, McGill University. Qualitative and quantitative studies of museum visitors and program participants. 2/2/98 through 1/5/98.
- Hilary Welbourne, Bachelor's Degree, Lycoming College. Aiding in development and research of exhibits at the various Smithsonian museums. 9/14/98 through 12/18/98.
- Kathryn Wycoff, Master's Candidate, University of Chicago. Qualitative and quantitative studies of museum visitors and program participants. 7/20/98 through 9/25/98.

National Air and Space Museum

- Sarah Akridge, Bachelor's Candidate, Duke University. Exhibits. Intern will assist with repairing and maintaining devices for the How Things Fly gallery. 7/6/98 through 8/31/98.
- Alonso Alverez, Bachelor's Candidate, Amherst College. Education. Intern will assist curators in the Dept. of Space History in the preparation of curatorial files documenting the provenance and history of space history artifacts. 6/1/98 through 8/14/98.
- Naruemon Boonsom, Bachelor's Candidate, University of the District of Columbia. Exhibits. Intern will assist with reconfiguring, fine-tuning, and maintaining devices in the How Things Fly gallery. 6/1/98 through 8/14/98.
- Dan Cohen, Bachelor's Candidate, ESTACA—Paris. Restoration. Intern will assist with the restoration of the Aichi M6AI, Seiran. This will include work in all phases of aircraft restoration. 6/2/98 through 8/19/98.
- Candace Cottrell, Bachelor's Candidate, West Virginia University. Archives. Intern will assist with the creation of databases that will contribute to the preservation and conservation of the photographic collection at NASM. 6/10/98 through 8/14/98.
- Jacqueline Crousillat, Associate's Candidate, Montgomery College. Photography. Researching photo collections. 9/10/98 through 12/22/98.
- Andres de Orleans-Borbon, Bachelor's Candidate, Polytechnic University of Turin (Italy). Development. Will learn basic aircraft restoration at the Garber facility. Will assist with the Capital Campaign. 8/3/98 through 8/28/98.
- James Hakala, Master's Candidate, George Washington University. Education. Intern will assist Explainers Coor-

dinator with scheduling and managing the program in the coordinator's absence. 6/1/98 through 8/14/98.

- Jim Hakala, Bachelor's Degree, George Washington University. Education. Help develop an explainers program for the How Things Fly gallery. 1/12/98 through 4/16/98.
- Michael "Scort" Harris, Bachelor's Candidate, University of Maryland—College Park. Public Affairs. Aiding in media relations and the coordination of media visits and events. Also includes writing pitch letters, making telephone calls, and possibly writing articles for publication. 9/24/98 through 12/31/98.
- Laramie Hickey-Friedman, Master's Candidate, University of Delaware. Conservation. Intern will assist with examining and treating spacesuits, aircraft components, and space history artifacts. 6/1/98 through 8/14/98.
- Tara Kelly, Bachelor's Candidate, George Washington University. Education. Intern will assist with the development of a museum overview sheet for distribution to teachers and schools. 6/1/98 through 5/31/99.
- Wakako Komoto, George Mason University. Education. Intern will help establish physical and intellectual control of archival collections. Intern will write descriptions, arrange and rehouse collections, and perform preservation tasks. 6/1/98 through 8/14/98.
- Donald Langhorne, Bachelor's Candidate, Texas Southern University. Education. Intern will assist the Student Services Coordinator with the management of the intern program. 6/1/98 through 8/14/98.
- Michael Margolius, Bachelor's Candidate, University of Maryland—College Park. Intern will rehouse aircraft and aircraft component technical manuals. 6/16/98 through 8/15/98.
- Selena Neighbours, Bachelor's Candidate, Johns Hopkins. Space History. Intern will prepare descriptive materials related to the theme of the planned Explore the Universe gallery. 6/1/98 through 8/14/98.
- Garrett Rooney, Bachelor's Candidate, Rensselaer. Exhibits. Intern will assist with reconfiguring, fine-tuning, and maintaining devices in the How Things Fly gallery. 6/1/98 through 8/14/98.
- Lela Sanchez, Florida State University. Intern will assist in the Explainer's Program in the How Things Fly gallery. 6/1/98 through 8/7/98.
- Hyesun Suk, Master's Candidate, George Washington University. Exhibits. Intern will create signage for the museum with the exhibits dept. and will assist with the design of NASM Web pages. 6/1/98 through 8/14/98.

National Museum of American Art

Allison Aldrich, Master's Candidate, George Washington University. Allison will begin the first section interning in the development office. She will then rotate to the registrat's department for the second half of the semester. 9/8/98 through 4/23/99.

- Bethany Baran, Master's Candidate, American University. Bethany will begin her internship at the Renwick Gallery, working with the Curator, Kenneth Trapp. She will then intern with the education department. 9/8/98 through 4/23/99.
- Jessica Braiterman, Bachelor's Degree, College of Notre Dame of Maryland. Jessica will be in the education department for the first half of the internship. She will then work in the design and production department. 9/8/98 through 4/23/99.
- Gretchen Dematera, Master's Candidate, H. John Heinz III School of Public Policy. Development. Intern will research Capital Campaign prospects for NMAA. 6/1/98 through 8/7/98.
- Christine Fisher, Montgomery College. MNI. Intern will prepare digital images for the NMAA Web site in the Office of New Media Iniatives. 2/6/98 through 4/24/98.
- Robert French, Master's Candidate, Southern Methodist University. Robert will begin the first half of the semester with Andrew Connors and Helen Lucero in the curatorial department. He will then rotate to the education department for the second half. 9/8/98 through 4/23/99.
- Katherine Fritzsche, Bachelor's Degree, Lawrence University. Kate will begin interning with Katherine Manthorne and assist with the *American Art Journal*. She will spend the second half of the semester with Bob Johnston in External Affairs. 9/8/98 through 4/23/99.
- Courtney Hamrick, Bachelor's Degree, Randolph-Macon Women's College. Registrar. Intern will assist with exhibitions and loans, collection storage, permanent collection documentation, packing and shipping, and rights and reproductions. 6/5/98 through 7/31/98.
- Sanders Hearne, Bachelor's Degree, Davidson College. Curatorial. Intern will research the NMAA Archives on the time that George Catlin spent in the NMAA and the resulting first exhibition held at the SI. 6/5/98 through 7/31/98.
- Sarah Horowitz, Bachelor's Candidate, Wellesley College. Renwick Gallery. Intern will conduct research for an exhibition on U.S. Navy silver. 5/26/98 through 7/31/98.
- Emily Krueger, Bachelor's Candidate, University of North Carolina—Chapel Hill. Intern will assist with the Nebraska Teacher Workshop, as well as developing Web applications. 6/5/98 through 7/31/98.
- Melissa Love, Bachelor's Candidare, Wellesley College. Registrar. Intern will assist with exhibitions and loans, collection storage, permanent collection documentation, packing and shipping, and rights and reproductions. 6/5/98 through 7/31/98.
- Christopher Lynch, Bachelor's Degree, Bowdoin College. Design and Production. Assist in the design and production office as a lighting intern. The intern will learn the role lighting plays in the display of artwork, learn a variety of different lighting techniques for different types of art and architecture. 8/13/98 through 9/25/98.
- Alison MacAdam, Bachelor's Candidate, Wesleyan. Public Affairs. Intern will assist with media events, requests from the

press, film crews, and promotion of public programs. 6/5/98 through 7/3/98.

- Joanna Marsh, Bachelor's Candidate, Cornell University. Intern Programs. Intern will research objects in the traveling folk art show in preparation for the annotated labels, and will research proposed acquisitions. 6/5/98 through 7/31/98.
- Bethany Martin, Bachelor's Candidate, Smith College. Design. Intern will assist with the production of the graphics for three exhibitions, and assist with preparations for future exhibitions. 6/5/98 through 7/31/98.
- Dorinna Mendoza, Bachelor's Candidate, Stanford University. Dorinna will spend the first half of her internship with the registrar's department. She will spend the second part with Curator Lynda Hartigan. 9/8/98 through 4/23/99.
- Barbara Palley, Bachelor's Candidate, University of Virginia. Education. Intern will assist with the prepartion of educational materials for the "Gold Rush" exhibit and assist with the related Web page. 6/5/98 through 8/21/98.
- Jina Park, Master's Candidate, Graduate School of Hong-Ik University. Jina will begin in the registrar's department interning in a variety of offices. She will spend the second half of the semester with George Gurney in the curatorial department. 9/8/98 through 4/23/99.
- Juan Rivera, Master's Candidate, Fashion Institute of Technology. Development. Intern will work with corporate sponsors for Latino initiatives taking place over the next five years. 6/1/98 through 8/7/98.
- Timothy Rutti, Bachelor's Candidate, University of Arizona— Tuscon. Design and Production. Intern will assist with the creation of a database, photography and digitization of photos for the nineteenth-century frame documentation and storage project. 6/5/98 through 7/31/98.
- Michael San Filippo, Master's Degree, Middlebury College. Advanced-level graduate internship at NMAA. 1/12/98 through 4/24/98.
- Suzanne Schairer, Bachelor's Degree, University of Chicago. Suzanne will start her internship with the Deputy Director, Charles Robertson. Depending on the scope of the project, she may remain there for the remainder of the semester. 9/8/98 through 4/23/99.
- Richard Sorenson, Master's Candidate, American University. Richard will begin interning with Therese Heyman in the curatorial department. He will then move to the Renwick and intern with the Curator, Kenneth Trapp. 9/8/98 through 4/23/99.
- Bianca Sparks, Bachelor's Candidate, Brown University. Intern will research Latino artists, assist with the drafting of object labels, and coordinate photographic and conservation requests. 6/1/98 through 8/7/98.
- Hillary Spencer, Master's Candidate, American University. Hillary will spend the first part of the internship in the design and production office. She will then move to the development office. 9/8/98 through 4/23/99.
- Adrianne Stone, Bachelor's Candidate, Wake Forest University. External Affairs. Intern will assist the Chief of Exter-

nal Affairs with product development. 6/5/98 through 7/31/98.

Elizabeth Wierenga, Master's Candidate, Wayne State University. Elizabeth will begin interning with Joann Moser in the curatorial department. She will then intern with Richard Murray, Curator of the Abbott Handerson Thayer exhibit. 9/8/98 through 4/23/99.

National Museum of African Art

- Molly Barnes, Bachelor's Degree, University of North Carolina— Chapel Hill. Library. Intern will contribute to the update of African terminology in Art and Architecture Thesaurus. 3/2/98 through 7/10/98.
- Claudia Brittenham, Bachelor's Candidate, Yale University. Intern will compile a package of information on all objects in the permanent collection. 6/1/98 through 7/24/98.
- Gina Cabrera, Bachelor's Candidate, University of Virginia. Intern will work with the Eliot Elisofon photographic office. 6/1/98 through 9/7/98.
- Jennifer Chow, Bachelor's Candidate, University of Virginia. Education. Intern will assist with the development of educational materials for the activity room for the "Olowe of Ise" exhibit. 6/15/98 through 8/21/98.
- Marsha Ford, Bachelor's Candidate, University of Maryland— College Park. Archives. Compile and catalog collection of papers donated by Constance Stuart Larabee. 9/8/98 through 11/13/98.
- Marian Gilbride, Bachelor's Degree, University of London— SOAS. Education Dept. Research on the Power and Identity exhibit—prepared for the use of docents. 9/28/98 through 12/4/98.
- Denise Hatcher, Bachelor's Candidate, Illinois State University. Intern will research new African art terms for use in the NMAFA Archives and Library. 6/1/98 through 8/7/98.
- Michael Miller, Master's Candidate, California State University— Fullerton. Intern will monitor Olowe exhibit activity room and assist with various research projects associated with other exhibitions. Intern will also facilitate teacher/student workshops and tours. 4/16/98 through 6/19/98.
- Tomoko Yagi, Master's Degree, George Washington University. Education. Intern will assist curator and write a grant proposal. 1/12/98 through 4/18/98.

National Museum of American History

- Carrie Alcorn, Bachelor's Candidate, Smith College. Social History. Documenting the users of women's dresses in the period costume collection 1800–1824. 9/8/98 through 12/17/98.
- Melissa Andrews. Public Services. Intern will research the development of women as consumers and that market, with a focus on weddings and rules of etiquette. 6/29/98 through 8/29/98.

- Denver Applehaus, Bachelor's Candidate, Georgetown University. Research for the Nobel Prize 2000 Project. 1/23/98 through 12/31/98.
- F. Juliette Arai, Master's Candidate, University of Maryland— College Park. Archives. Intern will process the Carvel Ice Cream and Krispy Kreme Doughnut Corporation records. 6/1/98 through 8/28/98.
- Jennifer Atkinson, Bachelor's Candidate, University of California—Santa Barbara. Cultural History. Intern will assist with the production of "Encuentros: Latino America at the Smithsonian." 6/23/98 through 8/28/98.
- Heather Bain, Bachelor's Candidate, Centre College. Domestic Life. To assist with research on the Ipswich House exhibit at the National Museum of American History. 1/5/98 through 1/13/98.
- Stacy Baird. Smithsonian Without Walls. Intern will provide research support for Revealing Things, an online exhibit about the material culture of personal possesions. 11/17/97 through 4/1/98.
- Maurita Baldock, Bachelor's Degree. Archives. Intern will assist in the Archives at NMAH, helping with the advertising of the history collections. 3/2/98 through 8/31/98.
- Nicole Barnard, Bethel College. Intern will assist a graduate research fellow with research for doctoral thesis on New York City. 2/9/98 through 4/30/98.
- Kristin Bauersfeld, Master's Degree, University of Pittsburgh. Photographic History. Intern will research industrial photography and assist with planning for an exhibit on photography and motion. 5/11/98 through 8/31/98.
- Melanie Beederman, Bachelor's Candidate, American University. Social History. Intern will assist with collection, exhibition, and research work in the Reform Movement collection. 5/20/98 through 8/21/98.
- Shannon Bell, Bachelor's Degree, University of California Berkeley. Costume. Intern will research Hispanic designers Luis Extevez an Antonio de Castillo's influence on American fashion. 6/1/98 through 8/7/98.
- Suzanne Bell, Master's Candidate, USM. Internships and Fellowships. Use collections at the National Archives and Library of Congress and collect, transcribe, and collate data on cotton gin manufacturers on microfilm and original media. 3/30/98 through 5/29/98.
- Katricia Bennett, Bachelor's Candidate, Howard University. Intern will explore the contemporary constructions of race and culture, and examine the designations of racial categories in the 2000 census. 6/1/98 through 8/7/98.
- Shannon Berry, Master's Candidate, University of Missouri— Columbia. Costume and Textiles. 6/8/98 through 7/9/98.
- Tad Blacketer, Bachelor's Candidate, Knox College. To assist a fellow in researching silent Western films. This involves researching archival film stock and newspapers form the turn of the century. 9/16/97 through 12/19/97.
- Janae-Sharee Breiner, Bachelor's Degree, Appalachian State University. Cultural History. Research on artifacts in the Cultural History Collections, as well as on a specific

athlete's acheivement within the social context of the period for an exhibition. 6/1/98 through 8/7/98.

- Christopher Brown, Bachelor's Candidate, Bowie State University. Computer Science. Intern will assist with help calls and networking in the computer service dept. 6/8/98 through 8/31/98.
- Corey Tronnier Brown, Bachelor's Candidate, University of the South. Intern will assist the "Rock and Soul" team and will research the history of music in Memphis. 5/26/98 through 8/8/98.
- Craig Patrick Campbell, High School Student, Good Counsel High School. Intern will help the numismatics department catalogue and organize Confederate Civil War currency by maker, type of paper, series, etc. 7/13/98 through 6/15/98.
- Nathan Campbell, Master's Candidate, University of Missouri—Columbia. Social History. Intern will research the cultural meaning of "home" in America for the exhibition "After the Revolution." 6/1/98 through 8/7/98.
- Dana Caplan, Bachelor's Candidate, Smith College. Archives Center. Princeton Posters research project. 9/8/98 through 12/17/98.
- Eric Chin, Bachelor's Candidate, University of California— San Diego. Aid in the research of project concerning advertising in America; work in SI libraries and Library of Congress obtaining necessary resources. 9/17/98 through 12/4/98.
- Gina Cincotta, Bachelor's Candidate, University of Notre Dame. External Affairs. Coordinating a project to develop a licensed museum product to be sold in the gift shop. Will work with curatorial staff and assist with special events and public relations work. 8/25/98 through 12/9/98.
- Christy Coleman, Bachelor's Candidate, Skidmore College. Intern will conduct a 1910/1920 census search for women working for the California Perfume Company, and assist with updating the Intern Orientation Handbook. 6/15/98 through 8/15/98.
- Josephine Cooper, Bachelor's Candidate, Portland State University. Study coronary mortality in the twentieth century due to heart attacks (w/o a stroke) with an emphasis on cases since 1948. 10/3/97 through 12/3/97.
- Randall Craft, Bachelor's Candidate, Georgetown University. Research for the Nobel Prize 2000 project. 1/29/98 through 6/1/98.
- William Crane, Bachelor's Candidate, George Washington University. Research housing development and gender issues in the United States. 10/9/97 through 12/31/97.
- Elwyn Crawford, Bachelor's Candidate, Smith College. Archives Center. Researching part of the Scurlock Studio Collection. 9/8/98 through 12/18/98.
- Emily Crow, Bachelor's Candidate, University of the South. Intern will assist with production of Blue Guitar exhibit, and CD of Native American women's music. 5/27/98 through 7/24/98.
- Jose Delannoy-Pizzini, University of Puerto Rico. Archives Center. To learn about care for archival audiovisual

materials, including film, video and audio tapes. 10/6/97 through 11/28/97.

- Laura Diener, Bachelor's Candidate, Vassar College. Costume Conservation. Work with collection of WWI women's uniforms in photography, cataloging, rehousing, and conservation. 6/10/98 through 8/28/98.
- Patricia Donnellan, Bachelor's Candidate, University of Michigan. Information Technology. Intern will assist with the Computerworld/Smithsonian Award Program. 5/11/98 through 8/7/98.
- Kevin Donovan, Bachelor's Candidate, Mary Washington College. Intern/Fellows Office. Conduct newspaper research at Library of Congress. 8/25/98 through 12/3/98.
- Antoinette Douglas, Montgomery College. Intern will assist with Duke Ellington program. 2/18/98 through 5/15/98.
- Styron Douthit, Master's Candidate, University of Central Oklahoma. Archives. Intern will gain experience with processing, describing, safeguarding and managing oral history collections. 3/16/98 through 7/31/98.
- Elizabeth Dunton, Bachelor's Candidate, Smith College. Social History. Assisting Harry Rubenstein in the Political History collection in the Department of Social History. Will assist in producing preliminary finding guide to Reform Movements collections. 9/8/98 through 12/18/98.
- Arna Edmundsdottir, Bachelor's Candidate, Montgomery College. Program Planning and Design. Learning the firsthand process of exhibition planning and design. Attaining a working knowledge of some of the technical skills required of designers, as well as an understanding of the need for critical thinking and the value of collaborative work. 9/9/98 through 12/9/98.
- Margo Edwards, Bachelor's Degree, Rice University. Social History. Intern will study American social history and assist with the maintenence and creation of exhibits. 2/17/98 through 5/29/98.
- D. Eric Ellis, Bachelor's Degree, Walla Walla College. Science, Information and Technology. Intern will be working with the solid-state artifacts and documents collection in the Department of Information, Science and Technology. 4/20/98 through 8/1/98.
- Rachel Erekson, Bachelor's Degree, Knox College. Social History. Researching twentieth-century Hispanic American designers, specifically Adolfo; participating in and researching other projects including the Gadsby Tavern program and a teacher's lounge; and assisting in organizing files and information for the archives. 9/8/98 through 11/25/98.
- Emily Filler, High School Student, Ovid-Elsie High School. Cultural History. Intern will assist with the production of the Smithsonian Jazz Masterworks Orchestra. 6/10/98 through 7/19/98.
- Natalia Fitzgerald, Bachelor's Candidate, University of Virginia. Complete two research notebooks on the medicaland popular-press-based coverage of the 1916–17 typhus epidermic. She will also familiarize herself with aspects of the Vidal exhibition process. 6/17/98 through 7/31/98.

- Douglas Flandro, Bachelor's Degree, Brigham Young University Office of Public Services. Intern will assist with production and execution of public programs, review and amend existing PR databases, and undertake tasks related to exhibit maintenance and production. 3/16/98 through 12/30/98.
- Jessica Flintoft, Bachelor's Candidate, Cornell University. Domestic Life. Assist with projects in the Division of Domestic Life. Will study punchboards, petty gambling games, and their place in American culture. 1/26/98 through 5/15/98.
- Emily Forester, Bachelor's Candidate, Wesleyan University. Program in African American Culture. Intern will research the socioeconomic status of contemporary African American communities. 6/1/98 through 7/31/98.
- Elliot Freeman, Bachelor's Candidate, George Washington University. Research on silent Western films, especially those directed by Cecil B. deMille. 10/14/97 through 12/12/97.
- David Georgen, High School Student, George C. Marshall High School. Electricity and Modern Physics. Intern will place information gathered by the Chips program on the Web. 6/25/98 through 12/31/98.
- Matt Gernstein, Master's Canididate, George Washington University. Public Services. Intern will assist with writing papers, research, fact checking and other tasks as they relate to the book *Lies Across the Landscape*. 5/18/98 through 8/31/98.
- Christina Glengary, Bachelor's Degree, American University. Archives. Intern will conduct research on French organizations that made posters during WWI and WWII. 2/12/98 through 5/1/98.
- Rebecca Gordon, Bachelor's Candidate, Smith College. Social History. Research the social history of museum artifacts and archives. 9/8/98 through 12/17/98.
- Anna Gorski, Bachelor's Candidate, University of California Santa Cruz. Research on perceptions of Mexico and Mexicans at the turn of the century. 4/1/98 through 6/15/98.
- Jay Grinstead. Assist with research and collections on the National Museum of Industrial History project. 9/30/97 through 4/1/98.
- Sarah Grogan, Bachelor's Degree, Connecticut College. Cultural History. Intern will assist with a documentary on the history of American wire making and with the production of a book on American Indian history. Intern will also assist with the production of a concert of Native American music. 11/29/98 through 7/29/98.
- Heidi Hackford, Doctoral Candidate, American University. Science, Medicine and Society. Preliminary work on the Bodyworks exhibition. 1/26/98 through 3/1/99.
- Brian Hairston, Bachelor's Candidate, Hampton University. Intern will explore the sociology and culture of athletics amoung Black Americans. 6/t/98 through 8/8/98.
- Kate Halamay, Bachelor's Candidate, Smith College. Social History. Researching the reasons behind the dramatic change in fashion between 1790 and 1820 in America (in the costume collection of NMAH). 9/8/98 through 12/17/98.

- Kia Hall, Sarah Lawrence College. Dept. of African American History and Culture. Intern will analyze comtemporary Black literary themes in the U.S., South America and Africa. 6/1/98 through 8/7/98.
- Peter Hannah, Bachelor's Candidate, University of California— San Diego. Cultural History. Sports and Leisure History: Background research and some basic data entry on history of exercise and exercise machines in the U.S. Involves research on inventors, patents, sports, gymnasiums, body images, and medical practice. 9/15/98 through 12/5/98.
- Thomas Harbison, Bachelor's Candidate, Duke University. Lemelson Center. Intern will research potential "Innovative Lives" presenters, help develop "Meet the Inventor" for the robot docent program and work in the Hands on History room. 6/1/98 through 7/31/98.
- Casey Hatton, Bachelor's Candidate, University of California— Santa Cruz. Assisting a fellow in the writing of *Lies Across* the Landscape: What Our History Markers, Memorials, and Museums Got Wrong, working on many small research projects. Work involves typical historical scholarship on secondary sources at the Library of Congress as well as people, the census, internet resources, and historic sites. 9/23/98 through 11/8/98.
- Thomas Hayden, Bachelor's Candidate, Hiram College. Cultural History. Intern will assist with cataloguing in sports history. 7/6/98 through 7/31/98.
- Lynn Heidelbaugh, Master's Candidate, George Washington University. Domestic Life. Intern will conduct research on a variety of artifacts in support of upcoming exhibits and publications. 5/26/98 through 8/18/98.
- Christy Hessler, Bachelor's Candidare, Biola University. Interns and Fellows. Research on mail-order clothes from after the Civil War until about 1890. 9/4/98 through 12/17/98.
- Denise Hirsch, Bachelor's Candidate, Grinnell College. Science, Medicine, and Society. Working to identify and describe objects and research on aspects of the Cold War for a future exhibit. 6/8/98 through 8/15/98.
- Lydia Hoffman, Master's Candidate, University of North Carolina—Chapel Hill. Intern Office. Research Assistant to Director Patrick Ladden on NMAH annual report. 1/20/98 through 3/9/98.
- Karmael-Elana Holmes, Bachelor's Candidate, American University. African American Culture. Intern will research contemporary African American images on television. 6/1/98 through 8/7/98.
- April Howard, Bachelor's Degree, Syracuse University. Conduct research for the Duke Ellington Youth Festival. 2/1/98 through 4/28/98.
- Andrew Huebner. Public Services. Historical research on topics ranging from the U.S. Civil War to race relations to census data to New Mexico history, for James Loewen's upcoming book *Lies Across the Landscape.* 2/5/98 through 5/1/98.
- Lisa Hynek, Bachelor's Candidate, University of Northern Iowa. Hands-On-Science Center. Intern will assist with the development of a Star-Spangled Banner conservation ac-

tivity for the Hands-On Science Center. 6/9/98 through 7/10/98.

- Angela Nicole Irby, Bachelor's Candidate, Brigham Young University. Intern will research and write on behind-thescenes activities at NMAH for use in the NMAH Board Newsletter, do research on individuals under consideration for Board membership, and assist with Star-Spangled Banner Project. 5/4/98 through 8/14/98.
- Thomas Iurino. Program Planning. Intern will assist with the development of an exhibition. Intern will produce concept drawings and models showing how exhibit space will be used. 7/13/98 through 9/4/98.
- Christina Jacobs, Bachelor's Candidate, American University. Cultural History. Research for a variety of cultural history projects including, but not limited to an exhibit on Jim Henson and a documentary on historically Black colleges. 9/17/98 through 5/31/99.
- Jenny Jensen, Master's Candidate, University of Wisconsin— Eau Claire. Curatorial. Intern will research material on African American history for a book being produced by Lonnie Bunch. 6/8/98 through 8/14/98.
- Amy Johnson, Master's Candidate, George Washington University. Cultural History. Research for the piano project/exhibit. 2/9/98 through 7/31/98.
- Ruth Kastner, Doctoral Candidate, University of Maryland. Office of Fellowships. Nobel Prize exhibit and American Physical Society history exhibit for APS centennial. 9/8/98 through 3/31/99.
- Eric Kelderman. Cultural History. Intern will research the Duke Ellington Archives and prepare reconstructed scores. 5/20/98 through 9/30/98.
- Julie Kidd, Bachelor's Candidate, Columbia College. American Indians. Photograph and document Native American objects found in New Mexico. 2/2/98 through 3/1/98.
- Dara Kosberg, Bachelor's Candidate, Georgetown University. Intern will conduct video research for the Nobel Prize exhibit. 2/10/98 through 4/28/98.
- April Lambert, Bachelor's Candidate, Johns Hopkins. Intern will assist with research for Dr. Loewen's book *Lies Across the Landscape*. 6/4/98 through 8/15/98.
- Natalie Landreth, Master's Candidate, Harvard College. Intern will assist with project for repatriation of Bermuda shipwreck artifacts. 4/3/98 through 6/30/98.
- Deborah Levine, Bachelor's Candidate, Washington University. Medical History. Intern will research medical history and artificial organs. 6/1/98 through 8/7/98.
- Rachel Lille, Bachelor's Candidate, Georgetown University. Research for Nobel Prize 2000 project. 1/26/98 through 12/31/98.
- Debbie Lin, Master's Candidate, Buffalo State College. Paper Conservation. Gain paper conservation treatment skills on a variety of paper objects as she helps to prepare objects for exhibit and loan. 6/8/98 through 8/21/98.
- Antoinette Livramento, Bachelor's Degree, San Fransico State University. Education. Intern will develop the monthly pro-

gram for the series "Our Story." This will include the creation of educational materials. 6/22/98 through 8/28/98.

Nell Maceda, High School Student, The Madiera School. Social History. Sorting through a collection of political history items using a critical eye to identify the best pieces in the collection. 9/23/98 through 5/31/99.

Therese Malmstrom, Bachelor's Candidate, Vaxjo University. Intern will work with the Nobel Prize exhibit. 3/2/98 through 4/29/98.

Theresa Mannion, Master's Candidate, George Washington University. Director's Office. Intern will update and repackage strategic planning materials from 1993–94. Intern will work with the Capitol Campaign. 5/21/98 through 8/14/98.

Starr Marcello, Bachelor's Candidate, Wesleyan University. Intern will assist with research of documents and films for the project "Hollywood's Good Neighbor Policy and U.S.-Latin American Relations, 1938–1947." 6/2/98 through 8/24/98.

Kristine Mauger, Bachelor's Candidate, Malone College. Technology. Assisting in cataloging objects, arranging photographic files and doing research in the documentary collections. Will also be assisting with exhibit work. 9/14/98 through 12/17/98.

Jennifer Mayott, Bachelor's Degree, St. Michael's College. Program Planning and Design. To acquire range of graphic production experience through hands-on application. To assist in installation of CCN exhibit. 8/24/98 through 12/3/98.

Melissa McAteer, Bachelor's Candidate, Syracuse University. Internship and Fellowship Office. Design assistant during fabrication phase of "Communities in a Changing Nation." Junior designer in support of program planning and design. Experience with and exposure to various museum exhibitions. 5/18/98 through 8/21/98.

Heather McClung, Bachelor's Degree, Marshall University. Electricity/Modern Physics. Working with approximately 800 parents for various microchips. Entering all of the information from those parents into a database to be put on the World Wide Web. 6/3/98 through 6/30/99.

Leticia McDonald, Bachelor's Candidate, Saint Mary's College. Research Asst. to John McKiernan-Gonzalez researching medical records from the U.S./Mexico border, especially the El Pase entrance, during WWII. 9/14/98 through 12/16/98.

Lindsey Mellon, Bachelor's Candidate, Virginia Tech. Internship and Fellowship Office. Compiling, editing and designing the internship book for the National Museum of American History, "Intern Opportunities." 5/18/98 through 8/14/98.

Francine Mendoza, Bachelor's Candidate, Wheaton College. Cultural History. Assist with primary research of government documents, print media, and motion pictures for the "Hollywood's Good Neighbor Policy and U.S.–Latin American Relations 1938–1947" project. 1/27/98 through 5/15/98.

Lauren Mara Metcalfe, High School Student, Stonewall Jackson High School. Education and Public Services. Facilitation of lab and bench activities with the general public in the Hands-on Science Center. Organization and creation of complete "back-up" sets for 4–10 boxed activities. 7/27/98 through 8/29/98.

Hope Michelson, Bachelor's Candidate, Georgetown University. Research for the Nobel Prize 2000 project. 1/19/98 through 6/1/98.

Martha Miers, Bachelor's Candidate, Kenyon College. Public Services. Intern will conduct research at the Library of Congress, OSIA, and the National Archives. 5/27/98 through 8/7/98.

Bridget Miller, Bachelor's Candidate, Amherst College. Cultural History. Intern will research movie heroes from the turn of the century. 6/15/98 through 8/15/98.

Lance Miller, High School Student. Intern will code HTML for the National Chip Collection. 7/20/98 through 12/30/98.

Colin Moore, Bachelor's Candidate, Swarthmore College. Social History. Intern will research American political history. 6/29/98 through 8/8/98.

Emily Moses, Bachelor's Candidate, Georgetown University. Research for Nobel Prize 2000 exhibit. 1/27/98 through 6/1/98.

John Murphy, Master's Candidate, Simmons College. Working with the archives of the Lemelson Center for Innovation and Invention. 5/1/98 through 7/7/98.

Lee Nagao. Intern will work on a retrospective of the Nobel Prize and a few of its winners. 5/18/98 through 11/30/98.

Nisha Nair, Bachelor's Degree, Savannah College of Art and Design. Design Department. Assist the design department with the Star-Spangled Banner exhibit. 1/15/98 through 4/30/98.

Emily Neilan, Master's Candidate, Arizona State University. Working with the Numismatics collection on display for two weeks and with the Chip collection in Electricity and Modern Physics for four weeks. 6/16/98 through 8/1/98.

Catherine Nichols. Cultural History. Reorganize collection of 35mm slides and assist with photography of objects in the Hispanic collection. Also determine which religious objects are currently on exhibit. 6/09/98 through 8/15/98.

Gerald O'Grady. Graphics (exhibits). To acquire a full range of graphic production experience through hands-on applications. To assist in installation of CCN exhibits. Special interst in electronic graphics. 9/1/98 through 5/31/99.

Melissa Obegi. Smithsonian Without Walls. Intern will conduct research to support Revealing Things, an online exhibtition about the material culture of personal possessions. II/17/97 through 4/1/98.

Azania Olezene, Bachelor's Candidate, Hampton University. Intern will work in the graphics dept. on upcoming exhibits for NMAH. 5/11/98 through 8/30/98.

Michaela Orizu, Master's Degree, University of Massachussetts-Amherst. Research on Ellington's "Sacred Concerts." 11/3/97 through 12/20/97.

Corina Peters. Capital Programs. To assist in the research for and development of a newsletter for members of the NMAH Board. 2/10/98 through 5/1/98.

- Alexandra Petti, Bachelor's Degree, University of Massachusetts-Boston. Office of Interns and Fellows. Intern will conduct research for a project involving industrialization, photography, and consumer culture in the U.S. (1890–1930). Intern will work in various SI libraries and the Library of Congress. 4/27/98 through 5/29/98.
- Molly Pertit, Bachelor's Candidate, Western Kentucky University. Intern will take pictures and help design the internship book. 6/1/98 through 7/13/98.
- Steven Pickford, American University. Education. Train for and work in the Hands-on History room, assist in the management of the Hands-on History internship program, assist with development of primary source material for teachers, other duties as assigned. 6/8/98 through 8/18/98.
- Stanneke Pijpers, Master's Degree, Katholieke Universiteit Nijmegen. Intern will study the representations of New York City from 1890–1940. 6/7/98 through 8/2/98.
- Geoffrey Pippenger, Bachelor's Degree, Middlebury College. Researching issues in transnational identities, Pan-Amerian, etc. 10/13/97 through 1/31/98.
- Jamal Pope, Bachelor's Candidate, Howard University. Graphics. Doing a wide variety of tasks within the graphics office, including but not limited to installation, layout, and planning. 9/21/98 through 12/31/98.
- Daniel Presler, Bachelor's Candidate, George Mason University. Archives Center. Organize posters and other papers in the Ella Fitzgerald Collection. 9/16/98 through 12/4/98.
- Matthew Putnam, Bachelor's Candidate, Bridgewater State College. Examining American's view of the Mexican Revolution of 1910–1920. 2/2/98 through 5/15/98.
- Linda Quinn, Bachelor's Candidate, California State University—Northridge. Cultural History. Intern will assist with production of a CD of Native American women's music, various film projects, and a virtual exhibit on the Web. 6/1/98 through 7/7/98.
- Pamela Reese, Bachelor's Candidate, Weber State University. Intern will work with the Chip collection, researching patents and bio sketches. 3/30/98 through 6/12/98.
- Pamela Reese, Bachelor's Candidate, Weber State University. E&MP. Working with the I.C.E. Litigation Series 17 and creating a science service Web page. 8/1/98 through 12/1/98.
- Jen Reznick, Bachelor's Degree, College of William and Mary. Cultural History. Intern will research and create an annotated bibliography and verticle file of articles on New Orleans jazz. 6/15/98 through 12/31/98.
- Chris Ring, A.A. Candidate, Montgomery College. Digital Imaging. Assisting with digital imaging project. 9/1/98 through 12/14/98.
- Lori Robbins, Master's Candidate, University of Mississippi. Technology. Intern will research "Rock and Soul" exhibit and other popular culture projects. 6/1/98 through 7/31/98.
- Stacey Rolland, Bachelor's Candidate, Smith College. Science, Medicine and Society. Women's health organizations and the history of mammography: to identify and collect ephemera from women's health organizations from across

the country and to research the development of mammography technology. 9/8/98 through 12/18/98.

- Manfred Roppelt, Master's Candidate, Catholic University of America. Information, Technology and Society. Intern will work with the numismatics section helping sort Confederate paper money transferred form the Archives. 1/26/98 through 5/10/98.
- Alisa Rosen, Master's Candidate, George Washington University. Military History. Intern will process a collection of military artifacts. 6/3/98 through 9/30/98.
- Adam Sachs, Bachelor's Candidate, New York University. Cultural History. Assist in the production of the Smithsonian Jazz Masterworks Orchestra events in the summer of 1999. 7/7/98 through 7/21/98.
- Florencia Sader Sanchez. Cultural History. Learn essential skills for coordination of onsite and "in community" public programs by assisting in the production stage of "Encuentros" Latin America at the Smithsonian. 6/23/98 through 12/31/98.
- Tracie Sam, Master's Candidate, George Washington University. History of Technology. Assist with "Between a Rock and a Hard Place" exhibition and the National Museum of Industrial History affiliation project. 2/3/98 through s/10/98.
- David Sawyer, Bachelor's Degree, Eastern Michigan University. Cultural History. Research about the Washington statue by Greenough. 9/10/98 through 12/3/98.
- Kelly Scanlon, Bachelor's Candidate, College of William and Mary. Intern will assist with press releases and media awareness of museum exhibits and events. 6/1/98 through 8/31/98.
- Teresa Schiavone, Bachelor's Candidate, College of William and Mary. Program Planning and Design. Intern will produce measured drawings and scale models that demonstrate design intent for "American Legacies" and "Ipswich House." 5/26/98 through 8/6/98.
- Sally Schmidt, Bachelor's Candidate, Johns Hopkins University. Photographic Archives. Intern will caralog objects, enter data, and assist in search inquiries. 6/2/98 through 7/9/98.
- Harry Schmidt III, Bachelor's Candidate, Georgetown University. Research for the Nobel Prize 2000 project. 1/20/98 through 6/1/98.
- Maureen Selle. Public Services. Working in the American History Internship Office. 9/28/98 through 12/31/98.
- Anne Marie Sheeran, Bachelor's Candidate, Georgetown University. Social History. Intern will caralog and conduct research for reform movement projects. 5/26/98 through 8/26/98.
- Cindy Sherman, Bachelor's Candidate, Vassar College. Armed Forces History. Intern will assist with the cataloging, research and photography of a collection of women's WWII uniforms. 5/26/98 through 7/31/98.
- Michael Sheyahshe-Lell, Bachelor's Candidate, University of Oklahoma. Intern will work on a virtual exhibition for NMAH. 6/1/98 through 8/7/98.
- Christina Simms, Bachelor's Degree, Washington and Jefferson College. Cultural History. Intern will rehouse and

catalog sound recordings, and research social history of rock and soul. 6/22/98 through 12/31/98.

- Isha Singleton, High School Student, Madeira School. Helping to coordinate the National Museum of American History holiday celebration 1998. 9/23/98 through 12/28/98.
- Lara Smetana, Bachelor's Candidate, Georgetown University. Research for the Nobel Prize 2000 project. 1/26/98 through 6/1/98.
- Rebecca Smith, Bachelor's Candidate, Amherst College. Intern will assist Kathy Goodis with her Ph.D. dissertation "The Road to Consumption: Outdoor advertising and the American Cultural Landscape, 1917–1990." 6/4/98 through 8/31/98.
- Jennifer Snyder, Bachelor's Candidate, University of Wisconsin—Eau Claire. Archives. Intern will organize and rehouse the Maidenform collection. 6/1/98 through 8/21/98.
- Amy Sokach, Bachelor's Candidate, Appalachian State University. Archives. Intern will assist with cataloging, processing and organizing the Scurlock Studio Collection (including related registrarial and preservation work). 5/26/98 through 7/3/98.
- Alejandra St. Guillen, Bachelor's Candidate, Wesleyan University. Intern will look at African American museums and historical sites in the U.S. and analyze African American heritage tourism. 6/1/98 through 8/7/98.
- Nicole Stanton, Doctoral Candidate, University of Michigan. History of Technology. Intern will conduct research for the "American Legacies" exhibit and related publications. 5/26/98 through 9/7/98.
- David Stevens, Bachelor's Candidate, University of California—Berkeley. Intern will research contemporary contact between Africans and African Americans. 6/1/98 through 8/7/98.
- Denise Stockman. Conservation. Intern will participate in a pre-conservation internship and will develop an understanding of preservation while participating in the operations of the objects and paper laboratories. 5/20/98 through 1/20/99.
- Debra Striek, Bachelor's Candidate, University of California— Santa Cruz, Cultural History. Exhibit research and exhibit production of Wiley College, Jim Henson, and many other projects. 9/30/98 through 12/11/98.
- Jennifer Swenson, Bachelor's Candidate, University of Kansas. Health Sciences. Intern will research genetic studies in the health sciences dept. 5/25/98 through 7/25/98.
- Ryan Taggart, Bachelor's Candidate, California Polytechnical Intstitute—San Luis Obispo. Information Technology. Intern will give demonstrations on period printing. 6/29/98 through 8/30/98.
- Jeanne Tan, Bachelor's Candidate, University of Northumbria at Newcastle. Social History. Intern will conduct research for the article "Shape Changing Women, 1775–1815." 6/17/98 through 8/30/98.
- Charles Taragin, Bachelor's Candidate, University of Chicago. Social History. Intern will research the career of the twen-

tieth-century designer Freida Dianond. 6/22/98 through 8/28/98.

- Dorothy Tate, Master's Candidate, Appalachian State University. Internship and Fellowship Office. Intern will orient new interns, create and update an intern directory for musuem staff, and update "Intern Opportunities" for 1998– 1999. 5/20/98 through 7/3/98.
- Catharine Telfair, Bachelor's Degree, Macalester College. Costume Dept. Researching for the First Ladies dresses project. 10/14/97 through 3/29/98.
- Torrence Thomas, Bachelor's Candidate, Duke University. Archives. Intern will assist with the implementation of an electronics records management program in the Archives, with attention paid to the Duke Ellington project. 6/1/98 through 8/7/98.
- Felicia Thompson, Bachelor's Candidate, University of Maryland—Baltimore. Archives. Intern will help organize, process, and catalog the Scurlock Collection (includes registratial and preservation work). 5/26/98 through 12/19/98.
- Lisa Todd, Howard University. Social History. Collecting data concerning the dressmaking trade in Baltimore during 1850–1861. 7/1/98 through 12/31/98.
- Courtney Tollison, Bachelor's Candidate, Furman University. Social History. Intern will assist with research for the Reform Movements Collections. 6/1/98 through 7/31/98.
- Joshua Torrence, Master's Degree, Indiana University of Pennsylvania. Information Technology. Intern will work with Web page design and collection management. 2/17/98 through 5/17/98.
- Alyssa Townsend, Bachelor's Degree, University of Alaska-Fairbanks. Sports and Leisure. Rehousing of sports collection, including uniforms. Entry into museum database of said collection. Various research on rehoused objects. Preliminary research for an exhibit about Jim Henson. 9/1/98 through 12/31/98.
- Jennifer Ulrich, Master's Candidate, University of Texas— Austin. Lemelson Center. Intern will process archives dealing with invention and innovation, and will make them accesible in print and electronic form. 6/1/98 through 8/7/98.
- Asta Valentinas, Bachelor's Degree, Thomas Aquinas College. Medicine. Intern will conduct research for and organize the "Bodyworks" exhibit. 6/15/98 through 12/31/98.
- Shawn Vantree, Master's Candidate, American University. Intern will review resources and standards of service at NMAH. 6/1/98 through 8/7/98.
- James Vincent. Intern/Fellows Office. Assist with research about U.S. housing policy. 9/1/98 through 12/31/98.
- Stephanie Wahl. Conservation. Assisting with costume conservation projects as related to exhibit and loans and assist with general operations of costume and textile conservation lab. 3/3/98 through 6/15/98.
- Jennifer Waldron, Bachelor's Degree, College of William and Mary. Collection Records. Intern will add interfiling to the

accession files of NMAH without compromising the SI Archives microfilming project. 6/1/98 through 8/31/98.

- Meghan Wallace, Master's Candidate, University of South Carolina. Internship and Fellowship Office. Intern will catalog objects for the Napa Valley wineries project. 5/18/98 through 8/1/98.
- Vera Hope Walston. Exhibits. Broad experience in all areas of the graphics department. 4/27/98 through 4/27/99.
- David Waltrop, Bachelor's Degree, University of Maryland— Baltimore. Science, Medicine and Society. Intern will research biological weapons with an emphasis on anthrax. 6/3/98 through 6/1/99.
- Mari Webel, Bachelor's Candidate, Stanford University. Intern and Fellowship Office. Intern will work with Richard Albourne, researching cultural and religeous history. Intern will also assist with orientation for new interns. 6/29/98 through 8/28/98.
- Dara Weinerman, Bachelor's Candidate, Smith College. History of Technology. Preparation for an exhibit on the Panama Canal. 9/8/98 through 12/17/98.
- Catherine Weis, Bachelor's Candidate, University of Kansas. Program Planning and Design. Intern will assist with design layout and typesetting for the Information Age exhibit. 6/1/98 through 7/31/98.
- Noah Wester, Bachelor's Degree, University of Maryland. Create an Internet commercial and guided tour for the Duke Ellington Collection Web site. 11/4/97 through 5/1/98.
- Amanda Whitehead, Bachelor's Degree, Princeton University. Archives. Intern will assist the American Music Collections staff with the arrangement and description of the Ray Mc-Kinley music and ephemera. 6/8/98 through 9/11/98.
- Katherine Wolling, Bachelor's Candidate, Juniata College. Information Technology. Intern will assist with the preparation of a catalog for the calculating machine collection, assist with sorting psychological documentaion, photograph geometic models, and prepare a paper on the history of math. 6/1/98 through 7/24/98.
- Raymond Woodring, Bachelor's Candidate, University of Chicago. History of Technology. Intern will organize a proposal for an exhibit on conceptions of time travel as it has appeared in science and mass media. 6/22/98 through 8/28/98.
- Andrea Woody, Bachelor's Degree, California State University— Monterey Bay. Social History. Intern will provide support for "Rock and Soul: A Social Crossroads." 5/4/98 through 11/31/98.
- Derek Wooten, Master's Candidate, Appalachian State University. Archives. Intern will assist with data collection in electronic media. 2/23/98 through 4/17/98.
- Amy Yeun, Bachelor's Candidate, Duke University. Cultural History. Intern will assist with the Steinway diaries project and the Piano 300 project. 6/15/98 through 8/7/98.
- Zeng Yuan Yuan, Master's Degree, Catholic University of America. Cultural History. Intern will assist with an editorial project on Asian-American artifacts. 6/29/98 through 1/20/99.

- Laura Zelasnic, Master's Degree, Queens College. Lemelson Center. Intern will process papers of American inventors. 6/1/98 through 8/7/98.
- Amber Zitzman, Bachelor's Candidate, West Chester University. Cultural History. Doing background research for two exhibits, one on the Panama Canal and one on cleaning sponges. 7/1/98 through 8/31/98.

National Museum of the American Indian

- Terry Abrams, Bachelor's Degree, University of Arizona. Publications. Assisted publications department with the NMAI Web page through edits, and edited children's books bluelines. 2/16/98 through 4/24/98.
- Leo Carpenter, Bachelor's Candidate, Humbolt State University. Photo Archives. Assisted staff with general cataloging and duplication requests. Learned photocopy work and details of digital photo documentation of objects from collection. 6/01/98 through 8/07/98.
- Brenna Clani, Bachelor's Candidate, Stanford University. Public Affairs. Assisted dept. by making contacts with media regarding national press for museum. Wrote one article for museum newsletter and assisted in editing all other written materials. 3/30/98 through 5/19/98.
- Beata Dolina, Bachelor's Degree, Hofstra University. Will work with photo staff on scheduled projects—copy work, archive slides, produce reproductions and research new exhibits. 10/6/97 through 12/12/97.
- Emil Her Many Horses, Bachelor's Degree, Augustana College. Survey of the South Dakota Sioux Collection. Intends to study traditional design of bead and quill work so the knowledge can be shared with presentday artisans. 9/8/97 through 5/30/98.
- Jamie Hunt, Bachelor's Candidate, University of Iowa. Facilities Planning. Assist staff architect on all activity regarding the new museum on the mall and with the construction of Cultural Resources Center in Suitland, Md. 6/1/98 through 7/31/98.
- Marion Jones, Bachelor's Candidate, Tulane University. Exhibits. To assist in organization of Our Universe exhibit, a component of the NMAI permanent exhibition for the musuem on the mall. 9/11/98 through 12/4/98.
- Dean Kinnerson, Master's Candidate, University of Nevada— Reno. Assisted Jim in researching content for the Spirit Capture: Masterwork Photographs exhibit to open Fall 1999 in New York. Researched NMAI collection, LOC collection, and NMNH Anthropology Archives. 6/1/98 through 8/7/98.
- Jonella Larson, Bachelor's Candidate, University of Alaska— Fairbanks. Conservation/Collections Mgmt. Will spend equal time with collections management, conservation and registration departments, performing duties in each of those areas. 9/08/98 through II/20/98.
- Sooja Lee, Bachelor's Candidate, Queens College. Exhibitions. Assisted with graphic projects from design through produc-

tion of the Kuna exhibit. Developed logo and misc. work on the "All Roads Are Good" show, and designed intern poster for recruitment of Exhibits intern positions. 5/13/98 through 10/2/98.

- Michelle McCovey, Master's Candidate, California Polytechnical Institute, San Luis Obispo. A part of all activity related to the new museum on the mall, but especially to the Cultural Resources Center in Suitland, Md. Research ideas for fountain design and attended all meetings and onsite activity. 2/2/98 through 5/29/98.
- Miles Miller, Bachelor's Candidate, Institute of American Indian Art. Collections Mgmt. Assisted staff by returning objects and pulling objects used by staff. Rehoused the entire long weapons collection. Was on hand as support staff for all NAGPRA visits to collection. 6/19/98 through 8/21/98.
- Hugo Naranjo, Bachelor's Degree, Strayer College. Membership. To study methods to attract new members for the Office of Membership Services, especially the Spanishspeaking public of the greater Washington, D.C. area. 1/12/98 through 3/20/98.
- Patrick Natseway, Master's Degree, Memphis College of Art. Exhibits. Assisted with research for ideas and content for NMAI permanent exhibition for museum on the mall. Research focused on the role of the contemporary artist in exhibits. 6/t/98 through 8/7/98.
- Michaela Niero, Master's Candidate, University of Rochester. Conservation. Preparing objects for two different exhibitions: The Horse in Plains Indian Art and Spirit Capture: Masterwork Photography. Will examine, document, treat and prepare some internal mounting for objects. 6/1/98 through 8/7/98.
- Saza Osawa, Bachelor's Candidate, Evergreen State College. Film & Video Center. Assist in the development of the Native Networks Web site by acquiring information on Native media makers and organizations in Latin America, also assist in the arrangements for the Living Voices radio series. 6/22/98 through 8/14/98.
- Karen Oughtred, Master's Degree, Antioch University. Education. Assist in creating curriculum for elementary school children for the annual museum play, "Harvest Ceremony: Beyond the Thanksgiving Myth." Also drafted evaluation forms for audience. 6/01/98 through 8/07/98.
- David Ramos, Bachelor's Candidate, University of Alaska, Anchorage. Will assist Collections Management with rehousing of objects, making mounts, etc. Will assist curatorial staff with records on Tlingit specific objects. 10/6/97 through 12/12/97.
- Elizabeth Robertson, Bachelor's Degree, Queens University. Conservation. Assisting staff with cleaning, documenting, stabilizing objects in collection as part of ongoing conservation efforts, exhibit use, or for the upcoming move of the collection to Maryland. 10/01/98 through 12/31/99.
- Molly Senior, Bachelor's Candidate, Bemidji State University. Education. Assisted with the compilation of visitor responses/evaluations to the GGHC for the last four years. Helped

to write summary report and modify new evaluations. 6/01/98 through 8/07/98.

- Monica Shah, Master's Candidate, University of Delaware— Winterthur. Conservation. Preparing objects for two exhibitions, The Horse in Plains Indian Art and Spirit Capture: Masterwork Photography, through examination, documentation, treatment, and internal mounting. 6/1/98 through 8/7/98.
- Monica Tate-Melendez, Bachelor's Candidate, Rutgers University. Cultural Resources. Provide resources/research list on the Taino culture for possible inclusion in permanent exhibition in the mall museum. 6/1/98 through 8/7/98.
- Randy Teton, Bachelor's Candidate, University of New Mexico. Conservation. Preparing objects; includes examinations, documentations, internal mountings, cleaning for two different exihibitions, The Horse in Plains Indian Art and Spirit Capture: Masterwork Photography. 6/1/98 through 8/7/98.
- Benjamin West, University of Southern California. Intern drafted a news release regarding the intern program at NMAI, and helped to "clean up" the internship mailing list. 7/7/98 through 8/14/98.
- Nathan Young, Bachelor's Candidate, Oklahoma University. Exhibitions. Assisted with the exhibition planning for the new NMAI museum on the Mall by organizing research materials, books, paper files, and database information. Participated in all planning discussions for the exhibit. 6/1/98 through 8/7/98.

National Museum of Natural History

- Keri Bartok, Master's Candidate, American University. Public Affairs. Assist Public Relations activities by writing articles, updating press materials, handling media inquiries and acting as a liason between news and entertainment media and the museum. 1/14/98 through 5/30/98.
- Erin Beatty, Master's Candidate, University of Colorado— Boulder. Invertebrate Zoology. Intern will assist with the physical curation, inventory, and data standardization of the NMNH collection of genus Tryonia (Spring Snail). 6/1/98 through 7/3/98.
- Emily Bonifay, Bachelor's Candidate, Ohio University. Public Affairs. Intern will assist with daily media inquiries, assist with the maintence of the print, TV and radio database, escort film crews in the museum and reorganize the press slide collection. 7/7/98 through 8/21/98.
- Nathan Bowden, Master's Candidate, George Washington University. MSC. Intern will prepare specimens for analysis in stable light isotope laboratory. 3/6/98 through 6/6/98.
- Richelle Brown, High School Student, Thomas Jefferson High School. Mammals. Evidences of injury and pathology in the skeletons of bottlenose dolphins. 9/18/98 through 1/30/98.
- Matthew Finarelli, Bachelor's Degree, Duke University. OIPPS. Creating and expandiong a photo database within

the Natural History Museum. Assisting any of the OIPPS staff with their daily duties. 9/28/98 through 12/31/98.

- Maximiliano Gomez, Montgomery College. Biodiversity. Intern will assist with research carried out for the longterm monitoring of the Estacion Biological Del Beni, Bolivia. 3/2/98 through 5/15/98.
- Rose Green, High School Student, Barrie School. Paleobiology. Intern will assist with the photographic documentation of lare Paleozoic plant fossils representing the transition from the ice age to global greenhouse climates. 6/9/98 through 7/31/98.
- Thomas Hanlon, NVCC. Paleobiology. Intern will study Paleoclimate assessments using sedimentary cores taken from Lake Issy-Kul in Krelykstan, Central Asia. 4/1/98 through 12/31/98.
- Jennifer Hembree, Bachelor's Degree, George Washington University. Will compile River Basin Survey data in order to correlate relationship between excavations/surveys done and the collections and reports housed at the Smithsonian. 10/27/97 through 1/7/98.
- Amanda Jay, Bachelor's Candidate, Bradford University. Public Programs. Intern will help develop exhibits, including exhibits on human evolution, ancient Egypt, and post-Neolithic Europe. 2/9/98 through 8/28/98.
- Christina Jones, Bachelor's Candidate, George Mason University. Exhibits. Intern will assist with filmography for the NMNH exhibit Forces of Change. 1/21/98 through 5/13/98.
- Steven Keegstra, Bachelor's Candidate, University of Maryland–College Park. ADP. Primary duties include map and database construction, editing, involvement in programming and discussion on GIS project implimentation. Will be assigned to new projects in archaeology, botany, invertebrate zoology, geology and paleobiology, as needed. 8/13/98 through 12/31/98.
- Sarah Kessler, High School Student, Germantown Friends School. Process and description of the William O. Field Photograph Collection. 1/5/98 through 1/30/98.
- Amy Kim, Bachelor's Candidare, Carleton College. Fishes. Intern will inventory the fish illustration collection and assist with reproductions of original works for Web sites. 6/15/98 through 8/21/98.
- Kimberly Lawson, Institute of American Indian Arts. Intern will assist with organizing the Division of Mound Exploration records. 6/1/98 through 8/7/98.
- David Lewis, Master's Candidate, University of Oregon. Intern will assist with the Southwest Oregon research project. 7/1/98 through 8/25/98.
- Elisabeth Linington. Public Affairs. Intern will assist with media inquiries, film crews and mailings of press materials. 1/14/98 through 6/14/98.
- Becky Malinsky, Bachelor's Candidate, American University. Anthropology. Intern will conduct documentary research on Southwest Indian drawings in the National Anthropological Archives. 6/2/98 through 8/31/98.

- Kimberlee McGrath, Bachelor's Candidate, Bucknell University. Intern will research repatriation for Mohegan funerary customs and material culture. 6/1/98 through 8/7/98.
- Alexander Milas, Bachelor's Candidate, George Mason University. Intern will assist with database management and with the rehousing of the Paleoindian collection. 5/18/98 through 9/9/98.
- Denise Mitchel, Master's Candidate, University of Oregon. Intern will conduct research for the Western Oregon Indians project. 7/1/98 through 8/25/98.
- Sean Montague, Bachelor's Degree, Memorial University of Newfoundland. Anthropology. Intern will assist the Arctic Studies Center with the Labrador exhibit. 2/23/98 through 6/12/98.
- Min Thu Myo. Anthropology. Intern will research and study the W.L. Abbot collection from the Thai–Burma border. 6/1/98 through 8/14/98.
- Michele Nava, Bachelor's Candidate, University of Hawaii. Anthropology. Intern will research the bibliographic and photographic archives pertaining to the Philippine ethnological collections at the NMNH. 6/1/98 through 8/7/98.
- Mollie Oremland, Bachelor's Candidate, University of Virginia. Systematics Lab. Intern will assist with the revision of Bigelow and Schroeder's "Fishes of the Gulf of Maine." 5/26/98 through 8/28/98.
- Svea Rodgers, Bachelor's Degree, University of Montana— Missoula. Exhibits. Digital photography of Rocks exhibit for Web site and electronic video; aid in exhibit installation and graphics. 9/9/98 through 12/9/98.
- Joy Rohde, Bachelor's Candidate, University of Chicago. Anthropology. Intern will collate documents relating to the Bureau of American Ethnology under John Wesley Powell. 6/22/98 through 8/28/98.
- Carolyn Shannon, Bachelor's Candidate, University of Oklahoma. Anthropology. Intern will assist with the assembling of archival data for repatriation evaluations. 6/1/98 through 8/15/98.
- Vicki Simon, Montgomery College. Anthro/Handbook. Assisting with illustration research on the Plains and Southeast volumes. Also working with her supervisor on various research projects relating to historical N. American Indian photography. 9/22/98 through 12/31/98.
- Brooke Sperling, Bachelor's Candidate, University of California—Santa Barbara. Repatriation. Complete and analyze a thorough catalog of the brain collection in the NMNH and research the social history of the autopsy to obtain a good background on the collection. 9/15/98 through 12/4/98.
- Mariah Steinwinter, High School Student, Sidwell Friends School. Botany. Intern will prepare illustrations for the archives, database entry, and scan for the online botanical catalog. 5/11/98 through 6/5/98.
- Susannah Stevens, Bachelor's Candidate, Carleton College. Education. Intern will work in the Discovery Room and assist staff with the development of educational projects. 6/18/98 through 8/31/98.

Sarah Trabucchi, Bachelor's Candidate, Smith College. Anthropology. Research on individual photographs selected for *The Handbook of North American Indians*, Plains volume. 9/8/98 through 12/17/98.

- Janina O'Brien Trent, Master's Candidate, George Washington University. Photography. Intern will create archival photographic collections documenting physical anthropology projects by Chip Clark and Doug Owsley. 3/1/98 through 5/15/98.
- Mackenzie Tysell, Bachelor's Candidate, University of California Davis. Anthropology. Intern will be working with the ASC and Canadian authorities in Newfoundland to analyze and safely return artifacts previously loaned to the Smithsonian. 4/1/98 through 6/30/98.
- R. Carlton Ward, Bachelor's Degree, Wake Forest University. OIPPS. Digitizing biological photographs collected by Smithsonian photographers to form a biodivesity database that will be available via the Internet. 9/1/98 through 12/18/98.

National Museum of Natural History—Research Training Program

Deokie Arjoon, Master's Candidate, University of Guyana. Botany. Intern will conduct a GIS analysis of the fish of Guyana. 5/23/98 through 8/2/98.

Joseph Bagby, Bachelor's Candidate, Gilford College. Anthropology. Intern will conduct field research in Mexico. 5/18/98 through 7/26/98.

- Amy Kathryn Barbour, Bachelor's Candidate, Oberlin College. Reorganizing the Bellerophont collection. 1/6/98 through 1/30/98.
- Jessica Cafarella, Bachelor's Candidate, Duke University. Anthropology. Study scurvy in pre-adult human fossil remains from the American Southwest. 1/12/98 through 6/15/98.
- Christopher Claflin, Bachelor's Candidate, George Washington University. Mineral Sciences. Intern will conduct a systematic study of amphibole-bearing granite pegmatites to test the significance of certain amphiboles as petrogenetic indicators. 5/23/98 through 8/2/98.
- Ashley Cramer, Bachelor's Candidate, University of New Mexico. Entomology. Intern will work on the description of Argyrotzienai (Insecta:Lepidoptera:Tortricidae). 5/25/98 through 8/2/98.

Jennifer Fairchild, Bachelor's Candidate, University of Washington. Invertebrate Zoology. Intern will study the development and distribution of paralarual Illex condetti in the northern Gulf of Mexico. 5/23/98 through 8/2/98.

Gregory Fuller, High School Student, Barrie School. Mineral Sciences. Separtate minerals from volcanic ashes from Colima Volcano, Mexico. These will be used to date the ashes using the 40AR/39AR method. 1/7/98 through 3/4/98.

Rose Green, High School Student, Barrie School. Anthropology. Study variation of the human mandible between genders. 1/7/98 through 3/4/98.

- Stephen Hardy, Bachelor's Candidate, Kansas University. Public Programs. Intern will research and report on funding opportunities with government agencies for programs related to global change and will research educational outreach programs. 6/9/98 through 7/26/98.
- Paul Harnik, Bachelor's Candidate, Oberlin College. Work on a statistical survey of the morphology of the genus Pecopteris. 1/6/98 through 1/30/98.
- Sara James, Bachelor's Candidate, College of William and Mary. Mineral Sciences. Intern will use minerals and glass to understand volcanic eruptions at the Arenal volcano in Costa Rica. 5/23/98 through 8/2/98.
- Tristan Kimbrell, Bachelor's Candidate, Kansas State University. Ornithology. Intern will help develop an new method for assessing the age of black-throated blue warblers by using cross sections of the long-bones of birds of a known age to investigate the association between endosteal deposits and age. 5/26/98 through 8/2/98.
- Wanda Lewis, Bachelor's Candidate, New Mexico State University. Anthropology. Intern will be involved in reconstructing morphological characteristics of the human face by analyzing key points on the skull. 5/23/98 through 8/2/98.
- Andrea Lord, Bachelor's Candidate, George Washington University. Anthropology. Intern will work with the conservation and rehousing of the human skeletal collections. 3/25/98 through 5/8/98.
- Molly Markey, Bowling Green State University. Paleobiology. Intern will sample and identify early Cretaceous Forminifera with respect to paleobiology. 5/25/98 through 8/2/98.
- Arturo Marquez-Alamedz, Master's Candidate, Northern Arizona University. Anthropology. Intern will assist with the creation of a consortium of institutions interested in developing research/educational programs on the anthropology of Northern Mexico. 5/20/98 through 8/17/98.
- Svetlana Maslakova, Bachelor's Candidate, Moscow State University. Invertebrate Zoology. Intern will analyze literature and specimens to test a hypothesis on the phylogenetic relationships between several nemerteans. 5/23/98 through 8/2/98.
- Colleen McLinn, Bachelor's Candidate, Eckerd College. Anthropology. Intern will study animal domestication and its agricultural impacts in the ancient Near East. 5/23/98 through 8/2/98.
- Sean Menke, Bachelor's Candidate, University of Minnesota.
- . Intern will study the morphological variation among species of the flatfish family Soleidae located in the East Indian Ocean. 5/23/98 through 8/2/98.
- Cristiano Moreira, Bachelor's Candidate, University De Federal do Rio De Janeiro. Vertebrate Zoology. Intern will study the neotropical characids subfamily Iguanodectimae. 5/23/98 through 8/2/98.
- Thinley Namgyel, Bachelor's Candidate, University of Wisconsin—Madison. Botany. Intern will conduct a phylogen-

tic and biogeographical analysis of the Himalayan genus Cautleya. 5/23/98 through 8/2/98.

- Michelle Nestlerode, Bachelor's Candidare, University of North Carolina—Willmington. Invertebrate Zoology.
 Intern will evaluate a 20-year-old sponge collection from the mid-Atlantic coast to look for changes in sponge diversity. 5/23/98 through 8/2/98.
- Scott Owens, High School Student, Eastern Senior High School. Botany. Help with inventory of endangered and threatened plant species. 3/1/98 through 5/30/98.
- Matthew Palmer, Bachelor's Candidate, Brigham Young University. Paleobiology. Intern will evaluate the intensity and type of insect herbivory on Eocene Flora from Republic, Washington. 5/23/98 through 8/2/98.
- Jonathan Porter, Bachelor's Candidate, Washington University. Anthropology. Intern will process 1933 African film footage from the Julius and Dorette Fleischman Collection and the Daniel Freedman Collection. 6/1/98 through 7/26/98.
- Debra Ann Prince, Master's Candidate, George Washington University. Anthropology. Intern will identify and catalog stone tool artifacts from the middle Stone Age site of Katanda, in central Africa. 3/1/98 through 5/15/98.
- Tomasz Prosynski, Bachelor's Candidate, Warsaw University. Entomology. Intern will conduct a morphological study of posterior eye tapeta in salticidae. 5/23/98 through 8/2/98.
- Reyna Romero, Bachelor's Candidate, New Mexico State University. Invertebrate Zoology. Intern will compare sponges from the Carolina coast from the early 1980s and today to determine changes in sponge diversity. 5/23/98 through 8/2/98.
- Ellen Rosenshein, Bachelor's Candidate, Binghamton University. Mineral Sciences. Intern will seek to study the mechanisms by which asteriods melted in the early history of the solar system. 5/23/98 through 8/2/98.
- Rudyard Sadleir, Bachelor's Candidate, University of Illinois— Chicago. Paleobiology. The student will test whether rapid burial of corals leads to better preservation than of those that remain on the sea floor after death. 5/23/98 through 8/2/98.
- Sandra Saluke, Bachelor's Candidate, Cornell University. Entomology. Intern will describe a new species of Elaphria. Insecta:Lepidopetera:Noctuidae. 5/23/98 through 8/2/98.
- Heidi Renee Shoup, Bachelor's Degree, Ohio State University. Vertebrate Zoology. Intern will compile exhisting morphological and molecular data with new morphological data to contest competing hypotheses about the phylogonee of cyprinodontifrom fish. 5/23/98 through 8/2/98.
- James Skoy, Bachelor's Candidate, Brigham Young University. Mammals. Intern will study the distribution and evolution of porcupine rats in the Bocas Del Toro Islands in Panama. 5/23/98 through 8/2/98.
- Shannon Stackhouse, Bachelor's Candidate, Harvard University. Anthropology. Intern will study the effects of domestication of animals and development of agriculture on ancient Near-East civilizations. 5/26/98 through 8/22/98.

- C. Tristan Stayton, Bachelor's Candidate, Purdue University. Paleobiology. Intern will investigate how fossil bird assemblages compare to living avian fauna to estimate ancient ecosytems. 5/23/98 through 8/2/98.
- Kevin Stewart, Bachelor's Candidate, Howard University. Entomology. Intern will compile and gather resident pest information and data in order to plan for the move of the department offices and collections. 5/23/98 through 8/2/98.
- Suzannah Stivison, Bachelor's Candidate, College of William and Mary. Systematics Lab. Intern will assist with a longterm study of Cephalopod phylogeny. 6/8/98 through 8/14/98.
- David Taylor, Bachelor's Candidate, Sam Houston State University. Botany. Intern will conduct a critical evaluation of specific relationships within the genus Pitcaimia. 5/23/98 through 8/2/98.
- Diana Thiel, Bachelor's Candidate, University of Deleware. Paleobiology. Intern will sample and identify foraminifera near the K/T boundary for differences in species diversity. 5/26/98 through 8/2/98.
- Dominica Tolentino, Master's Candidate, George Washington University. Intern will process, label and create a computer database of images of physical anthropological objects. 3/4/98 through 5/15/98.
- Allison Wack, Bachelor's Candidate, Randolph Macon University. Botany. Intern will review the change in distribution of flora and fauna habitat in Arlington County, Virginia over the past century. 5/23/98 through 8/2/98.
- Moritz Weinbeer, Bachelor's Candidate, University of Wuerzburg. Mammals. Intern will study the distribution, evolution and biogeography of one species of fruit-eating bat on the Bocas del Toro Islands in Panama. 5/23/98 through 8/2/98.
- Maksim Yegoron, Bachelor's Candidate, University of Michigan. Anthropology. Intern will study weaving practices and textile technologies of Central Asia. 5/23/98 through 8/2/98.
- Cassady Yoder, Bachelor's Candidate, University of New Mexico. Anthropology. Intern will test the applicability of the fourth-rib age estimation technique for human skeletal remains to ribs 2–9. 5/23/98 through 8/2/98.

National Portrait Gallery

- Anne Marie Addicott, Bachelor's Candidate, California Lutheran University. Assist Public Program Director with film series and conduct research for "Cultures in Motion" performances. 10/8/97 through 12/5/97.
- Heather Agnello, Bachelor's Candidate, American University. Graphics/Design & Production. Assist Graphics Office with projects relating to the Theodore Roosevelt and Philippe Halsman exhibitions. Will learn silkscreening process, label fabrication and how exhibits are installed. 9/9/98 through 12/18/98.

- Lindsay Bowman, Bachelor's Candidate, University of Virginia. Intern will assist with the organization and research of the collection, editing and varifying portrait data and images, and incorporating data and images into a national database. 6/29/98 through 7/31/98.
- William Brannon. Design & Production. Intern will assist in the production of two exhibits. Skills Learned: label fabrication, silkscreening, photo mounting, and some computer graphics layout programs. Will also be responsible for gallery checks and cleaning. 12/1/97 through 4/17/98.
- Valinda Carroll, Master's Candidate, Buffalo State College. Conservation. Intern will help with condition reports of untreated nineteenth and twentieth-century black-andwhite photographs. 6/8/98 through 8/28/98.
- Vanessa Curtis, Bachelor's Candidate, Trinity College. Education. To research Latino cultures by creating an exhibit that brings individuals out to experience these cultures through paintings, lectures, film series and special events. 8/31/98 through 11/30/98.
- Francis Fletcher, Bachelor's Degree, College of Wooster. Education. Duties include biographical research on subject and artists, editing and verifying data, organizing data and materials, and incorporating data and images into a national online database. 2/17/98 through 5/15/98.
- Rhonda Gray-Young, Bachelor's Candidate, Mongomery College. Office of Education. Participate with staff in high school classroom presentations and tours in the permanent collection. Complete a research project with an art history emphasis that relates to an existing program. Assist with Living History program presented in conjunction with special exhibition. 9/28/98 through 12/18/98.
- Ana Cristina Gutierrez, Bachelor's Candidate, Franklin and Marshall College. Education. Intern will assist the Public Program Director with the Latino film festival, Cultures in Motion programs and film series. Also assist with the Beatles' courtyard concerts. 5/4/98 through 8/14/98.
- Jennifer Harbster, Bachelor's Candidate, University of California—Santa Cruz. Education. Intern will assist the Public Program Director with the production of Cultures in Motion programs and film series. 4/6/98 through 6/15/98.
- Sarah Harre, Bachelor's Candidate, Yale University. Peale Family Papers. Researches Titian Ramsay Peale's participation on the Wilkes expedition to the South Pacific. Writes scholarly annotation and headnotes for a documentary history publishing project. Writes a scholarly research paper on an aspect of her research. 9/8/98 through 12/23/98.
- Brenda Ingersoll. Design and Production. Intern will assist in the Graphics Department with projects relating to the Time and Caricatures exhibit. Intern will learn how to silkscreen and other aspects of exhibit installation. 1/5/98 through 4/27/98.
- Zach Intrater, Bachelor's Candidate, University of Chicago. Curatorial. Work on the Notable Americans exhibition, starting with the provenance of Mary Cassatt by Degas. 6/22/98 through 8/14/98.

- Suzanne Karr, Bachelor's Candidate, Brown University. Intern will edit and fact-check a Hans Namuth biography. 6/10/98 through 9/1/98.
- Mary Mack, Montgomery College. Conduct research for school and adult services programs on women that made a significant contributution to the women's movement. Colead tours at the National Portrait Gallery. 2/11/98 through 5/15/98.
- Eva McGovern, Bachelor's Candidate, University of Nottingham. Painting and Sculpture. Intern will research photographs and photographers. 6/29/98 through 8/21/98.
- Tami Mnoian, Bachelor's Candidate, University of California—Santa Barbara. Assisting Public Programs Director with programming for "Cultures in Motion" series, and researching films for the NPG weekly film series. 1/6/98 through 3/11/98.
- Catherine Nichols, Bachelor's Candidate, Duke University. Education. Intern will oversee the Summer Intern Conferences and social events for interns. 6/1/98 through 8/28/98.
- Suzannah Niepold, Bachelor's Candidate, Bryn Mawr. Electronic Research. Intern will indentify and organize NPG collection images, scan them and manipulate with imaging software as neccesary for the NPG collections information system. 6/1/98 through 8/8/98.
- Elaine Nuzzaco, Bachelor's Candidate, Brigham Young University. Intern will assist with stack and staff book inventory, and will help develop a plan for automating the vertical file collection. 5/18/98 through 8/25/98.
- Judith Osborne, Montgomery College. Education. Intern will assist in the orgainization of the History Hunters Summer Camp by researching and making copies of original Civil War letters, and will make contacts with Civil War-related organizations, reenactors, and designers. 2/24/98 through 5/8/98.
- Kristen Peterson, Bachelor's Candidate, Brigham Young University. Graphics. Silkscreen labels, photo signage, daily gallery check. 9/9/98 through 12/10/98.
- Sarah Perty, Bachelor's Candidate, Mary Washington College. Education. Intern will assist the public program director with the Cultures in Motion program, program notes, and film series. Assist with the Beatles' courtyard concerts. 6/15/98 through 8/15/98.
- Rebecca Pskowski, High School Student, Richard Montgomery High School. Education. Intern will conduct research on an upcoming travelling exhibition organized by the Department of Photographs. 6/22/98 through 8/14/98.
- Hannah Schneider, Bachelor's Candidate, Swarthmore College. Peale Family Papers. Intern will conduct a textual and substantive analysis of a series of articles published by Peale in the mid-nineteenth century. 5/26/98 through 8/14/98.
- Suzanne Sennett, Bachelor's Candidate, University of Massachusetts—Amherst. Design. Intern will be involved with design and graphics work for the Roosevelt, Halsman, and Warhol exhibits. 6/23/98 through 8/31/98.

Anna McCoy Smith, Bachelor's Candidate, Salem College. Researching the popular images of Theodore Roosevelt, which appeared in illustrated magazines and newspapers at the turn of the twentieth century. 12/27/97 through 1/29/08.

Cambra Stern, Bachelor's Candidate, Tufts University. Photography. Inventory and catalog the Portrait Gallery's extensive video collection, creating a database for easy access to this information. 6/22/98 through 8/7/98.

Christopher Suwyn, Bachelor's Candidate, University of California—Santa Cruz. Library. Intern will assist with inventory, assist with generating exchange requests for exhibition catalogs, and develop a plan for an automated vertical file system. 6/29/98 through 8/28/98.

Minako Takahashi, Master's Candidate, George Washington University. Exhibitions. Intern will assist with assembling proposal packets, creating and maintaining exhibits history databases, and archiving files. 5/18/98 through 7/2/98.

Sarah Weisman, Bachelor's Degree, Kenyon College. Peale Family Papers. In 1998, the Charles Willson Peale Family Papers revised and submitted for publication, vol. 5, *The Autobiography of Charles Willson Peale*. Research begins on volumes 6 and 7, the children of Charles Willson Peale. 9/21/98 through 12/18/98.

National Postal Museum

- Anna Dernbach, Bachelor's Degree, Linfield College. To work with the exhibits writer/editor in providing background research and concept development for the design team working on an upcoming exhibit on postal automation. 1/12/98 through 3/27/98.
- Aimee Gee, Bachelor's Candidate, University of California-----Berkeley. Education. Intern will assist with the creation and conduct of a museum summer camp for middle-school students. 6/15/98 through 7/31/98.
- Lynn Heidelbaugh, Master's Candidate, George Washington University. To research historical and photographic materials at departments and museums of the Smithsonian, the Library of Congress and the National Archives. 1/13/98 through 4/30/98.
- Brian Huber, Bachelor's Candidate, Virginia Technical Institute. Education. Intern will assist with the creation and conduct of a museum summer camp for middle-school students. 6/15/98 through 7/10/98.
- Lisa Ming-I Liu, Bachelor's Candidate, University of Chicago. Curatorial. Intern will research the history of Chinese immigrants in America in the late nineteenth and early rwentieth centuries. 6/22/98 through 9/11/98.
- Travis Riley, Bachelor's Candidate, Wheaton College. Responsible for updating the museum's Web site using information, photographs and text provided by the museum's Web site group. 1/5/98 through 1/23/98.
- Jen Smith, Bachelor's Candidate, Howard University. To become familiar with various aspects of creating and produc-

ing musuem, historic and lecture programs. 10/4/97 through 5/31/98.

National Zoological Park

- Margaret Barse, Bachelor's Degree, Northwestern University. Public Affairs. Intern will assist with video projects for the Web site at the NZP. 6/15/98 through 8/15/98.
- Christina Bentz, Bachelor's Degree, Coe College. Intern will assist with the educational programming pertaining to Neotropical migratory birds. 6/1/98 through 8/7/98.
- Jennifer Esposito, Veterinary Doctoral Candidate, Texas A&M College of Vet. Med. Beaver Valley. Intern will work with the golden lion tamarins in a free-ranging program. 5/18/98 through 8/15/98.
- Katie Flickinger, Bachelor's Degree, University of Massachusetts. Intern will study mineral appetite in the pygmy marmoset. 6/8/98 through 8/31/98.
- Elise Geldon, Bachelor's Candidate, Princeton University. FONZ—Membership. 6/15/98 through 8/21/98.
- Lisa Griffin, Bachelor's Candidate, Oregon State University. Horticulture. Intern will identify trees that are hazardous to tourists and staff and catalogue exhisting trees in the landscape. 6/22/98 through 9/11/98.
- Katia Jones, Bachelor's Candidate, University of Maryland— Baltimore County. Nutrition Lab. Intern will study the effect of nutrition on reproduction in the common marmoset. 6/1/98 through 8/7/98.
- Daniel Lebbin, Bachelor's Candidate, Duke University. Animal Records. Intern will develop identification systems to distinguish between specimens of the same species without using tags or markings. 5/18/98 through 7/7/98.
- Amber Lyons, Bachelor's Candidate, Unity College. Mammals. Intern will assist with great cats. 5/26/98 through 8/21/98.
- Laurie Nelson, Bachelor's Degree, Cornell University. Intern will assist with the desert turtle project. 6/1/98 through 8/21/98.
- Kathleen Palmer, Bachelor's Degree, Davidson College. Public Affairs. 6/3/98 through 9/15/98.
- Pablo Pedraza, Bachelor's Candidate, University of Puerto Rico. Amazonia Gallery. Intern will study the interrelationship between art and science. 6/15/98 through 8/20/98.

Office of Accessibility

Clare Brown, Master's Candidate, George Washington University. To research and revise the Smithsonian's guidelines for accessibile exhibit design. 1/20/98 through 5/30/98.

Danielle Sanders, Bachelor's Candidate, University of Miami. FONZ—Membership. 6/15/98 through 8/21/98.

Office of Exhibit Central

- Kristin Fuller, Bachelor's Candidate, Howard University. Assist in the implementation of activity-based costing accounting system in an effort to better track overhead costs, direct materials, and direct labor used in the exhibition processes. 9/18/98 through 5/31/99.
- Zaneta Hong, Bachelor's Candidate, Cornell University. Intern will organize information concerning internships and will rotate in the design, editing and modelmaking divisions. 6/8/98 through 8/31/98.
- Andrea Pippins, Bachelor's Candidate, Temple University. Graphics. Assisting with the design and preparation of graphics for exhibits at the Smithsonian. 6/1/98 through 8/7/98.
- Ama Schulman, Master's Candidate, University of Maryland. Fabrication. Working on the Woody Guthrie traveling exhibition. 9/15/98 through 2/28/99.

Office of Fellowships and Grants

- Terry Abrams, Bachelor's Degree, University of Arizona. National Museum of the American Indian. Publications. 2/16/98 through 4/24/98.
- Shannon Bell, Bachelor's Degree, University of California Berkeley. National Museum of American History. Costume. Intern will research Hispanic designers Luis Extervez's and Antonio de Castillo's influence on American fashion. 6/1/98 through 8/7/98.
- Katricia Bennett, Bachelor's Candidate, Howard University. National Museum of American History. Intern will explore the contemporary constructions of race and culture and examine the designations of racial categories in the 2000 census. 6/1/98 through 8/7/98.
- Christina Bentz, Bachelor's Degree, Coe College. National Zoological Park. Intern will assist with the educational programming pertaining to neotropical migratory birds. 6/1/98 through 8/7/98.
- Idana Bonsi, Master's Candidate, University of Maryland— College Park. OPMB. Intern will redesign budget book and directives review and will develop training materials. 6/1/98 through 8/7/98.
- Janae-Sharee Breiner, Bachelor's Degree, Appalachian State University. National Museum of American History. 6/1/98 through 8/7/98.
- Gina Cabrera, Bachelor's Candidate, University of Virginia. National Museum of African Art. Intern will work with the Eliot Elisofon Photographic office. 6/1/98 through 9/7/98.
- Nathan Campbell, Master's Candidate, University of Missouri— Columbia. National Museum of American History. Social History. Intern will research the cultural meaning of "home" in America for the exhibition After the Revolution. 6/1/98 through 8/7/98.

- Jennifer Chow, Bachelor's Candidate, University of Virginia. National Museum of African Art. Education. Intern will assist with the development of educational materials for the activity room for the Olowe of Ise exhibit. 6/15/98 through 8/21/98.
- Gretchen Dematera, Master's Candidate, H. John Heinz III School of Public Policy. National Museum of American Art. Development. Intern will research Capital Campaign prospects for NMAA. 6/r/98 through 8/7/98.
- Brian Hairston, Bachelor's Candidate, Hampton University. Intern will explore the sociology and culture of athletics amoung Black Americans. 6/1/98 through 8/8/98.
- Kia Hall, Sarah Lawrence College. National Museum of American History. Dept. of African American History and Culture. Intern will analyze comtemporary Black literary themes in the U.S., South America and Africa. 6/1/98 through 8/7/98.
- Ginger Hargett, Bachelor's Candidate, Oberlin College. Office of the Smithsonian Institution Archives. Intern will develop a database for anthropological and archaeological records in the National Anthropological Archives. 6/8/98 through 8/19/98.
- Denise Hatcher, Bachelor's Candidate, Illinois State University. National Museum of African Art. Intern will research new African art terms for use in the NMAfA Archives and Library. 6/1/98 through 8/7/98.
- Clyde Higgs, Master's Candidate, East Carolina University. Office of Sponsored Projects. Intern will edit and update the Principal Investor's Guide—compiling survey results and developing financial reports. 6/1/98 through 8/7/98.
- Karmael-Elana Holmes, Bachelor's Candidate, American University. National Museum of Natural History. African American Culture. Intern will research contemporary African American images on television. 6/t/98 through 8/7/98.
- Katia Jones, Bachelor's Candidate, University of Maryland— Baltimore County. National Zoological Park. Nutrition Lab. Intern will study the effect of nutrition on reproduction in the common marmoset. 6/1/98 through 8/7/98.
- Amy Kim, Bachelor's Candidate, Carleton College. National Museum of Natural History. Fishes. Intern will inventory the fish illustration collection, and assist with reproductions of original works for Web sites. 6/15/98 through 8/21/98.
- Kimberly Lawson, Institute of American Indian Arts. National Museum of Natural History. Intern will assist with organizing the Division of Mound Exploration records. 6/1/98 through 8/7/98.
- Antoinette Livramento, Bachelor's Degree, San Fransico State University. National Museum of American History. Education. Intern will develop the monthly program for the series "Our Story." This will include the creation of educational materials. 6/22/98 through 8/28/98.
- Adrian Loving, Master's Candidate, University of the Arts. Education. Create written materials and models geared to

the educational and outreach needs of elementary school students and teachers, while considering simple construction, economical, lightweight and recyclable materials, and physical accessibility. 6/1/98 through 8/7/98.

- Shauna Lukin, Bachelor's Candidate, University of Alaska— Fairbanks. National Museum of Natural History. Arctic Studies Center. Assisting in the development of the exhibition Looking Both Ways: Heritage and Identity of the Alutiiq people and assisting in the production of an Alutiiq elder-youth conference. 6/1/98 through 8/7/98.
- Kimberlee McGrath, Bachelor's Candidate, Bucknell University. National Museum of Natural History. Intern will research repatriation for Mohegan funerary customs and material culture. 6/1/98 through 8/7/98.
- Heidi McKinnon, Bachelor's Candidate, University of New Mexico. Center for Folklife Programs and Cultural Studies. Intern will conduct research for a program on the culture of the Rio Grande for the 1998 Folklife Festival. 6/1/98 through 8/7/98.
- Sean Montague, Bachelor's Degree, Memorial University of Newfoundland. National Museum of Natural History. Anthropology. Intern will assist the Arctic Studies Center with the Labrador exhibit. 2/23/98 through 6/12/98.
- Min Thu Myo. National Museum of Natural History. Anthropology. Intern will research and study the W.L. Abbot collection from the Thai-Burma border. 6/1/98 through 8/14/98.
- Michele Nava, Bachelor's Candidate, University of Hawaii. National Museum of Natural History. Anthropology. Intern will research the bibliographic and photographic archives pertaining to the Philippine ethnological collections at the NMNH. 6/1/98 through 8/7/98.
- Wendy Pagell, Bachelor's Candidate, Aurora University. Office of Information Technology. Intern will analyze the FY 1998 expenditures and generate financial projections, and reconcile data from the financial reporting system. 7/1/98 through 8/7/98.
- Andrea Pippins, Bachelor's Candidate, Temple University. Office of Exhibit Central. Graphics. Assisting with the design and preparation of graphics for exhibits at the Smithsonian. 6/1/98 through 8/7/98.
- Juan Rivera, Master's Candidate, Fashion Institute of Technology. National Museum of American Art. Development. Intern will work with corporate sponsors for Latino initiatives taking place over the next five years. 6/1/98 through 8/7/98.
- Lela Sanchez, Florida State University. National Air and Space Museum. Intern will assist in the Explainer's Program in the How Things Fly gallery. 6/1/98 through 8/7/98.
- Carolyn Shannon, Bachelor's Candidate, University of Oklahoma. National Museum of Natural History. Anthropology. Intern will assist with the assembling of archival data for repatriation evaluations. 6/1/98 through 8/15/98.
- Michael Sheyahshe-Lell, Bachelor's Candidate, University of Oklahoma. National Museum of American History. Intern

will work on a virtual exhibition for NMAH. 6/1/98 through 8/7/98.

- Bianca Sparks, Bachelor's Candidate, Brown University. National Museum of American Art. Intern will research Latino artists, assist with the drafting of object labels, and coordinate photographic and conservation requests. *6*/1/98 through 8/7/98.
- Alejandra St. Guillen, Bachelor's Candidate, Wesleyan University. Intern will look at African American museums and historical sites in the U.S. and analyze African American heritage tourism. 6/1/98 through 8/7/98.
- Nicole Stanton, Doctoral Candidate, University of Michigan. History of Technology. Intern will conduct research for the American Legacies exhibit and related publications. 5/26/98 through 9/7/98.
- David Stevens, Bachelor's Candidate, University of California— Berkeley. National Museum of American History. Intern will research contemporary contact between Africans and African Americans. 6/1/98 through 8/7/98.
- Natalie Swetye, Bachelor's Candidate, Colorado College. Center for Folklife Programs and Cultural Studies. Intern will research and produce a program on the culture of the Rio Grande/Rio Bravo basin for the Folklife Festival. 6/1/98 through 8/7/98.
- Torrence Thomas, Bachelor's Candidate, Duke University. Archives. Intern will assist with the implementation of an electronics records management program in the Archives, with attention paid to the Duke Ellington project. 6/1/98 through 8/7/98.
- Shawn Vantree, Master's Candidate, American University. National Museum of American History. Intern will review resources and standards of service at NMAH. 6/1/98 through 8/7/98.
- Calvin Walker, Master's Candidate, U.S. International Univertsity. Smithsonian Tropical Research Institute. Conducting surveys related to the development of STRI's college-level courses in tropical ecology and marine biology. 6/15/98 through 8/21/98.
- Grace Wang, Master's Candidate, University of Michigan. Center for Folklife Programs and Cultural Studies. Intern will assist with Pahiyas, A Philippine Harvest for the 1998 Folklife Festival. 6/1/98 through 8/7/98.

Office of General Counsel

Jamie Rosenfield, Master's Candidate, George Washington University. Research project on restitution of cultural property confiscated by Nazi troops during WWII. 1/12/98 through 6/12/98.

Office of Imaging, Printing, and Photographic Services

Diego Rubin De Celis, Montgomery College. Intern will assist with digital format transformation of the most commonly used photos of the imaging deptartment in order to make them accessable from the Smithsonian database. 3/26/98 through 5/8/98.

- Susan Hunter, Bachelor's Candidate, Savannah College of Art and Design. To study the influence computers have had on the photographic medium. 6/1/98 through 8/1/98.
- Jeanie Kahnke, Master's Candidate, George Mason University. Intern will help plan, organize, staff and manage a college internship program for the digital imaging laboratory. 1/22/98 through 5/1/98.
- Josh Moeller, Bachelor's Candidate, George Mason University. Intern will scan and digitize archive pictures and objects to be placed on the Internet. 5/19/98 through 8/31/98.
- Sarah Poff, Bachelor's Candidate, Miami University. Intern will assist OIPPS projects for the anthropology dept. 6/1/98 through 7/31/98.
- Christina Shomaker, Bachelor's Degree, George Washington University. Will create a Web site and an image library for the anthropology dept. 10/1/97 through 8/30/98.
- Jessamyn Steimer, Bachelor's Candidate, Haverford College. Intern will assist with scanning, photo CD conversion, and other imaging projects. 5/27/98 through 8/31/98.
- Monsee Wood, Bachelor's Candidate, Virginia Commonwealth University. Intern will assist with electronic imaging, scanning and printing with photo CD. 6/15/98 through 8/5/98.

Office of Information Technology

Wendy Pagell, Bachelor's Candidate, Aurora University. Intern will analyze the FY 1998 expenditures and generate financial projections, and reconcile data from the financial reporting system. 7/1/98 through 8/7/98.

Office of Membership and Development

- Aimee Caton, Bachelor's Candidate, Duke University. Membership. Designed gift brochure, sent letters, invitations, and other mailings to members, researched membership benefits. 6/1/98 through 8/14/98.
- Michele Gehrig, Bachelor's Candidate, Hollins College. Development. Assisted with coordinating mailings, events, and meetings for constituents. 1/5/98 through 1/30/98.
- Kathleen Jarrott, Bachelor's Degree, University of Illinois. Prospect research projects as assigned. 5/26/98 through 7/25/98.
- Tamika McKim-Neblett. To develop a communications plan for OMD's planned giving program. 1/5/98 through 4/17/98.
- Karen Raymond, Associate's Candidate, Montgomery College. Women's Committee. Maintaining member information, assisting with events, meetings, and daily office operations. 9/8/98 through 12/31/98.

Office of Public Affairs

Kelly Scanlon, Bachelor's Candidate, College of William and Mary. Intern will assist with press releases and media awareness of museum exhibits and events. 6/1/98 through 8/31/98.

Office of Planning, Management, and Budget

Kazuharu Ishida, Master's Degree, Grad School of Media and Gov., Keio University. Redesign the Call for Plans to include measurements for performance and strategies and how they relate to an organization's initiatives. 10/14/97 through 5/1/98.

Office of the Physical Plant—Architectural History and Historic Preservation

- Christopher Alexander, Bachelor's Candidate, George Washington University. Research on American architecture and development of virtual tour of Smithsonian Building. 8/31/98 through 11/20/98.
- Marion-Fairlie Benson, Bachelor's Candidate, New York University. Intern will conduct research related to nineteenth- and early-twentieth-century architecture for a Spring 1999 AHHP lecture series. 5/26/98 through 7/31/98.
- Sarah Fayen, Bachelor's Degree, Yale University. Researched Adolf Cluss, architect of the Arts and Industries Building, correspondence regarding the construction of the building. 6/8/98 through 8/14/98.
- Lucy Maulsby, Master's Degree, Cambridge University. Research the McMillian Plan of 1901 and its impact on the National Museum of Natural History and the Freer Gallery of Art. 1/12/98 through 3/20/98.

Office of the Physical Plant—Horticultural Services Division

- Aislinn Adams, Diploma, National Botanic Gardens. Butterfly Garden. Intern will work in the Butterfly Garden, maintaining proper conditions for the plants in the butterfly habitat. While doing this, she will observe seasonal changes in butterfly populations, and their life in the habitat. She may have the opportunity to work on plans for the new educational center that is under development in the garden. 8/31/98 through 12/25/98.
- Melissa Antokal, Bachelor's Candidate, University of Illinois— Urbana/Champaign. Intern will catalog slides and enter data into the SIRIS database. Intern will also be involved with digitizing images for the computer record. All activities will use techniques used in the Archives of American Gardens. 6/1/98 through 8/14/98.
- Cindy Burkhardt, Western Michigan University. Intern will work with all aspects of collection management of the orchid collection. Intern will cultivate, label, identify, record growth and flowering and verify nomenclature for specimens. 6/1/98 through 8/14/98.
- Trish Fix, Bachelor's Candidate, University of Virginia. Intern will work with the integrated pest management program. She will study and analyze insects, diseases, nematodes and physiological problems on garden plants and work with

management techniques for problems identified. 6/1/98 through 7/31/98.

- Sarah Gould, Bachelor's Candidate, Smith College. Intern will catalog slides and enter data into the SIRIS database. Intern will also be involved with digitizing images for the computer record. All activities will use techniques used in the Archives of American Gardens. 6/1/98 through 8/7/98.
- Anne-Marie Hanson, Bachelor's Degree, James Madison University. Horticultural Services Division. Intern will be working in general grounds maintenance so that she can gain the broadest possible experience in the field. This will include turf management, rose cultivation, spring bulb planting and care of perennials, shrubs, and trees. 9/21/98 through 1/9/99.
- Jill Osipchak, Bachelor's Candidate, West Va. University. Intern will assist the Landscape Architect in working with plans of the museum grounds. This will include peparing drawings, verifying plants and evaluating construction drawings. 5/18/98 through 8/14/98.
- Christa Partain, Northern Virginia Community College. Enid Haupt Garden. Intern will work with the horticulturist in maintaining the Enid A. Haupt Garden. This includes watering, weeding, pest control and grooming. Intern will also cultivate roses and tropical plants. 2/2/98 through 5/22/98.

Smithsonian Institution Archives

- Meghan Gutierrez, Bachelor's Candidate, University of California—Santa Cruz. Institutional Archives. Cataloging women's and African Americans' contributions to the Smithsonian Institution. 9/16/98 through 12/4/98.
- Ginger Hargett, Bachelor's Candidate, Oberlin College. Intern will develop a database for anthropological and archaeological records in the National Anthropological Archives. 6/8/98 through 8/19/98.
- Alexander Lourie, Bachelor's Candidate, Kenyon College. Preservation. Intern will assist with general duties in the preservation department of the Archives. 6/17/98 through 8/7/98.
- Jose Delannoy-Pizzini. Intern worked on defining and developing a mission statement for the Casals Museum, researching and discussing collections management policy issues, and conducting interviews with selected SI staff to assist in his assessment of the Pablo Casals Collection in Washington, D.C. for possible donation by Ms. Martha Casals to the Museo Pablo Casals in San Juan. 9/21/98 through 10/30/98.
- Michael Rhodes, Master's Candidate, University of Wisconsin. Intern will arrange and describe the papers of Oscar L Cartwright (entomologist). 5/26/98 through 7/31/98.
- Tina Wong, Bachelor's Candidate, Swarthmore College. Joseph Henry Papers. Intern will research the Smithsonian's connections with Japan during Joseph Henry's secretaryship. 5/19/98 through 7/23/98.

Office of Sponsored Projects

- Cheryl Alston, Bachelor's Candidate, Wayne State University. Intern will receive training in grant writing in relation to cultural institutions. 6/8/98 through 1/15/99.
- Lisa Ann Beaverhead, Bachelor's Candidate, Salish Kootenai College. Develop skills in grant seeking, proposal writing, and administration to be used at a local nonprofit organization in my hometown. 6/8/98 through 8/15/98.
- Aaliyah Bilal, High School Student, Oxon Hill High School. Will take information from various foundations and create several volumes of reference materials for customers. Also designing a training calendar for OSP staff. 8/3/98 through 8/28/98.
- Idana Bonsi, Master's Candidate, University of Maryland. Research financial information for Smithsonian financial system. 1/27/98 through 5/22/98.
- Clyde Higgs, Master's Candidate, East Carolina University. Intern will edit and update the Principal Investor's Guide compiling survey results and developing financial reports. 6/1/98 through 8/7/98.
- Naomi Mintz, Bachelor's Candidate, George Mason University. Serve in a training capacity as an assistant to the Contract Administrator at OSP. Will help produce a handbook on grant proposal guidelines. 10/6/97 through 12/5/97.
- Florencia Sader Sanchez. Intern will gain experience with various aspects of grant-writing. 3/23/98 through 6/12/98.

Product Development and Licensing

- Susan Garrett, Bachelor's Degree, Johns Hopkins University. Assists Product Managers in product development of Smithsonian-licensed merchandise for the retail market (outside Museum shops and mail-order catalogue). 6/1/98 through 6/1/99.
- Aditi Mehta, Bachelor's Candidate, University of Richmond. Assists Product Managers in product development of Smithsonian-licensed merchandise for the retail market (outside Museum shops and mail-order catalogue) and developed PD&L Web site. 5/18/98 through 8/7/98.
- Christy Nyberg, Bachelor's Degree, University of Florida. Intern will assist with the development of a marketing package for presentation to potential licensees. 7/1/98 through 11/1/98.
- Elise Schimeck, Bachelor's Canidate, Michigan State University. Assists Product Managers in product development of Smithsonian-licensed merchandise for the retail market (outside Museum shops and mail-order catalogue). 5/18/98 through 8/7/98.
- Caroline Schumann, Bermannschule. Assist in producing the engagement calendar for 1999 and related duties. 10/14/97 through 12/5/97.

Smithsonian Center for Materials Research and Education

Stephanie Hornbeck, Master's Candidate, New York University Archaeological Conservation Intern. Field research to be conducted in Harappa, Pakistan and Copan, Honduras. 10/1/97 through 9/30/98.

Smithsonian Environmental Research Center

- Safra Altman, Bachelor's Degree, Brown University. Survey of the density and distribution of the parasite Perkinsus marinus in Macoma balthica clams in the Rhode River. 3/2/98 through 5/22/98.
- Dina Berin, Bachelor's Candidate, Oberlin College. Invasion Ecology. Intern will study the abundance, population structure, and general ecology of the green crab in Tuckerton, N.J. 6/1/98 through 8/20/98.
- Dorrit Blakeslee, Bachelor's Candidate, University of Chicago. Study on nutrient sedimentation and release in the Rhode River estuary. 6/22/98 through 8/28/98.
- Sally Box, University of Adelaide. Intern will study the impact of rising atmospheric carbon dioxide on plant and ecosystem processes. 6/8/98 through 8/14/98.
- Elizabeth Bricken, Bachelor's Candidate, Warren Wilson College. Modeling of the nitrogen and phosphorous flow in the Paruxent Watershed. 6/1/98 through 8/21/98.
- Patrick Campfield, Bachelor's Candidate, University of Maryland—College Park. Intern will study sperm limitation in Chesapeake Bay blue crabs. 5/29/98 through 8/29/98.
- Christine Chui, Master's Candidate, Yale University. Study of interaction between two toxigenic strains of Vibrio cholerae. 6/1/98 through 8/28/98.
- Claire Dacey, Bachelor's Degree, Stanford University. Canopy Studies. Study of leaf characteristics as indicators of light environment. 5/25/98 through 7/31/98.
- Payton Deeks, Bachelor's Candidare, Bowdoin College. Studying factors influencing juvenile blue crab prey selectivity of two clam species. 6/4/98 through 8/28/98.
- Sarah Eppley, Bachelor's Degree, Bucknell University. Chemistry. Physical characterization study of water sediment, and nutrient dynamics in a Paruxent River reach. 6/15/98 through 8/21/98.
- Mary Ford, Bachelor's Degree, Harvard. Environmental and ecology instruction. 3/30/98 through 6/19/98.
- Jon Hasfjord, Bachelor's Candidate, Warren Wilson College. Web page design for SERC education department. 5/26/98 through 8/14/98.
- Ingrid Hogle, Bachelor's Degree, University of Michigan. Determining phosphorus levels and mineralization rates in wetland soils. 4/20/98 through 7/10/98.
- David Johnson, Bachelor's Candidate, Duke University. An investigation of mixotrophy in Prorocentrum minimum. 6/8/98 through 8/29/98.
- Jonathan Lee, Bachelor's Candidate, University of California— Berkeley. How size-dependent predation risk affects the use of shallow water refuge. 5/26/98 through 8/22/98.

- Rooni Mathew, Master's Candidate, Duke University. Streamflow simulation model for the Paruxent River system. 6/1/98 through 8/21/98.
- Rebecca Miller. The role of Arbuscular mycorrhizae in seedling recruitment. 6/8/98 through 8/24/98.
- Jill Peloquin, Bachelor's Degree, Eckerd College. Photobiology. Utilization of flourometry to determine and define the effects of ultraviolet radiation on the photosynthesis of the Arctic kelps, Laminaria solidungula and Laminaria saccharinia. 6/15/98 through 10/2/98.
- Rachel Poretsky, Bachelor's Candidate, Brandeis University. Nutrient Lab. Probing for dentrification genes in soil microorganisms. 6/2/98 through 8/21/98.
- Kathryn Roache, Bachelor's Degree, University of Delaware. Gene probing of nitrogen reducing bacteria in a riparian forest system. 1/20/98 through 5/15/98.
- Federico Rotman, Bachelor's Degree, University of New Hampshire. Education. Population structure of two Rhode River bivalve species: Macoma balthica and Macoma mitchelli. 4/13/98 through 7/3/98.
- Lucia Salazar, Bachelor's Candidate, University of Oklahoma. Intern will study parasitic infestation of dinoflagellates, and trophic relationships amoung planktonic protozoa. 6/1/98 through 8/21/98.
- Sally Schoenfeld, Bachelor's Candidate, Emory University. Invasions Biology. Verifying Vibrios: A study of population dynamics of Vibrio cholerae in the Chesapeake Bay region. 5/18/98 through 8/7/98.
- Laura Schreeg, Bachelor's Candidate, Saint Mary's College. Dendroecological and ecophysiological analysis in gap versus nongap environments of deciduous and evergreen schrub understoreys. 5/25/98 through 8/14/98.
- Kristen Smeby, Bachelor's Candidate, Tulane University. Solar Biology Lab. 5/18/98 through 8/7/98.
- Cynthia Smith, Bachelor's Degree, Central Michigan University. Plant Ecology. 5/11/98 through 7/31/98.
- Maria Unger, Master's Candidate, University of Vienna. Anatomical adjustments of Scirpus olneyi to elevated CO₂. 6/8/98 through 8/28/98.
- Catherine Ware, Bachelor's Candidate, Dartmouth College. Study of two strains of Vibrio cholera to see if the competition between them affects their abundance on the zooplankton that they live on. 9/8/98 through 12/15/98.
- Enrico Yepez-Gonzalez, Bachelor's Candidate, University of Guadalajara. Study of the effects of elevated CO₂ on carbon export in marsh soil water. 4/1/98 through 7/24/98.

Smithsonian Institution Libraries

- Elizabeth Houck, Bachelor's Candidate, Smith College. NMAH Library. Assist with preparation of SIL exhibit describing the exploration of the southeastern United States through early literature. 9/8/98 through 12/17/98.
- Tina Mason, Master's Candidate, University of Texas, Austin. Preservation Services. Intern will work with rare-books conservation. 1/26/98 through 8/28/98.

Smithsonian Magazine

Laura Gonzales, Bachelor's Candidate, American University. Intern will be involved with most aspects of magazine publishing. 6/1/98 through 8/7/98.

Smithsonian Press/Smithsonian Productions

- Caroline Casey, Bachelor's Candidate, Claremont McKenna College. Intern will prepare manuscripts and illustrations for the SI Press book *Spaceflight*. 6/15/98 through 8/7/98.
- Patrece Dean, Master's Candidate, Howard University. Intern will assist with the maintenance of the audiotape archive and database. 5/18/98 through 8/31/98.
- Douglas Jameson, Bachelor's Candidare, Peabody Conservatory. Intern will assist with digital audio editing and audio studio production. Intern will also assist with the maintenance of the audiotape archive and database. 5/18/98 through 8/31/98.
- Maggie McWilliams, Bachelor's Candidate, Hollins College. Smithsonian Press. Intern will assist with a manuscript that SIPP is considering publishing with the British Film Institute. 1/5/98 through 1/30/98.

Smithsonian Institution Traveling Exhibition Service

- Jose Delannoy-Pizzini. To obtain a broad overview of collections management policies and procedures to assist in the assessment, acquisition, and documentation of the Pablo Casals Archival Collection. 9/21/98 through II/13/98.
- Casey-Marie Pelasara, High School Student, Glenelg Country School. Intern will assist with the development of the the exhibit This Land is Your Land: The Life and Legacy of Woody Guthrie. 6/16/98 through 7/30/98.
- Angelica Delfina Sanchez, Master's Candidate, University of Texas—San Antonio. Intern will prepare information on the traveling exhibit of Black Seminoles in Washington D.C. and Texas. 6/8/98 through 8/14/98.

Smithsonian Office of Education

- Claudia Arze-Bravo, Montgomery College. Publications. Intern will research Latino contributions in science and technology. 6/8/98 through 8/17/98.
- Felisa Brunschwig, Bachelor's Degree, Tufts University. Publications. Intern will research Latino contributions to science and technology. 6/8/98 through 8/17/98.
- Isabel Guajardo, Bachelor's Degree, VCU. Intern will assist with the creation of discovery boxes about Buddist art for use by teachers and assist with the summer camp program. 7/7/98 through 8/31/98.
- Swatantar Mann, Master's Degree. The intern will have the opportunity to observe and gain hands-on experience in creating classroom curriculum using museum resources. Ms. Mann will work with Deps. Museum School Teachers to develop a discovery box about Buddish art to use in the classroom. 4/20/98 through 12/31/98.

- Amy Navitsky, Bachelor's Candidate, Smith College. Publications. Intern will examine the contributions made by the Latino community to the history of science and technology. 6/8/98 through 8/17/98.
- Rossina Tran, Senior, University of Maryland, College Park. Work on SOE Web site and serve as a research assistant for NMAH. 11/14/97 through 2/14/98.
- Shauna Weiler, Bachelor's Candidate, University of California—Berkeley. Education. Review current literature and conduct primary research in object-based learning; research current programs available for K-12 students and educators in all Smithsonian museums; observe program events, seminars and conferences of SOE. 9/1/98 through 12/10/98.

Smithsonian Tropical Research Institute

- Nidia Maritza Aguisre Ateneio, Master's Candidate, Universidad Santa Maria La Antigua. Abundanaia distribucion y parametros dasometricos de aspecies maderables en la Cuenca del Canol. Proyecte di Menitereo-Componente Cobertura Boseosa. 4/13/98 through 8/13/98.
- Sofia Castillo, Master's Candidate, Fac. Ciencias Agropecoarias U.P. Coleccion y Indentificacion de plagas en semillas de Arboles Natives de Panama. 2/1/98 through 5/30/98.
- Mabelle Chong, Bachelor's Degree, University of Panama. Intern will study industrially important microfungi from decaying macromycetes. 2/1/98 through 7/30/98.
- Alexandra Moran. Intern will work with BioLead project. 5/1/98 through 9/30/98.
- Andrew Patterson, Bachelor's Candidate, University of Idaho. Intern will work with fertilization project on gigante peninsula supervised by Joseph Wright and Kyle Harme. 1/15/98 through 7/15/98.
- Maribel Arlene Gonzales Torres. Intern will study mtDNA variation in highland and lowland avian species complexes. 8/11/97 through 8/11/98.
- Gustavo Adolfo Vargas Urrego, Universidad de los Andes. Branch carbon balance and allocation during extreme El Nino and La Nina in a wet neotropical forest. 8/14/98 through 12/22/98.

The Smithsonian Associates

- Julia Bilek, Montgomery College. Discovery Theater. Intern will research folk tales for use in upcoming theater productions. 2/1/98 through 5/31/98.
- Corinne Gray, Bachelor's Candidate, Smith College. Study Tours. Intern will assist with the study tours program. 6/22/98 through 8/28/98.
- Kathleen Whelley, Bachelor's Candidate, Wellesley College. To get acquainted with the workings of educational tour planning, program design, marketing and evaluation as it relates to museums. 5/26/98 through 8/7/98.

Research Associates

Research Associate status is conferred by the directors of museums, research institutes, and offices on individuals from outside the Institution who are conducting ongoing research in which the Smithsonian has collections or expertise. Research Associates are granted access to the Institution's facilities and reference resources and often consult or collaborate with Smithsonian researchers. Most appointments of Research Associates are for a duration of three years and are renewable. The following is a list of individuals who held the title of Research Associate during fiscal year 1998.

Center for Folklife Programs and Cultural Studies

Mr. Roland Freeman Mr. Daniel Goodwin Dr. Ivan Karp Ms. Corinne Kratz Mr. Alan Lomax Mr. Worth Long Dr. Rene Lopez Ms. Kate Rinzler

Conservation Analytical Laboratory

Ms. Jacqueline S. Olin

Freer Gallery of Art/Arthur M. Sackler Gallery

Dr. Esin Aril Mr. W. Thomas Chase Ms. Elisabeth West Fitzhugh Dr. Thomas Lawton Mrs. Mary S. Slusser

National Air and Space Museum

Dr. John R. Breihan

National Museum of African Art

Dr. Labelle Prussin

National Museum of American Art

Dr. Wanda M. Corn Dr. Charles C. Eldredge

National Museum of American History

Gen. Roy K. Flint

National Museum of Natural History

Department of Anthropology

Ms. Patricia O. Afable Mr. Kenneth Bilby Dr. Tamara L. Bray Mr. Noel Broadbent Dr. Alison S. Brooks Mr. Roger H. Colten Dr. Anita G. Cook Dr. Karen Marie Dohm Dr. Jean-Paul Dumont Dr. Jean-Paul Dumont Dr. Ann Fienup-Riordan Dr. Catherine S. Fowler Dr. George C. Frison Dr. Joan M. Gero

Dr. Diane Patrice Gifford-Gonzalez Mr. Norman Hallendy Dr. Catherine A. Hawks Dr. Charlene James-Duguid Dr. Richard T. Koritzer, D.D.S. Mr. Edgardo Krebs Dr. Joel C. Kuipers Dr. H. Leedom Lefferts Dr. Bonnie S. Magnes-Gardiner Dr. Sally McLendon Dr. Betty J. Meggers Dr. Margareta Musilova Dr. Christopher Nagle Dr. Michael D. Petraglia Ms. Mercedes del Rio Dr. Robert G. Schmidt Dr. Douglas Siegel-Causey Ms. Nancy Sikes Dr. Kenvan G. Tomaselli Dr. John W. Verano Dr. Jeffrey K. Wilkerson Dr. Frederick A. Winter Dr. John E. Yellen

Office of Biodiversity Programs

Dr. Claude Gascon

Department of Botany

Dr. Patrick Herendeen Dr. Merideth Anne Lane Dr. Elbert L. Little Dr. Diane S. Littler Dr. Alicia Lourteig Dr. Nancy Morin Dr. Mark Plotkin Dr. Robert J. Soreng Dr. Basil Stergios Dr. Anna L. Weitzman

Department of Entomology

Dr. David Adamski Dr. Joachim Adis Dr. David H. Ahrenholz Dr. Annette Aiello Dr. Leeanne E. Alonso Dr. Vitor O. Becker Dr. William E. Bickley Dr. Andrew Van Zandt Brower Dr. Brian V. Brown Mr. Robert C. Busby Dr. Astrid Caldas Mr. Curtis J. Callaghan Dr. Robert W. Carlson Dr. Gabriela Chavarria Dr. Eduardo Dominguez Dr. Lance Durden Dr. Robert L. Edwards Dr. Neal L. Evenhuis Mr. John Fales Dr. Douglas C. Ferguson Dr. Adrian B. Forsyth Dr. Amnon Freidberg Dr. Raymond G. Gagne Ms. Nicole Gibson Dr. Jeffrey Glassberg Dr. E. Eric Grissell Dr. Raiph E. Harbach Dr. Michael W. Hastriter Dr. Thomas J. Henry Mrs. Elaine R.S. Hodges Dr. Ronald W. Hodges Dr. Gustavo Hormiga Dr. Darlene D. Judd Dr. George O. Krizek Dr. James Donald Lafontaine Dr. Gerardo Lamas Dr. Berte Loiselle Dr. Arnold S. Menke Dr. Douglass R. Miller Dr. Scott E. Miller Dr. Charles Mitter Dr. Sreve Nakahara Dr. David A. Nickle Dr. Allen L. Norrborn Dr. Paul A. Opler Dr. Enrique G. Ortiz Dr. James Pakaluk Dr. John T. Polhemus Dr. Patricia Gentili Poole Mr. Curtis Sabrosky Dr. Nikolaj Scharff Dr. Michael E. Schauff Dr. Jeffrey W. Shultz Dr. Robert L. Smiley Dr. David R. Smith Dr. M. Alma Solis Dr. Felix A.H. Sperling Dr. Manya B. Stoetzel Dr. F. Christian Thompson Dr. Natalia J. Vandenberg Dr. Richard E. White Dr. Norman E. Woodley

Department of Invertebrate Zoology

Dr. G. Denton Belk Dr. Barbara Best Dr. Darryl L. Felder Dr. Mark J. Grygier Dr. John R. Holsinger Dr. Roy K. Kropp Dr. Marjorie L. Reaka-Kudla Dr. E. Taisoo Park Mr. Richard E. Petit Dr. Janet W. Reid Dr. Edward E. Ruppert Dr. Michael Vecchione

Office of Exhibits

Prof. Franz Zeithammer

Department of Paleobiology

Dr. Shelton P. Applegate Dr. William I. Ausich Dr. Raymond L. Bernor Dr. Annalisa Berta Dr. Robyn Burnham Dr. Zhongyuan Chen Dr. James M. Clark Dr. Stephen J. Culver Dr. John D. Damuth, Jr. Dr. Daryl P. Domning Dr. J. Thomas Dutro, Jr. Dr. Ralph E. Eshelman Dr. Jerzy Fedorowski Dr. Robert A. Gastaldo Dr. Thomas G. Gibson Dr. Michael D. Gottfried Dr. Rex Alan Hanger Dr. Robert W. Hook Dr. Nigel Hughes Dr. Scott E. Ishman Dr. Thomas W. Kammer Dr. Carl F. Koch Dr. Spencer G. Lucas Dr. Christopher G. Maples Dr. Jerry N. McDonald Dr. Herbert W. Meyer Dr. Robert B. Neuman Dr. William A. Oliver, Jr. Dr. Lisa E. Osterman Dr. John Pojeta, Jr. Dr. Louis J. Pribyl, Jr. Dr. John E. Reperski Dr. William J. Sando Dr. Judith Skog Dr. Anthony D. Socci Dr. I. Gregory Sohn Dr. Steven M. Stanley Dr. Joshua I. Tracey Dr. James W. Valentine Dr. Katherine Sian Davies-Vollum Dr. Andrew G. Warne

Dr. Debra A. Willard Dr. Keddy Yemane Dr. Ellis L. Yochelson

Department of Vertebrate Zoology

Dr. Allen Allison Dr. Ronald Altig Dr. Aaron Marthew Bauer Mr. Bruce M. Beehler Dr. Eleanor D. Brown Dr. John R. Burns Dr. John E. Cadle Dr. Philip J. Clapham Dr. C. Kenneth Dodd, Jr. Dr. Maureen Donnelly Dr. Louise H. Emmons Dr. Carl H. Ernst Dr. Robert Ewan Fordyce Dr. Alfred L. Gardner Dr. J. Whitfield Gibbons Dr. David A. Good Dr. Harry J. Grier Dr. Lester A. Hart Dr. Lawrence R. Heaney Dr. Stephen Blair Hedges Dr. Richard Highton Dr. Aleta Hohn Mr. Ivan Ineich Mr. Morton L. Isler Mrs. Phyllis R. Isler Dr. Elisabeth Kalko Ms. Roxie C. Laybourne Dr. Bradley C. Livezey Dr. Jonathan B. Losos Dr. Lori Marino Dr. Linda R. Maxson Dr. Roy W. McDiarmid Mr. Joseph C. Mitchell Dr. Molly R. Morris Dr. Thomas A. Munroe Dr. Guy G. Musser Dr. Hidetoshi Ota Dr. William Perrin Mr. Gregory K. Pregill Dr. John E. Randall Dr. Rafael Omar de Sa Dr. Elizabeth Anne Schreiber Dr. Norman J. Scott, Jr. Dr. Jiakun Song Dr. Brian J. Stafford Mr. Wayne C. Starnes Dr. David L. Stein Dr. Ian R. Swingland Dr. William F. Smith-Vaniz

Mr. Richard J. Wassersug Mrs. Marilyn J. Weitzman

National Zoological Park

Biological Programs

Dr. Ann P. Beyers Dr. Sue A. Ellis Dr. Mary M. Hagedom Dr. Stephen J. O'Brien Dr. Nancy Cameron Pratt Dr. William F. Rall Dr. Samuel K. Wasser

Conservation Research Center

Dr. Steven R. Beissinger Dr. Joel Berger Dr. Richard Despard Estes Dr. John Gordon Frazier Dr. Martha S. Fujita Dr. Karen L. Goodrowe Dr. Deborah Caldwell Hahn Dr. Yadvendradev Jhala Dr. William R. Lance Dr. Mary Victoria McDonald Dr. Charles W. McDougal Dr. William J. McShea Dr. Jill D. Mellon Dr. Brian Miller Dr. Sriyanie Miththapala Dr. Illar Muul Dr. Mary Ann Ottinger Dr. Terry Phillips Dr. Edward D. Plotka Dr. Jorge Humberto Vega Rivera Dr. Terry Lynn Roth Dr. Mitchel Schiewe Dr. Lisa G. Sorenson Dr. Michael D. Sorenson Ms. Rebecca E. Spindler Dr. Bridget Joan Stutchbury Dr. Michael Stuwe Dr. Katerina Vlcek Thompson Dr. Richard H. Wagner Dr. Paul J. Weldon

Dr. Pan Wenshi Dr. Nadja Wielebnowski Dr. Kevin Winker

Department of Zoological Research

Dr. John M. Francis Dr. David W. Johnston Dr. Patricia Majluf Dr. Elizabeth Anne Perry

Department of Herpetology

Dr. James B. Murphy

Interpretive Programs

Dr. Judy M. Manning

Office of the Provost

Dr. Wilton S. Dillon

Smithsonian Institution Archives

Joseph Henry Papers

Dr. Albert E. Moyer

Smithsonian Astrophysical Observatory

Dr. Alastair Cameron Dr. Charles Gammie Dr. Alyssa Goodman Dr. Josh Grindlay Dr. Robert Kirshner Dr. Chris Kochanek Dr. Avi Loeb Dr. Jane Luu Dr. Ramesh Narayan Dr. William Press Smithsonian Environmental Research Center

Dr. James T. Carlton Dr. Paul R. Jivoff Dr. Romuald N. Lipcius Dr. David L. Smith Prof. Diane K. Stoecker Dr. Richard A. Tankersley Dr. Simon F. Thrush Dr. Keiji Wada Dr. Donna L. Wolcott Dr. Thomas G. Wolcott

Smithsonian Tropical Research Institute

Dr. Tomas Arias Dr. Hector Barrios Dr. Mary Alice Coffroth Dr. Phyllis D. Coley Dr. Laurel Collins Dr. Nicholas J. Georgiadis Dr. Gregory S. Gilbert Dr. Mahabir Gupta Dr. Roberto Ibanez Dr. Jorge Illueca Dr. Peter Jung Dr. Howard R. Lasker Dr. Steve Mulkey Dr. Diomedes Quintero Dr. Robert E. Ricklefs Dr. Tyson Roberts Dr. Michael Ryan Dr. Hans-Ulrich Schnitzler Dr. Robert F. Stallard Dr. Henry Stockwell Dr. Melvin Tyree

Within we want in want withing 1 October 1997-30 before the total the trachtering					
Principal Investigator	Sponsor	Award Title	Date Awarded	Total Awarded	Purpose
Anacostia Neighborhood Museum					
Newsome, Steven	Henry Luce Foundation	Speak to My Heart Exhibition Subtoral awards received:	30-Sep-98	80,000 80,000	Exhibition (1)
Archives of American Art	Art				
Byers, James	Pasadena Art Alliance	Transcriptions of Artists' Oral Histories	80-nul-oi	2,000	Research
Dawson, Barbara	Ahmanson Foundation	Processing and Cataloging the Millard Sheets Collection	10-Jun-98	29,000	Research
Dawson, Bailsara	Abington Foundation	Inventory of William Mozart McVey Documents Subtotal awards received:	07-Aug-98	10,000 41,000	Research (3)
thur M. Sackler Ga	Arthur M. Sackler Gallery/Freer Gallery of Art				
Beach, Milo	Mettopolitan Center for Eastern Art Studies	The Shimada Prize	08-Jan-98	12,000	Other
Scars, Patrick	Philip L. Graham Foundation	Freer Courtyard Accessibility Project	30-Sep-98	150,000	Other
Ybarra-Frausto, Tomas	Rockefeller Foundation	Devi: The Great Goddess	30-Sep-98	100,000	Exhibition
		Subtotal awards received:		262,000	(3)
nter for Folklife Pr	Center for Folklife Programs and Cultural Studies				
Cadaval, Olivia	U.SMexico Fund for Culture	The River Is Ours: Culture and Ecology in the Rio Bravo/Rio Grande Program	24-Oct-97	20,000	Other
Kurin, Richard	Wisconsin Sesquicentennial Commission	Wisconsin Program - 1998 Folklife Festival	30-Sep-98	48,263	Exhibition
Kurin, Richard	Phil Hardin Foundation	Discovering Our Delta	30-Sep-98	18,750	Research

The following two tables list only those grants and contracts that were awarded to Smithsonian Institution offices and bureaus during fiscal year 1998. Ongoing grants and contracts that

Award Activity at the Smithsonian Institution in Fiscal Year 1998

140

Principal Investigator	Sponsor	Award Title	Date Awarded	Total Awarded	Purpose
Center for Museum Studies Ellis, Rex R	idies Rockefeller Foundation	Humanities Fellowships on Latino Cultural Research in a Museum Context Subtotal awards received:	14-Aug-98	81,495 81,495	Fellowship (1)
Cooper-Hewitt National Design Museum Dunn, Dorothy NYCPAE/Anner Dunn, Dorothy Altman Foundari Fellowes, Lucy National Renewal	al Design Museum NYCPAE/Annenberg Foundation Altman Foundation National Renewable Energy Laboratory	Educational Improvment and Reform Through the Arts Design Directions Mount and Display DOE/NRL Artifacts: "Under the Sun"	14-May-98 22-Sep-98 30-Sep-98	4,975 76,500 10,500	Education Education Exhibition
Fellowes, Lucy Piłgrim, Dianne Piłgrim, Dianne	Dept. of Energy New York State Council on the Arts Peter Krueger-Christie's Foundation,	Under the Sun: An Outdoor Exhibition of Light Unlimited by Design 1998-1999 Peter Krueger-Christie's Fellow at CHNDM	12-Dec-97 30-Sep-98 24-Sep-98	75,000 10,000 20,000	Exhibition Exhibition Fellowship
	Inc.	Subtotal awards received:		196,975	(9)
Hirshhorn Museum and Sculpture Garden Benezra, Neal Lannan Foundati Viso, Olga Elizabeth Firesto Foundation	d Sculpture Garden Lannan Foundation Elizabeth Firestone Graham Foundation	Support for Ditections Series in 1998 Directions Series: Samuel Taylor-Wood Subtotal awards received:	03-Dec-97 30-Sep-98	30,000 10,000 40,000	Exhibition Exhibition (2)
International Center Hirsch, Leonard Hirsch, Leonard Hyatt, Vera	Agency for International Development Dept. of Interior Conservation International	Desertification Conference Indigenous Communities Workshop Ghana Central Region Natural Resources Conservation and Historic Preservation Project Subtotal awards received:	12-Jun-98 30-Sep-98 10-Mar-98	20,000 500 85,963 106,463	Research Research Research (3)
National Air and Space Museum Alison, Thomas Central Campbell, Bruce Nation A.	: Museum Central Intelligence Agency National Aeronautics and Space Administration	Model Aircraft Installation Radar Studies of the Lunar Regolith	17-Jul-98 24-Feb-98	2,500	Exhibition Research
Campbell, Bruce Engen, Donald	National Aeronautics and Space Administration Commonwealth of Virginia	Analysis of Venus Geology Using Magellan Databases and Terrestrial Analogs VA DOT Funding for Dulles Extension	20-Mar-98 01-Jun-98	119,200 178,349	Research Construction
Herken, Gregg	Argonne National Labratory/DOE	DOE Historic Themes Project	03-Feb-98	6,821	Other

Principal Investigator	Sponsor	Award Title	Date Awarded	Total Awarded	Purpose
Jacobs, William	National Transportation Safety Board	National Transportation Safety Board Exhibit at NASM	17-Oct-97	35,000	Exhibition
Maxwell, Ted	National Acronautics and Space Administration	Geomorphic Analyses of the Martian Highlands	09-Mar-98	\$5,000	Rcsearch
Maxwell, Ted	National Aeronautics and Space Administration	Mars Crater Ejecta Morphology	18-Feb-98	25,000	Research
Neufeld, Michael	San Diego Foundation/Reuben H. Fleet Foundation Fund	A. Verville Fellowship	03-Nov-97	10,000	Fellowship
Scheffler, Elizabeth	Dept. of Transportation (Interagency Transfer)	Transportation-related Projects, Artifacts, and Research	08-Sep-98	891,000	Other
Smith, Howard	National Aeronautics and Space Administration	ISO Guest Observer Data Analysis and LWS Instrument Team Activities	10-Nov-97	102,000	Research
Watters, Thomas	Gertrude E. Skelly Charitable Foundation	NASM Wcbsite	14-Nov-97	\$0,000	Education
Zimbelman, James	National Aeronautics and Space Administration	Topical Geologic Mapping of Mars and Venus	13-Apr-98	21,700	Research
Zimbelman, James	National Aeronautics and Space Administration	Long Lava Flows on the Terrestrial Planets	11-Mar-98	30,000	Research
Zimbelman, James	National Aeronautics and Space Administration	Educational Outreach: Regional Planetary Imaging Facility	31-Aug-98	10,000	Education
		Subtotal awatels received:		1,560,574	(15)
National Museum of American Art	nerican Art				
Broun, Elizabeth	Fidelity Foundation	Image and Memory: Picturing Old New England	10-Aug-98	50,000	Exhibition
Broun, Elizabeth	Community Foundation for the National Capitol Region	Docent Education Training Project	30-Sep-98	10,600	Education
Broun, Elizabeth	Community Foundation for the National Capitol Region	Docent Education Training Project	30-Sep-98	2,500	Education
Panzer, Nora	Morris and Gwendolyn Cafritz Foundation	American Art in the DC Public Schools	19-Jun-98	25,000	Education
		Subtotal awards received:		88,100	(4)
National Museum of American History	nerican History				
Becker, Ronald Becker, Ronald	Pew Chartable Trusts John S. and James L. Knight	Star-Spangled Banner Preservation Project Star Spangled Banner Preservation Project	02-Jul-98 06-Jul-98	5,000,000 250,000	Research Research
Fleckner, John	Eugene and Agnes E. Meyer	Scurlock Studio Collection	24-Oct-97	50,000	Other
	Foundation				

.

Annual Report of Award Activities 1 October 1997–30 September 1998 (Excluding SAO) (cont'd)

Principal Investigator	Sponsor	Award Title	Date Awarded	Total Awarded	Purpose
Gradwohl, Judith	Rockefeller Foundation	Revealing Things Project	22-Jul-98	50,000	Publication
Hasse, John	DOI. National Park Service	New Orleans Jazz Music Editions	21-Aug-98	26,700	Research
Locke, Jennifer	Civil Liberties Public Education Fund	"A More Perfect Union" Exhibition Upgrade	12-Aug-98	40,000	Research
Perge, Catherine	Freed Foundation	Duke Ellington Youth Project	01-Apr-98	15,000	Education
		Subtotal awards received:		5,431,700	(2)
National Museum of Natural History	tural History				
Anklam, Marian	NASA/Stennis Space Center	Remote Sensing Expeditions	or-Dec-97	149,885	Rescarch
Anklam, Marian	NASA/Stennis Space Center	Remote Sensing Expeditions	01-Sep-98	353,961	Research
Bell, Deborah	National Institutes of Health	Support for Mounting Herbarium Specimens	10-Mar-98	4,620	Research
Crowell, Aron	Alaska Humanities Forum/NEH	Alaska Native Museum and Culture Center Development and Management Workshop	17-1'eb-98	I,000	Other
Dallmeier, Francisco	Shell Prospecting and Development (Peru) B.V.	Biodiversity Research in Peru	21-Nov-97	40,000	Research
Dallmeier, Francisco	Shell Prospecting and Development (Peru) B.V.	Biodiversity Research in Peru	07-Jan-98	294,000	Research
Dallmeier, Francisco	Shell Prospecting and Development (Petu) B.V.	Biodiversity Research in Peru	27-Jul-98	160,000	Research
DePriest, Paula	National Science Foundation	Monographic Studies in the Cladoniaceae	10-Aug-98	150,000	Research
Erwin, Douglas	National Aeronautics and Space Administration	A High-Resolution Paleontological and Geochronologic Analysis of the Permian Mass Extinction	12-Jun-98	74,993	Research
Fauchald, Kristian	National Science Foundation	Biological Collections from Polar Regions	18-Jun-98	249,308	Research
Fitzhugh, William	Maine Community Fund	A Major Social History of Labrador	03-Nov-97	2,000	Publication
Fitzhugh, William	DOI, National Park Service (Interagency Transfer)	Assist in the Development of U.SRussian Exchanges, Research and Cooperative Programs	06-May-98	41,751	Research
Fitzhugh, William	DOI, National Park Service	Conducting Archeological Research on Lands Administered by the National Park Service in Alaska	08-May-98	\$6,500	Research
Fitzhugh, William	Nippon Foundation	Spirit of a Northern People	08-Jul-98	1,342,400	Research
Fitzhugh, William	Museum Loan Network	Arts Alaska: The Smithsonian's Alaskan Loan Program	05-Aug-98	12,000	Education
Gascon, Claude	National Aetonautics and Space Administration	Anthropogenic Landscape Changes and the Dynamics of Amazonian Forest Bio Mass	86-un[-61	175,289	Research
Heyer, W. Ronald	National Aeronautics and Space Administration	Amphibian Populations and Global Climates	30-Oct-97	35,582	Research
Homiak, John	Reed Foundation, Inc.	Digitization of the Anne Chapman Collection	17-Mar-98	2,000	Other
Homiak, John	Laura Boulton Foundation, Inc.	HSFA Outreach Project	14-Sep-98	8,000	Other
. (0000 23	Danaah

			Date		¢
Principal Investigator	Sponsor	Award Title	Awarded	Total Awarded	Purpose
Kress, W. John	National Science Foundation	National Museum of Natural History Research Training Program	24-Feb-98	30,000	Education
Krupnik, Igor	DOC, Sea Grant College (Maryland)	Ecosystem Variability and Subsistence Hunting Pressure in the Dering Strait	90-Aug-98	27,670	Research
Krupnik, Igor	National Science Foundation	The Beringian Yu'pik Heritage Project: The Population History Sourcebook of St. Lawrence Island	17-Sep-98	48,553	Research
Laurance, William	Conservation, Pood and Health Foundation, Inc.	Woody Vines as Indicators of Chronic Disturbance in Amazonian Forest Fragments	04-May-98	11,240	Research
Luhr, James	Dept. of Energy	CD-ROM Access to the Global Volcanism Program	23-Jun-98	67,200	Research
MacLeod, Ken	Texas A&M Research Foundation/NSF	An Integrated Paleotological, Geochemical, and Sedimentological of Changes in Ocean Structure	22-Oct-97	20,000	Other
MacPherson, Glenn	National Aeronautics and Space Administration	Isotropic, Petrological and Trace Element Studies of Primitive Solar System Material	28-May-98	24,583	Research
Mathis, Wayne	National Science Foundation	Monographic Research in the Diptera	20-Apr-98	102,681	Research
McCoy, Timothy	National Acronautics and Space Administration	Experimental Studies of Igneous Processes in Enstatite Meteorites	30-Apr-98	17,500	Research
McCoy, Timothy	National Science Foundation	Research Training Program/Alliances for Minority Participation Partnership	22-May-98	120,758	Education
McCoy, Timothy	National Science Foundation	National Museum of Natural History Research Training Program—Geological Sciences	10-Mar-98	20,000	Education
Norenburg, Jon	George Washington University/NSF	Bringing the Phylum Nemertea and its Taxonomy into the 20th and 21st Centuries	26-Jan-98	110,925	Research
Norenburg, Jon	National Institutes of Health	Maintaining Voucher Collection of Marine Animals	10-Oct-97	666'6	Research
Norenburg, Jon	George Washington University/NSF	Bringing the Phylum Nemertea and its Taxonomy into the 20th and 21st Centuries	21-Aug-98	101,870	Research
Osterman, Lisa	Texas A&M Research Foundation/NSF	Participation in Scientific Cruise Leg 178, Occan Drilling Program	11-Feb-98	17,729	Research
Potter, Charles	Dept. of Commerce	Add Marine Mammal Records and Bibliographic Data to Existing Databases	03-Dec-97	15,000	Research
Rasmussen, Kenneth	National Science Foundation	The Quaternary Record of Lake-Level Oscillation and Climate Change: Lake Issyk-Kul, Kyrgyzstan	30-Mar-98	\$,000	Research
Rasmussen, Kenneth	National Science Foundation	Microbialites and Deep-Basin Sediments of Modern and Ancient Lake Issyk-Kul, Kyrgyzstan	22-Jun-98	15,000	Research
Rice, Mary	Link Foundation	Graduate Student Training in Matine Science	18-Jun-98	15,000	Education
Rosenberger, Alfred	University of Texas at Houston	Smithsonian-Intercon Partnership	10-Aug-98	15,750	Research
Ruetzler, Klaus	National Science Foundation	Enhance Research Capabilities at Carrie Bow Cay Field Station,	26-Nov-97	10,647	Other

Annual Report of Award Activities 1 October 1997–30 September 1998 (Excluding SAO) (cont'd)

a Itor	Sponsor	Award Title			
heresa na na nara nara nara			Awarded	Total Awarded	Purpose
	Science Poundation	Stable Isotope Analysis of Early Hominid Localities in the African Rift	21-Sep-98	81,750	Research
	Wenner-Gren Foundation	The Legacy of the Afro-Cuban Cabildos: Ethnic Formationas and Contemporary Cultural Practices	11-Dec-97	6,000	Research
	Environmental Protection Agency (Interagency Transfer)	Use of Indigenous Knowledge for Risk Assessment Based Ecological Research Planning	or-Dec-97	26,070	Instruction
	Interior	General Support for Carrie Bow Cay Field Station, Belize	96-nul-fo	\$,000	Other
	Missouri Botanical Garden	Flora of North America	30-Dec-97	15,140	Research
	National Aeronautrics and Space Administration	Forces of Change: An Exhibition on Global Change	04-Aug-98	200,000	Exhibition
	National Aeronautics and Space Administration	Forces of Change: An Exhibition on Global Change	07-Jan-98	250,000	Exhibition
	Asian Cultural Council	Kamuy: Spirit of the Ainu Exhibition	06-Apr-98	8,000	Exhibition
Williams, Jeffrey Environn	Environmental Protection Agency	Identification, Atchival and Data Management of Fish Collections	22-Jul-98	60,000	Research
Wilson, Don Homelan	Homeland Foundation	Biological Dynamics of Forest Fragments Project	13-Mar-98	20,000	Research
Wilson, Don Mellon F	Mellon Foundation	Biological Dynamics of Forest Fragments Project	25-Jun-98	\$0,000	Research
Wilson, Don Environn (Inte	Environmental Protection Agency (Interagency Transfer)	Interagency Taxonomy Information System	86-Ju[-60	250,000	Research
Wilson, Don Environn (Int	Environmental Protection Agency (Interagency Transfer)	Interagency Taxonomic Information System-Data Development	24-Jul-98	50,000	Research
Zug, George DOC, Se	DOC, Sea Grant College (Maryland)	Skeletochronology of Pacific Marine Turtles Subtotal awards received:	13-Jan-98	4,400 5,329,754	Research (55)
National Museum of the American Indian	Indian				
Bernstein, Bruce Andrew	Andrew W. Mellon Foundation	Support for Conservation Training	18-Sep-98	29,000	Other
Colonghi, John New York Comn Weatherford, Ford Foundation Elizabeth	New York Community Trust Ford Foundation	Support for a Museum Fundraising Campaign 1997 Native American Film and Video Festival at NMAI	06-Mar-98 12-Nov-97	30,000 100,000	Other Education
Weatherford, U.SMey Elizabeth	U.SMexico Fund for Culture	Video Native America: An International Traveling Video Festival	24-Dec-97	10,450	Exhibition
Weatherford, Ford Foundation Elizabeth	ndation	The Film and Video Web Fund	26-Aug-98	125,000	Education
West, W. Ríchard J.D. and	J.D. and C.T. MacArthur Foundation	Support for the Cultural Resources Center at NMAI Subtoral awards received:	22-Oct-97	500,000 704.460	Education

Principal Investigator	Sponsor	Award Title	Awarded	Total Awarded	Purpose
National Postal Museum					
Bruns, James	U.S. Postal Service	1998 Operations at the Postal Museum Subtotal awards received:	02-Oct-97	2,664,083 2,664,083	Exhibition (I)
National Science Resources Center	ces Center				
Lapp, Douglas Lapp, Douglas	National Science Foundation National Science Foundation	Science and Technology Concepts for Middle Schools (STC/MS) Leadership and Assistance for Science Education Reform	21-Sep-98 01-Jun-98	869,027 1,043,453	Education Education
Lapp, Douglas Lapp, Douglas	Robert Wood Johnson Foundation Robert Wood Johnson Foundation	Science and Technology Concepts for Middle Schools (STC/MS) Leadership and Assistance for Science Education Reform	86-nu[-?0 86-nu[-?0	400,000 375,000	Education Education
		Subtotal awards received:		2,687,480	(4)
National Zoological Park	_×				
Beck, Benjamin	Frankfort Zoological Society	Reintroduction of Golden Lion Tamarins, 1998	03-Aug-98	106,614	Research
Boness, Daryl	NASA (Interagency Transfer)	Harbor Seal Study–Year Two	30-Sep-98	115,000	Research
Boness, Daryl	NASA (Interagency Transfer)	Harbor Seal Study-Year Three	26-Nov-97	119,754	Research
Brown, Janine	American Zoo and Aquarium Association	Improving Artificial Insemination Success in Tigers by Optimizing Hormonal Induction Therapy	02-Dec-97	9,250	Research
Brown, Janine	Kansas City Zoological Park	Animal Diagnostic Testing for Other Zoos	01-Apr-98	200	Research
Dittus, Wolfgang	Earthwatch Expeditions, Inc.	Behavioral Ecology of Toque Macaques	30-Sep-98	79,200	Research
Fleischer, Robert	State of California	Population Movements and Potential Barriers to Movements between Populations of San Toanuin Kir Floxes	30-Jun-98	40,000	Research
Fleischer, Robert	State of California	Genetic Research: Constructing and Screening of GKR Microsatellite Enriched Library	oı-Apr-98	2,000	Research
Fleischer, Robert	Dept. of Interior	DNA Assays from Kit Fox Scat Samples	or-Apr-98	I,200	Research
Fleischer, Robert	DOI, USGS/BRD	Genetic Structure of Common Raven Populations	22-Sep-98	15,750	Research
Greenberg, Russell	National Geographic Society	Conservation Value of Coffee Plantations for Breeding Tropical Birds	01-Apr-98	18,000	Research
Greenberg, Russell	Winrock International/USAID	Development of Environmentally Friendly Coffee in Peru	01-Jun-98	115,392	Research
Hagerdon, Mary	DOC, Sea Grant College (Maryland)	Cryopreservation of Fish Embryos: Permeability of the Yolk Syncytial Layer	08-Apr-98	40,822	Research
McShea, William	National Fish and Wildlife Foundation	Landscape Features that Determine the Distribution of Volant and Terrestrial Small Mammals	18-Jun-98	16,000	Research
McShea, William	Dept. of Agriculture	Long-Term Monitoring of Migratory Birds Within the George	25-Feb-98	16,000	Research

Annual Report of Award Activities 1 October 1997–30 September 1998 (Excluding SAO) (cont'd)

Principal Investigator	Sponsor	Award Title	Date Awarded	Total Awarded	Purpose
McShea, William	Dept. of Agriculture	Establishing Monitoring Protocol for Small Mammals on	25-Sep-98	32,500	Research
McShea, William	Earthwatch Expeditions, Inc.	Allegheny Mountain Shenandoah Wildlife	24-Nov-07	020 22	Record
Nichols, Donald	Dept. of Interior	Pathogenesis of Ophidian Paramyxoviris Infection in the Brown Tree Snake	24-Jul-98	27,600	Research
Nichols, Donald	Dept of Interior	Pathogenisis of Ophidian Paramyxovirus in the Brown Tree Snake (Boiga Irregularis)	25-Sep-98	265,974	Research
O'Brien, Stephen	Winn Feline Foundation	Development of Genetic Databases	30-Sep-98	2,000	Research
Oftedal, Olav	DOI, Bureau of Land and Mines	Nutritional Studies on the Desert Tortoise and Plant Pep Analyses in the Eastern Mojave	30-Jun-98	180,000	Research
Penfold, Linda	American Zoo and Aquarium Association	Characterization and Hormonal Control of Aggression in Gerenuk Bachelor Groups	27-Scp-98	16,070	Research
Petit, Lisa	DOI, USGS/BRD	Breeding Success of Bird Species Nesting in Forest Understory	30-Sep-98	16.000	Recearch
Pukazhenthi, Budhan	National Institutes of Health	Cryopreservation of Spermatozoa for Enhancing Reproduction in Rare Biomedical Models	30-Jun-98	66,937	Research
Rappole, John	DOI, National Biological Survey	Golden Warbler Wintering Habitat Delineation	31-Jul-98	49,470	Research
Rappole, John	State of Virginia/George Mason University	Critical Components of Hydrologic Variability in Tidal Freshwater Wetlands	30-Sep-98	20,000	Research
Rappole, John	National Geographic Society	Conservation Strategies for Migratory Birds Using Myanmar's Dipterocarp Monsoon Forests	12-Mar-98	19,905	Research
Robinson, Michael	Friends of the National Zoo	Calendar Year 1998 FONZ Grant Program	20-Mar-08	090 283	Record
Wemmer, Christen	World Wildlife Fund-U.K.	Reintroduction of Four Elephants in Lampang	28-Jan-98	12,190	Research
Wildt, David	USDA, Agriculture Research Service	Comparative Semen Cryopreservation of Poultry and Non-domestic Avian Species	23-Sep-98	20,000	Research
		Subtotal awards received:		2,045,038	(30)
Office of the Provost					
Carrigan, Michael	Scottsdale Cultural Council	"Icons" Exhibition	17-Oct-97	1,100,000	Exhibition
Carrigan, Michael	Centro Alameda, Inc. (Affiliation)	Centro Alameda in San Antonio, Texas Affiliation Program	10-Dec-97	30,000	Education
Carrigan, Michael	Bisbee (Affiliation)	Bisbee Affiliation Program	30-Sep-98	I,000	Education
Carrigan, Michael	Boys Harbor (Affiliation)	Boys Harbor Affiliation Program	30-Sep-98	2,500	Education
Carrigan, Michael	Centro Alameda, Inc. (Affiliation)	Centro Alameda, Inc. Affiliation Program	30-Sep-98	100,000	Education
Carrigan, Michael	Dallas Museum of Natural History (Affiliation)	Dallas Museum of Natural History Affiliation Program	30-Sep-98	2,500	Education
Carrigan, Michael	Florida World Museum (Affiliation)	Florida World Museum Affiliation Program	30-Sep-98	2,500	Education
Carrigan, Michael	Heritage Harbor (Affiliation)	Heritage Harbor Affiliation Program	30-Sep-98	2,500	Education
Carrigan, Michael	Inventure Place (Affiliarion)	Inventure Place Affiliation Decoram			

WITHUR INCOULD MAN	TIMMENT AND AN AT A MARCHARING & OCCORDER ADD - DO OCCUMENT 1990 (ANCHUMING DIVO) (ANN AN	1990 (Excluding on Strong 4)	¢		
Principal Investigator	Sponsor	Award Title	Date	Total Awarded	Purpose
Carrigan, Michael	Kansas Cosmosphere (Affiliation)	Kansas Cosmosphere Affiliation Program	30-Sep-98	2,500	Education
Carrigan, Michael	Memphis Rock 'N' Soul, Inc. (Affiliation)	Memphis Rock 'n' Soul Affiliation Program	30-Sep-98	2,500	Education
Carrigan, Michael	Miami Museum of Science (Affiliation)	Miami Museum of Science Affiliation Program	30-Sep-98	\$,000	Education
Carrigan, Michael	Museo de Arte de Puerto Rico (Affiliation)	Museo de Arte de Puerto Rico Affiliation Program	30-Sep-98	2,500	Education
Carrigan, Michael	Museum of the Americas (Affiliation)	Museum of the Americas Affiliation Program	30-Sep-98	2,500	Education
Carrigan, Michael	National Museum of Industrial History (Affiliation)	National Museum of Industrial History Affiliation Program	30-Sep-98	85,006	Education
Carrigan, Michael	National Museum of Jazz (Affiliation)	National Museum of Jazz Affiliation Program	30-Sep-98	2,500	Education
Carrigan, Michael Carrigan, Michael	Origins of the Southwest (Affiliation) Public Corporation for the Arts	Origins of the Southwest Affiliation Program Public Corporation for the Arts Affiliation Program	30-Sep-98 30-Sep-98	5,000 Ι,000	Education Education
	(Affiliation)				
Carrigan, Michael	St. Louis Museum (Affiliation)	St. Louis Museum Affiliation Program	30-Sep-98	2,500	Education
Carrigan, Michael	San Carlos Institute (Affiliation)	San Carlos Institute Affiliation Program	30-Sep-98	2,500	Education
O'Connor, J. Dennis	National Science Foundation	Science on the Mall: Planning Phase Subtotal awards received:	06-Feb-98	231,793 1,588,799	Exhibition (21)
Office of the Undersecretary	tary				
Lindeman, Kathryn	Chevy Chase Federal Savings Bank	Washington Post Sampler Ad (1998) Subtotal awards received:	01-Apr-98	60,000 60,000	Publication (I)
Smithsonian Archives					
Rothenberg, Marc	Richard Lounsbery Foundation, Inc.	Joseph Henty Papers Project Subtoral awards received:	12-Jun-98	119,235 119,235	Research (I)
Smithsonian Environmental Research Center	ntal Research Center				
Coats, Donald	Chesapeake Research Consortium, Inc./NSF	Parasitism of Bloom-Forming Dinoflagellates	22-Jun-98	65,309	Research
Correll, David	National Science Foundation	Relating Nutrient Discharges to Geology and Landscape Pattern in the Chesapeake Bay Watershed	12-Mar-98	200,000	Research
Correll, David	Academy of Natural Sciences of Philadelphia	The Importance of Understanding Ecological Complexity to Predicting Effects of Multiple Stressors	18-Jun-98	197,326	Research
Correll, David	County Commissioners of Charles County, Maryland	Mattawoman Creek and Watershed: Nutrient and Sediment Dynamics	22-Oct-97	309,054	Research
Drake, Bert	Dept. of Energy	Impact of Elevated CO2 on a Florida Scrub-Oak Ecosystem	24-Mar-98	450,064	Research

Annual Report of Award Activities 1 October 1997–30 September 1998 (Excluding SAO) (cont'd)

Principal InvestigatorSponsorHines, AnsonChesapeake Research CoHines, AnsonChesapeake Research CoInc.National Citizens' AdviHines, AnsonRegional Citizens' AdviJordan, ThomasDept. of CommerceJordan, ThomasDept. of CommerceJordan, ThomasDept. of CommerceNeale, PatrickNational Science FoundsNeale, PatrickNational Science FoundsNeale, PatrickDoC, Sea Grant CollegeRuiz, GregoryDept. of InteriorRuiz, GregoryDept. of CommerceRuiz, GregoryDept. of InteriorRuiz, GregoryDept. of InteriorRuiz, GregoryDept. of InteriorRuiz, GregoryDept. of Interior	Sponsor				
22		Award Title	Awarded	Total Awarded	Purpose
S5	Chesapeake Research Consortium, Inc./NSF	A Field Test of Source-sink Dynamics in Marine Systems: Linking Recruitment, Dispersal and Post-Set	14-Apr-98	150,000	Research
55	Regional Citizens' Advisory Council, Inc.	Study of Ballast-Mediated Introductions in the Prince William Sound	12-Nov-97	220,000	Research
SE	National Science Poundation	Sperm Allocation and Potential for Sperm Limitation in the Blue Crab	09-Feb-98	102,000	Research
	merce	Assessment of the Relative Input to Coastal Waterbodies	17-Jun-98	1,500	Research
	National Science Foundation	New Approaches to Measuring and Understanding the Effects of Ultraviolet Radiation on Photosynthesis by Antarctic Phytoplankton	13-Apr-98	89,412	Research
	National Science Foundation	New Approaches to Measuring and Understanding the Effects of Ultraviolet Radiation on Photosynthesis by Antarctic Phytoplankton	24-Scp-98	66,710	Research
	int College (Maryland)	The Relative Importance of Ballast Water from Domestic Ship Traffic in Translocation of Nonindigenous Species Among U.S. Ports	16-Oct-97	111,883	Research
	ior	Biological Invasions of Chesapeake Bay	15-Apr-98	15,000	Research
	merce	Measuring the Transfer, Dynamics, and Risk of Invasion for Microbial Communities Associated with Ballast Water	16-Mar-98	52,518	Research
	m	Development and Analysis of Bacteria in Ballast Water	18-Jun-98	4,000	Research
	ior	Biological Invasions of the Chesapeake Bay	10-Oct-97	30,000	Research
	sportation	Ballast Water Data Management Project	19-Aug-98	60,000	Research
	Dept. of Transportation	National Ballast Information Cleatinghouse	18-Mar-98	300,000	Research
Whigham, Dennis Dept. of Agriculture	culture	Using Constructed Wetland for Control of Agricultural Runoff	21-May-98	12,500	Research
		Subtotal awards received:		2,437,276	(61)
Smithsonian Office of Education					
Bay, Ann Institute of Mu Services (I	Institute of Museum and Library Services (Interagency Transfer)	Added Value: How to Assess the Contribution of Museum Studies	30-Jun-98	49,875	Research
Bay, Ann IBM Corporation Marable, Maria District of Columbia	ion lumbia	IBM–SI Echucational Partnership Museum Magnet School	o8-Dec-97 o8-Iun-o8	75,000 80.000	Education
<i>a</i>)	Morris and Gwendolyn Cafritz Foundation	Carousel: A Guide for Teachers and Students	10-Aug-98	12,500	Research
		Subtotal awards received:		217,375	(4)

Publications of the Smithsonian Institution Press in Fiscal Year 1998

During fiscal year 1998, the Smithsonian Institution Press released more than 80 publications, including trade books, exhibition catalogs, monographs, museum guides, and sound recordings. The most important are listed below.

University Press

- Arbon, Lee. They Also Flew: The Enlisted Pilot Legacy, 1912– 1942 (pbk.)
- Ardouin, Claude Daniel, ed. Museums and Archaeology in West Africa.
- Bischof, Werner. After the War.
- Blakely, Robert L., and Judith M. Harrington, eds. Bones in the Basement: Postmortem Racism in Nineteenth-Century Medical Training.
- Bogart, Michele H. Public Sculpture and the Civic Ideal in New York City, 1890-1930. (pbk.)
- Bosman, Paul, and Anthony Hall-Martin. Cats of Africa.
- Bradburd, Daniel. Being There: The Necessity of Fieldwork.
- Brown, Dona. Inventing New England: Regional Tourism in the Nineteenth Century. (pbk.)
- Burri, René. Poetry by Miguel Barnet. Cuba y Cuba.
- Carlebach, Michael L. American Photojournalism Comes of Age.
- Crisman, Kevin J., and Arthur B. Cohn. When Horses Walked on Water: Horse-Powered Ferries in Nineteenth-Century America.
- Day, Dwayne A., John M. Logsdon, and Brian Latell, eds. Eye in the Sky: The Story of the CORONA Spy Satellites.
- Dilworth, Leah. Imagining Indians in the Southwest: Persistent Visions of a Primitive Past. (pbk.)
- Engen, Donald D. Wings and Warriors: My Life as a Naval Aviator. Ferber, Linda S., and Barbara Dayer Gallati. Masters of Color and
- Light: Homer, Sargent, and the American Watercolor Movement.
- Frank, Barbara E. Mande Potters and Leatherworkers: Art and Heritage in West Africa.

- Franzmann, Albert W., and Charles C. Schwartz, eds. Ecology and Management of the North American Moose.
- Freestone, Ian, and David Gairnster, eds. Pottery in the Making: Ceramic Traditions.
- Geary, Christraud M., and Virginia-Lee Webb, eds. Delivering Views: Distant Cultures in Early Postcards.
- Gmelch, George, and J.J. Weiner. In the Ballpark: The Working Lives of Baseball People.
- Godelier, Maurice, Thomas R. Trautmann, and Franklin E. Tjon Sie Fat. Transformations of Kinship.
- Goldsmith, Peter D. Making People's Music: Moe Asch and Folkways Records.
- Gordon, Ian. Comic Strips and Consumer Culture, 1890-1945.
- Horak, Jan-Christopher. Making Images Move: Photographers and Avant-Garde Cinema.
- Johnsgard, Paul A. North American Owls: Biology and Natural History. (pbk.)
- Kingery, W. David, ed. Learning from Things: Method and Theory of Material Culture Studies. (pbk.)
- Kirchner, Bill, ed. A Miles Davis Reader.
- Kriz, Marjorie M., ed. Soaring above Setbacks: The Autobiography of Janet Harmon Bragg, African American Aviator. (pbk.)
- Kunz, Thomas H., and Paul A. Racey, eds. Bat Biology and Conservation.
- Kurin, Richard. Reflections of a Culture Broker: A View from the Smithsonian.
- Lemann, Nicholas. Out of the Forties. (pbk.)
- Lopez, Donald S. Into the Teeth of the Tiger. (pbk.)
- Malaro, Marie C. A Legal Primer on Managing Museum Collections. 2d ed.
- Mark, Mary Ellen. Portraits.
- McCurdy, Howard E. Space and the American Imagination.
- McFarland, Stephen L. America's Pursuit of Precision Bombing, 1910-1945 (pbk.)
- Mergen, Bernard. Snow in America.
- Mitchell, Joseph C. The Reptiles of Virginia. (pbk.)
- Moyer, Albert E. Joseph Henry: The Rise of an American Scientist.
- Moynihan, Martin H. The Social Regulation of Competition and Aggression in Animals.
- Musser, Charles. Edison Motion Pictures, 1890–1900: An Annotated Filmography.
- Nichols, Deborah L., and Thomas H. Charlton, eds. The Archaeology of City-States: Cross-Cultural Approaches.
- Ottenberg, Simon. New Traditions from Nigeria: Seven Artists of the Nsukka Group.
- Panzer, Mary, with an essay by Jeana K. Foley. Mathew Brady and the Image of History.
- Petranka, James. Salamanders of the United States and Canada.
- Prussin, Labelle. African Nomadic Architecture: Space, Place, and Gender. (pbk.)
- Rappole, John H. The Ecology of Migrant Birds: A Neotropical Perspective. (pbk.)
- Saler, Benson, Charles A. Ziegler, and Charles B. Moore. UFO Crash at Roswell: The Genesis of a Modern Myth.

Santos-Granero, Fernando, and Frederica Barclay. Selva Central: History, Economy, and Land Use in Peruvian Amazonia.

Selig, Ruth Osterweis, and Marilyn R. London, eds. Anthropology Explored: The Best of Smithsonian AnthroNotes.

Shepherdson, David J., Jill D. Mellen, and Michael Hutchins. Second Nature: Environmental Enrichment for Captive Animals.

Spudis, Paul D. The Once and Future Moon. (pbk.)

Stark, Miriam T., ed. The Archaeology of Social Boundaries.

Stattersfield, Alison, Michael Crosby, Adrian Long, and David Wege. Endemic Bird Areas of the World: Priorities for Biodiversity Conservation.

Stoddart, Torn. Sarajevo.

Tidwell, William D. Common Fossil Plants of Western North America. 2d ed.

Tisdale, Mary E., and Bibi Booth, eds. Beyond the National Parks: A Recreation Guide to Public Lands in the West.

Trapp, Kenneth R., and Howard Risatti. Skilled Work: American Craft in the Renwick Gallery.

Tucker, Graham M., and Michael I. Evans, comps. Habitats for Birds in Europe: A Conservation Strategy for the Wider Environment.

Twelve Centuries of Japanese Art from the Imperial Collections. Wattenmaker, Patricia. Household and State in Upper

Mesopotamia: Specialized Economy and the Social Uses of Goods in an Early Complex Society.

Werrell, Kenneth P. Blankets of Fire: U.S. Bombers over Japan during World War II. (pbk.)

Wiessner, Polly, and Akii Turnu. Historical Vines: Enga Networks of Exchange, Ritual, and Warfare in Papua New Guinea.

Smithsonian Books

The Smithsonian Guides to Historic America. Revised and updated editions.

Smithsonian Collection of Recordings

The Jazz Singers: A Smithsonian Collection of Jazz Vocals from 1919 to 1994.

Federal Series Publications

Smithsonian Contributions to Anthropology

 Eugene I. Knez. "The Modernization of Three Korean Villages, 1951–1981: An Illustrated Study of a People and Their Material Culture." 216 pages, color frontispiece, 191 figures, 35 tables. 6 October 1997.

Smithsonian Contributions to Botany

 Bolores R. Piperno and Deborah M. Pearsall. "The Silica Bodies of Tropical American Grasses: Morphology, Taxonomy, and Implications for Grass Systematics and Fossil Phytolith Identification." 40 pages, 76 figures, 2 tables. 6 July 1998.

86. Lynn J. Gillespie and W. Scott Armbruster. "A Contribution to the Guianan Flora: *Dalechampia, Haematostemon, Omphalea, Pera, Plukenetia,* and *Tragia* (Euphorbiaceae) with Notes on Subfamily Acalyphoideae." 48 pages, 14 figures. 15 October 1997.

 Paul M. Peterson, Robert D. Webster, and Jesus Valdes-Reyna. "Genera of New World Eragrostideae (Poaceae: Chloridoideae)." 50 pages, 1 table. 14 November 1997.

Smithsonian Contributions to Paleobiology

- Richard S. Boardman. "Reflections on the Morphology, Anatomy, Evolution, and Classification of the Class Stenolaemata (Bryozoa)." 59 pages, 129 figures. 26 August 1998.
- 87. I.G. Sohn and Louis S. Kornicker. "Ostracoda from the Late Permian of Greece (Thaumatocyprididae and Polycopidae)." 34 pages, 20 figures, 2 tables, 1 map. 26 August 1998.

Smithsonian Contributions to Zoology

- 586. Nancy A. Voss, Michael Vecchione, Ronald B. Toll, and Michael J. Sweeney, editors. "Systematics and Biogeography of Cephalopods." 2 volumes, 599 pages, 257 figures, 69 tables. 28 May 1998.
- 590. Henk Wolda, Charles W. O'Brien, and Henry P. Stockwell. "Weevil Diversity and Seasonality in Tropical Panama as Deduced from Light-Trap Catches (Coleoptera: Curculionoidea)." 79 pages, 27 figures, 9 tables. 7 May 1998.
- 591. Stephen D. Cairns. "A Generic Revision and Phylogenetic Analysis of the Turbinoliidae (Cnidaria: Scleractinia)." 55 pages, 5 figures, 10 plates, 6 tables. 23 October 1997.
- 592. Wayne N. Mathis. "Shore Flies of the Belizean Cays (Diptera: Ephydridae)." 77 pages, 258 figures, 6 tables. 12 November 1997.
- 593. Louis S. Kornicker and Elizabeth Harrison-Nelson. "Myodocopid Ostracoda of Pillar Point Harbor, Half Moon Bay, California." 53 pages, 28 figures, 6 tables. 12 November 1997.

594. Oliver S. Flint, Jr. "Studies of Neotropical Caddisflies, LIII: A Taxonomic Revision of the Subgenus *Curgia* of the Genus *Chimarra* (Trichoptera: Philopotamidae)." 131 pages, 446 figures, 26 maps. 23 July 1998.

- 595. Louis S. Kornicker and Bernard A. Thomassin. "Ostracoda (Myodocopina) of Tuléar Reef Complex, SW Madagascar." 134 pages, 86 figures, 2 tables. 22 January 1998.
- 596. Nicole Boury-Esnault and Klaus Rützler, editors.
 "Thesaurus of Sponge Morphology." 55 pages, 306 figures.
 2 December 1997.
- 597. Donald R. Davis. "A World Classification of the Harmacloninae, a New Subfamily of Tineidae (Lepidoptera:

Tineoidea). 81 pages, 346 figures, 8 maps, 1 table. 22 January 1998.

- 598. Belinda Alvarez, Rob W.M. van Soest, and Klaus Rützler. "A Revision of Axinellidae (Porifera: Demospongiae) of the Central West Atlantic Region." 47 pages, 23 figures, 18 tables. 11 September 1998.
- 599. Louis S. Kornicker and Thomas M. Iliffe. "Myodocopid Ostracoda (Halocypridina, Cladocopina) from Anchialine Caves in the Bahamas, Canary Islands, and Mexico." 93 pages, 64 figures, 2 maps, 9 tables. 13 July 1998.
- 600. Robert Hershler and Winston F. Ponder. "A Review of Morphological Characters of Hydrobioid Snails." 55 pages, 21 figures. 10 July 1998.

Publications of the Staff of the Smithsonian Institution and Its Subsidiaries in Fiscal Year 1998

Archives of American Art

Office of the Director

------. Lecture. "Sourine: Sources and Legacies," New York Studio School. December 1997.

-----. Lecture. "Dr. Albert C. Barnes and The Barnes Foundation," Faculté des Letres et Science humaine of the University of Neuchâtel under the auspices of a grant from the Swiss-American Cultural Exchange Council, April 1998.

Lecture. "Public Institutions: Access and Cultural Identity," the role of the Archives of American Art, Second Biennial Smithsonian-Westminster Symposium, the University of Westminster London, and the Smithsonian Institution, May 1998.

West Coast Regional Center

- . Catalogue essay. "Richard Bunkall," Mendenhall Gallery, Pasadena, CA, February 1998.
- . Panelist. "Inventing Culture for California: An Overview of the Visual Arts, 1849–1906," Humanities West, Herbst Theatre, San Francisco, CA, May 1998.
- ———. Article. "On the Edge of America: California Modernist Art and Culture," *The Sydney Papers*, Sydney, Australia, May 1998.

———. Chair panelist. "Visions of Empire in West Coast Public Art," American Studies Association Conference, Seattle, WA, November 1998.

Center for Folklife Programs and Cultural Studies

Printed Materials

Belanus, Berty and Marjorie Hunt. "Teacher Seminar in Its Fifth Year." Smithsonian Talk Story (14)(Fall 1998):7. Washington, D.C.: Smithsonian Institution.

Borden, Carla and Peter Seitel, editors. Smithsonian Folklife Festival Program Book. Washington, D.C.: Smithsonian Institution.

, editor. Smithsonian Talk Story (13)(Spring 1998). Washington, D.C.: Smithsonian Institution.

------, editor. Smithsonian Talk Story (14)(Fall 1998).

Washington, D.C.: Smithsonian Institution.

- Cadaval, Olivia, with Lucy Bates, Heidi McKinnon, Diana Robertson, and Cynthia Vidaurri, compilers. "Culture & Environment in the Río Grande/Río Bravo Basin: A Preview." In *Smithsonian Folklife Festival Program Book*, edited by Carla M. Borden and Peter Seitel, 79–93. Washington, D.C.: Smithsonian Institution.
- . "Latino Community Cultural Heritage Center." Smithsonian Talk Story (13)(Spring 1998):7. Washington, D.C.: Smithsonian Institution.
- and Cynthia Vidaurri. "The Río Grande/Río Bravo Festival Program—A Preview." *Smithsonian Talk Story* (14)(Fall 1998):6. Washington, D.C.: Smithsonian Institution.
- Early, James. "Repositioning U.S.-Caribbean Relations: Reflections on Development and African-American-Caribbean Identities." In U.S.-Caribbean Relations: Their Impact on Peoples and Culture, edited by Ransford W. Palmer. Westport, CT: Praeger Press.

Archives of American Art. A Finding Aid to the Tomás Ybarra-Frausto Research Material on Chicano Art, 1965–1997, Archives of American Art, Smithsonian Institution, 1998.

[.] *Journal*, quarterly magazine, published continuously since 1960.

Stover, Catherine and Lisa Lynch. A Finding Aid to the Rockwell Kent Papers, Archives of American Arτ, Smithsonian Institution, 1998.

Wattenmaker, Richard J. Lecture. "Samuel Yellin: American Blacksmith," Reynolda House, Museum of American Art, seminar "The American House," Winston-Salem, North Carolina, November 1997.

Karlstrom, Paul J., Panelist, "Mexico, Muralism and Modernism in Northern California," Mexican Masterpieces Conference, Los Angeles County Museum of Art, CA, January 1998.

. "Cultural Policy Issues on the Web." Smithsonian Talk Story (13)(Spring 1998):6. Washington, D.C.: Smithsonian Institution.

Franklin, John Whittington and John Hope Franklin, editors. My Life and an Era: The Autobiography of Buck Colbert Franklin. Baton Rouge: Louisiana State University Press.

Horowitz, Amy. "Folkways at 50." *Smithsonian Talk Story* (13)(Spring 1998): I. Washington, D.C.: Smithsonian Institution.

Kennedy, Richard. "Rethinking the Philippine Exhibit at the 1904 St. Louis World's Fair." In *Smithsonian Folklife Festival Program Book*, edited by Carla M. Borden and Peter Seitel, 4I-44. Washington, D.C.: Smithsonian Institution.

------. "Pabiyas: A Philippine Harvest." Smithsonian Talk Story (14)(Fall 1998):4. Washington, D.C.: Smithsonian Institution.

Kurin, Richard. Reflections of a Culture Broker: A View from the Smithsonian. Washington, D.C.: Smithsonian Institution Press. ———. The Smithsonian Folklife Festival: Culture Of, By, and

For the People. Washington, D.C.: Smithsonian Institution. ————. "The Festival and Folkways—Ralph Rinzler's Living Cultural Archives." In Smithsonian Folklife Festival Program Book, edited by Carla M. Borden and Peter Seitel, 5–8. Washington, D.C.: Smithsonian Institution.

——. "Director's Talk Story." Smithsonian Talk Story (13) (Spring 1998):2. Washington, D.C.: Smithsonian Institution.

N'Diaye, Diana Baird. "AIFS Update." Smithsonian Talk Story (13)(Spring 1998):9. Washington, D.C.: Smithsonian Institution.

------. "Maroon Exhibition." Smithsonian Talk Story (13)(Spring 1998):9. Washington, D.C.: Smithsonian Institution.

Parker, Diana. "The Festival As Community." In Smithsonian Folklife Festival Program Book, edited by Carla M. Borden and Peter Seitel, 4. Washington, D.C.: Smithsonian Institution.

Reiniger, Arlene and Tom Vennum. "The Festival Continues: In Wisconsin." *Smithsonian Talk Story* (14)(Fall 1998):1. Washington, D.C.: Smithsonian Institution.

. "Wisconsin." Smithsonian Talk Story (14)(Fall 1998):3. Washington, D.C.: Smithsonian Institution.

Rinzler, Kate. "The Fourth Annual Friends of the Festival Ralph Rinzler Memorial Concert." *Smithsonian Talk Story* (13)(Spring 1998):6. Washington, D.C.: Smithsonian Institution.

Seeger, Anthony. "Ethnomusicology and Music Law" (reprint). In Bruce Ziff and Pratima V. Rao, *Borrowed Power: Essays on Cultural Appropriation*, 52–67. New Brunswick: Rutgers University Press.

. "Speaking of Folkways." *Smithsonian Talk Story* (14)(Fall 1998):12. Washington, D.C.: Smithsonian Institution.

Smith, Stephanie. "News from the Archives." Smithsonian Talk Story (14)(Fall 1998):17. Washington, D.C.: Smithsonian Institution.

Vennum, Thomas Jr. "The Enduring Craftsmanship of Wisconsin's Native Peoples: The Ojibwe Birch-bark Canoe." In Smithsonian Folklife Festival Program Book, edited by Carla M. Borden and Peter Seitel, 26–30. Washington, D.C.: Smithsonian Institution.

Vidaurri, Cynthia and Olivia Cadaval. "Río Grande/Río Bravo Basin Program Extended." *Smithsonian Talk Story* (13)(Spring 1998):5. Washington, D.C.: Smithsonian Institution.

Sound Recordings

Black Banjo Songsters of North Carolina and Virginia. SFW 40079.

Deep Polka: Dance Music from the Midwest. SFW 40088.

Woody Guthrie. Hard Travelin': The Asch Recordings, Volume 3. SFW 40102.

Heartbeat 2 More Voices of First Nations Women. SFW 40455.

Roscoe Holcomb. The High Lonesome Sound. SFW 40104.

Music of Indonesia 13: Kalimantan Strings. SFW 40429.

Music of Indonesia 14: Lombok, Kalimantan, Banyumas: Little-known Forms of Gamelan and Wayang. SFW 40441.

Music of Indonesia 15 South Sulawesi Strings. SFW 40442.

Pete Reiniger, sound supervisor. A Treasury of Library of Congress Field Recordings. Selected and annotated by Stephen Wade. Rounder CD 1500. ——, recording engineer and sound supervisor. Dan Crary's Holiday Guitar. Sugar Hill CD-3871.

, recording engineer and sound engineer. Stephen Wade's Dancing in the Parlor. County Records CD-2721.

Mike Seeger. Southern Banjo Sounds: An Anthology of Style and Technique. SFW 40107.

Pete Seeger. Birds, Beasts, Bugs & Fishes (Little and Big). SFW 45039.

. If I Had A Hammer: Songs of Hope and Struggle. SFW 40096.

Shout On: The Lead Belly Legacy, Volume 3. SFW 40105.

The Harry Smith Connection: A Live Tribute to the Anthology of American Folk Music. SFW 40085.

The Smithsonian Folkways Children's Music Collection. SFW 45043.

Sounds of North American Frogs: The Biological Significance of Voice in Frogs. SFW 45060.

Josh White. Free and Equal Blues. SFW 40081.

Hirshhorn Museum and Sculpture Garden

Benezra, Neal. An Uncommon Vision: The Des Moines Art Center. Des Moines: Des Moines Art Center, 1998. Contributing author.

Demetrion, James T. Introduction in Valerie Fletcher, A Garden for Art: Outdoor Sculpture at the Hirshhorn Museum. London and New York: Thames and Hudson in association with the Hirshhorn Museum and Sculpture Garden, 1998.

———. An Uncommon Vision: The Des Moines Art Center. Des Moines: Des Moines Art Center, 1998. Contributing author.

Demetrion, James T., and Andrea Rose. Preface and Acknowledgments in *Stanley Spencer: An English Vision.* New Haven: Yale University Press in association with The British Council and Hirshhorn Museum and Sculpture Garden, 1997. Essay by Fiona MacCarthy. Exhibition catalog.

Fletcher, Valerie. A Garden for Art: Outdoor Sculpture at the Hirshhorn Museum. London and New York: Thames and Hudson in association with the Hirshhorn Museum and Sculpture Garden, 1998.

Montreal: Montreal Museum of Fine Art, 1998. Exhibition catalog. English and French editions.

Lawrence, Sidney. Directions—Tony Oursler: Video Dolls with Tracy Leipold. Washington, D.C.: Hirshhorn Museum and Sculpture Garden, 1998. Exhibition brochure.

———. "Remarks at the Roger Brown Memorial Service, December 15, 1997." The School of the Art Institute of Chicago, Alumni News 9, no. 4 (Winter 1997–98):5.

Rosenzweig, Phyllis. *Directions—Kiki Smith: Night.* Washington, D.C.: Hirshhorn Museum and Sculpture Garden, 1998. Exhibition brochure.

"Grace Hartigan and the Abstract Expressionists." In Grace Hartigan: Ab-Ex Pointillism/1988-1993. Baltimore: Lovola College Art Gallery, 1997. Exhibition catalog.

Viso, Olga M. Directions—Toba Kbedoori. Washington, D.C.: Hirshhorn Museum and Sculprure Garden, 1997. Exhibition brochure.

. Triumph of the Spirit: Carlos Alfonzo, A Survey, 1975–1991 Miami: Museum of Modern Art of Dade County, Miami, Florida, 1998. Contributing author. Exhibition catalog.

——. Triumph of the Spirit: Carlos Alfonzo, A Survey, 1975–1991 Washington, D.C.: Hirshhorn Museum and Sculpture Garden, 1998. Exhibition brochure. Spanish edition translated by Pilar Molnár.

Zilczer, Judith. "Identifying Willem de Kooning's 'Reclining Man.' " American Art 12, no. 2 (Summer 1998): 26–35.

National Air and Space Museum

Division of Aeronautics

Anderson, John. "Research in Supersonic Flight and the Breaking of the Sound Barrier," in From Engineering Science to Big Science: The NACA and NASA Collier Trophy Research Project Winners, edited by Pamela Mack, NASA SP-4219, U.S. Government Printing Office, 1998, pp. 55–86.

———. "Some Reflections On the History of Fluid Dynamics," in *Handbook of Fluid Dynamics*, edited by Richard Johnson, CRC Press, 1998, pp. 2-1–2-15.

———. A History of Aerodynamics and Its Impact on Flying Machines, Cambridge University Press, paperback edition, 1998.

Crouch, Tom. "Santos-Dumont and the NASM Airship," Air & Space Smithsonian June/July 1998.

Journal of American History, December 1998, pp. 1197–1199. Davies, Ron. Airlines of Latin America Since 1919, Paladwr Press, October 1997 reprint.

———. Charles Lindbergh, An Airman, His Aircraft, and His Great Flights, Paladws Press, November 1997. . Berlin Airlift, Paladwr Press, July 1998

. Cento Aereo Amanonico, Revista Aerea, April 1998.

Hardesty, Von. Russian Aviation and Air Power, London: Frank Cass, 1998.

Jakab, Peter. "Samuel Pierpont Langley," in *The Biographical Encyclopedia of Scientists*, edited by Richard Olson and Roger Smith. New York: Marshall Cavendish Corp., 1998.

Lee, Russell. "Dissecting an Air Force (Air Disarmament Division's Role in Neutralizing the Luftwaffe and Plundering its Secrets)," in *American Aviation Historical Society Journal*, Volume 44 No. 1, Spring 1999.

Pisano, Dominick. Film review, "The Wright Stuff, written, produced and directed by Nancy Porter Productions for The American Experience," 1996, in *The Journal of American History*, December 1997, 1169–1171.

Center for Earth and Planetary Studies

Bulmer, M.H. 1997. Comparisons of mass movements from modified domes on Venus to submarine volcaniclastic deposits on Earth. Int. Conf. Volcanic Activity and the Environment, IAVCEI, Mexico, p. 134.

-----. 1997. Comparisons between mass movements on Venus associated with modified domes and those from escarpments. Lunar Planet. Sci. XXVII, 177–178.

Campbell, B.A., Hawke, B.R., and Thompson, T.W. Long-wavelength radar studies of the lunar maria, J. Geophys. Res., 102, 19,307–19,320, 1997.

------. Comparison of radar and Clementine multispectral data for the lunar maria, LPSC XXVIII, 1997.

Campbell, B.A., and Shepard, M.K. Effect of Venus surface illumination on photographic image texture, Geophys. Res. Letters, 24, 731–734, 1997.

Campbell, B.A., Arvidson, R.E., Shepard, M.K., and Bracket, R. Remore sensing of surface processes, in Venus II, 503–526, 1997.

Campbell, B.A. Venus surface processes: Results from Magellan and questions for future exploration, Eastern Geophysical Society Mrg., 1997.

Cook, A.C., Watters, T.R., and Robinson, M.S. New stereo Image Analysis of Mariner 10 Images of Mercury, Vernadsky-Brown Microsymposium on Comparative Planetology 26, Moscow, Oct. 13–17, 1997, pp. 26–27.

Craddock, R.A., Crumpler, L.S., Aubele, J.C., and Zimbelman, J.R. Geology of Chryse Planitia and the Viking 1 Landing Site: Implications for the Mars Pathfinder mission, Jour. Geophys. Res., 102, E2, 4161–4183, 1997.

Craddock, R.A., Maxwell, T.A., and Howard, A.D. Crater morphometry and modification in the Sinus Sabeus and Margaritifer Sinus Regions of Mars, Jour. Geophys. Res., 102, E6, 13,321–13,340, 1997.

Craddock, R.A., Eaton, L.S., Russo, C.J., and Torley, R.F., A new method for determining the emplacement mechanism(s) of rocks on Mars, Lunar Planet. Sci. Conf., XXVII, 263–264, 1997.

Craddock R.A., Robinson, M.S., Hawke, B.R., and McEwen, A.S. Clementine—based geology of Moscoviense Basin, lunar farside, Lunar Planet. Sci. Conf., XXVII, 265–264, 1997.

Craddock R.A., Crumpler, L.S., Aubel, J.C., and Zimbelman, J.R. 1997. Geology of central Chyrse Planitiaand the Viking 1 landing site: Implications for the Mars Pathfinder Mission, Jour. Geophys. Res. (Planets), 102, E2, 4161–4183.

Edgett, K.S., Butler, B.J., Zimbelman, J.R., and Hamilton, V.E. (1997) Geologic context of the Mars radar "Stealth" region in southwestern Tharsis, Jour. Geophys. Res. (Planets), 102, E9, 21545–21568.

Hanley, D. and Zimbelman, J.R. 1997. Quantifying topographic control of lava flow emplacement: Kilauea volcano, Hawaii, Trans. Am. Geophys. Union 78 (17), S317.

Jacobberger, P.A. and Jellison, G.P. 1997. "Remote Sensing," in Encyclopedia of Planetary Sciences, ed. Rhodes W. Fairbridge and James H. Shirley, 1st. ed. London; New York: Chapman and Hall, 1997, pp. 689–696.

Jacobberger, P.A. 1997. "Color," in Encyclopedia of Planetary Sciences, ed. Rhodes W. Fairbridge and James H. Shirley, 1st ed. London; New York: Chapman and Hall, pp. 114–115.

Jacobberger, P.A. 1997. "Landsar," in Encyclopedia of Planetary Sciences, ed. Rhodes W. Fairbridge and James H. Shirley, 1st ed. London; New York: Chapman and Hall, 1997, p. 690.

Space History

Ceruzzi, Paul. "Crossing the Divide: Architectural Issues in the History of Computing," Annals of the History of Computing, 19/1 (1997), pp. 5–12.

Review of Arthur Norberg and Judy O'Neill, Transforming Computer Technology (Baltimore, 1996), in Technology & Culture 39 (July 1998), pp. 596-598.

Collins, Martin J. "Planning for Modern War: RAND and the Air Force, 1945–1950." (Ph.D. dissertation, University of Maryland, 1998).

DeVorkin, David H. "Henry Norris Russell," "Meghnad Saha," and "Hertzsprung Russell Diagram." Lankford, ed. *Garland History of Astronomy.* Garland, 1997.

------. "Charles Greeley Abbot," Biographical Memoirs of the National Academy of Sciences. National Academy Press, 1998, 3–23.

Herken, Gregg. Article, "History, Fate, and Fortune: The 'Space Race' Exhibition," *The Grapevine*, March 1998, Smithsonian Institution.

Needell, Allan. "Project Troy and the Cold War Annexation of the Social Sciences," in Christopher Simpson, ed., Universities and Empire: Money and Politics in the Social Sciences during the Cold War (New York: The New Press, 1998), pp. 3–38.

Winter, Frank, with Michael J. Neufeld. "Heylandt's Rocket Cars and the V-2: A Little Known Chapter in the History of Rocket Technology," in Philippe Jung, ed., AAS History Series, Vol. 21 (Univelt Corp. for American Astronomical Society: San Diego, 1998, pp. 41–72.

National Museum of African Art

Chaffers, Pedra. The Poetics of Line: Seven Artists of the Nsukka Group Family Guide. National Museum of African Art, 1997.

Geary, Christraud M. South Africa, 1936–1949. Photographs by Constance Stuart Larrabee. National Museum of African Art, 1998 [exhibition brochure].

———. "Nineteenth Century Images of the Mangbetu in Explorers' Accounts," in *The Scramble for Art in Central Africa*, Enid Schildkrout and Curtis Keim, eds., Cambridge, 1998 (University of Cambridge Press), pp. 133–168.

"Photography: Development." In Encyclopedia of Africa South of the Sahara. John Middleton (ed.), New York, 1997 (Charles Scribner). pp. 404–409.

Geary, Christraud M. and Virginia Lee Webb, eds. Delivering Views. Distant Cultures in Early Postcards. Washington, D.C., 1998 (Smithsonian Institution Press).

Nicolls, Andrea. A Spiral of History: A Carved Tusk from the Loango Coast, Congo. National Museum of African Art, 1998 [exhibition brochure].

Puccinelli, Lydia. African Forms in the Furniture of Pierre Legrain. National Museum of African Art, 1998 [exhibition brochure].

Walker, Roslyn A. Olove of Ise: A Yoruba Sculptor to Kings. National Museum of African Art, 1998 [exhibition brochure].

National Museum of American Art

Gurney, George. Sculpture Now '98: The Figure. Washington Sculptors Group Exhibition at Washington Square, Washington, D.C., February 2–May I, 1998. Juror's Statement. Hartigan, Lynda Roscoe. "Joseph Cornell's Explorations: Art on File," in Joseph Cornell/Marcel Duchamp...in Resonance. Philadelphia Museum of Art and The Menil Collection, 1998, pp. 220–243.

. "Never Forgetting Bert," Folk Art Messenger, vol. II, no. 3, Summer, 1998, pp. 4-5.

Heyman, Therese Thau. Posters American Style. Washington, D.C.: National Museum of American Art, Smithsonian Institution in association with Harry N. Abrams, Inc., Publishers, 1998.

Mecklenburg, Virginia M. "George Bellows's Vine-Clad Shore, Monhegan Island," American Art 11, no. 3 (Fall 1997), 74-76.

Murray, Richard. "Elihu Vedder's Drawings for the Rubáiyár," American Art Review 10 (March-April 1998): 108-11.

Serwer, Jacquelyn. "Introduction," *David Beck's L'Opera*. Washington, D.C.: National Museum of American Art, 1998.

National Museum of American History

Office of Curatorial Affairs

Department of History

Archives Center

Ruffins, Fath. "Culture Wars Won and Lost: Ethnic Museums on the Mall: The African American Museum on the Mall Project." *Radical History Review* 70 (Winter, 1998).

. "Reflecting on Ethnic Imagery in the Landscape of Commerce 1945–1976." In *Getting and Spending: American* and European Consumption in the Twentieth Century, edited by Charles McGovern, et al. Cambridge: Cambridge University Press, 1998.

Division of Cultural History

- Bass, Howard and Rayna Green, producers. *Heartbeat 2: More Voices of First Nations Women.* Smithsonian Folkways, 1998. Audio recording.
- Bowers, Dwight. Fascinating Rhythm: The Broadway Gershwin. BMG Classics, 1998. Recording.

Green, Rayna and Howard Bass, producers. *Heartbeat 2: More Voices of First Nations Women.* Smithsonian Folkways, 1998. Audio recording.

——. "Native American Women." In *Readings in American Indian Law: Recalling the Rhythm of Survival*, edited by Jo Carillo. Philadelphia: Temple University Press, 1998.

- Hasse, John Edward. "Jazz: The Sound of Surprise." International Gallerie (Mumbai, India) I (1998).

------. "Scott Joplin's Solace: A Mexican Serenade." In American Music: A Panorama. New York: Schirmer Books, 1998.

- McGovern, Charles, Susan Strasser, and Matthias Judt, eds. Getting and Spending: American and European Consumption in the Twentieth Century. Cambridge: Cambridge University Press, and Washington, D.C.: German Historical Institute, 1998.
- Rand, Harry. "Earth Mother: A Sculpture by Seymour Lipton." *Werner and Gabrielle Merzbacher Collection.* Jerusalem: Israel Museum, 1998.

hängen in 16 amerikanischen Museen." *Die Deutsche* Bildungzeit (February 11, 1998).

Shayt, David. "The Jewish Way of Death." Folklore Forum 29 (1998).

Slowick, Kenneth. The Cello and the King of Prussia. Sony Virtual Label, 1998. Recording.

Division of the History of Technology

Hacker, Barton C. "'Hotter Than a \$2 Pistol': Fallout, Sheep, and the Atomic Energy Commission, 1953–1986." In *The Atomic West*, edited by Bruce Hevly and John M. Findlay. Seattle: Center for the Study of the Pacific Northwest, in association with the University of Washington Press, 1998. "A Short History of the Laboratory at Livermore."

Science and Technology Review (Sept. 1998).

Johnson, Paula. "Boat Models, Buoys and Board Games: Reflecting and Reliving Watermen's Work." *Material History Review* 48 (Fall 1998).

Kendrick, Kathleen. "'The Things Down Stairs': Containing Horror in the Nineteenth-Century Wax Museum." Nineteenth Century Studies 12 (1998).

Liebhold, Peter and Harry Rubenstein. "Between a Rock and a Hard Place: A History of American Sweatshops, 1820–Present." Entry on historymatters Web site (www.historymatters.gmu.edu).

. "Between a Rock and a Hard Place." Labor's Heritage 9 (Spring 1998).

Lubar, Steven. "Men, Women, Production, Consumption." In His and Hers: Gender and American Consumerism, 1900–1960, edited by Arwen Mohun and Roger Horwitz. Charlottesville: University Press of Virginia, 1998.

Stine, Jeffrey K. "Environmental Policy during the Carter Presidency." In *The Carter Presidency: Policy Choices in the Post-New Deal Era*, edited by Gary M. Fink and Hugh Davis Graham. Lawrence: University Press of Kansas, 1998.

Stine, Jeffrey K. and Howard Rosen, eds. Going Underground: Tunneling Past, Present, and Future. Kansas City: American Public Works Association, 1998.

Stine, Jeffrey K. and Joel Tarr. "At the Intersection of Histories: Technology and the Environment." *Technology* and Culture 39 (October 1998).

William Withuhn. "Trains Unlimited." History Channel, 1998. Television program.

Division of Information Technology and Society

Boudreau, Joan. The Feather Trade and the American Conservation Movement. 1998 [virtual exhibit].

Delaney, Michelle. The 1896 Washington Salon and Art Photography. 1998 [virtual exhibit].

Doty, Richard G. America's Money, America's Story. Iola, WI: Krause Publications, 1998 (reprint).

———. The Sobo Mint and the Industrialization of Money. London: British Numismatic Society and Spink Ltd., and Washington, D.C.: National Museum of American History/Smithsonian Institution, 1998.

Finn, Bernard. "Museums of Science and Technology" in Maria Ferreira and Jose Rodrigues, eds., Museums of Science and Tecnology. Madrid: Fundacao Oriente. 1998: pp. 73–81.

Eklund, Jon and Peter Morris. "Spectrophotometer." In Instruments of Science: An Historical Encyclopedia, edited by Robert Bud and Deborah Jean Warner. New York: Garland Publishing Co., 1998.

Forman, Paul. "Clocks, atomic" and "Lock-in detection/ amplifier." In Instruments of Science: An Historical Encyclopedia, edited by Robert Bud and Deborah Jean Warner. New York: Garland Publishing Co., 1998.

------. "Molecular Beam Measurements of Nuclear Moments before Magnetic Resonance: I.I. Rabi and Deflecting Magnets to 1938. Part I." Annals of Science 55 (1998).

- Kidwell, Peggy. "Calculating machine" and "Planimeter." In Instruments of Science: An Historical Encyclopedia, edited by

Robert Bud and Deborah Jean Warner. New York: Garland Publishing Co., 1998.

Entries on Donald Menzel, Cacilia Payne-Gaposchkin, Frank Schlesinger, Solon I. Bailey, Antonia Maury, Otto Struve, Hannibal Ford, and William Ferrel. In American National Biography. Oxford: Oxford University Press, 1998.

. Reviews in The Annals of History of Computing, 1998.
. Review in Isis 89 (1998).

Mudd, Douglas. Coinage of Spain. 1998. [Web page]. ———. Parthia: The Forgotten Empire. 1998. [Web page].

Sherman, Roger. "Heliostat," in Instruments of Science: An Historical Encyclopedia, Robert Bud and Deborah Jean Warner, eds., The Science Museum, London and The National Museum of American History in association with Garland Publishing, Inc., 1998, pp. 305–308.

Division of Science, Medicine, and Society

Gossel, Patricia Peck. "Biolistic apparatus," and "Colony counter." In *Instruments of Science: An Historical Encyclopedia*, edited by Robert Bud and Deborah Jean Warner. New York: Garland Publishing Co., 1998.

Kondratas, Ramunas. "Polymerase Chain Reaction." In Instruments of Science: An Historical Encyclopedia, edited by Robert Bud and Deborah Jean Warner. New York: Garland Publishing Co., 1998.

———. "Foreword" to The Laboratory Section of the American Public Health Association 1899–1999: 100 Years of Research, Development and Diagnostic Services, by Joel Cohen. Washington, D.C.: American Public Health Association, 1998.

- Turner, Steven. "Goniometer." In Instruments of Science: An Historical Encyclopedia, edited by Robert Bud and Deborah Jean Warner. New York: Garland Publishing Co., 1998.
- Warner, Deborah Jean, and Robert Bud, eds. Instruments of Science: An Historical Encyclopedia. New York: Garland Publishing Co., 1998.

Division of Social History

- Adrosko, Rira J., with Mary Cobb Rousselot. A Checklist of Carpet Patent Models in the Textile Collection. Washington, D.C.: National Museum of American History, 1998.
- Bird, William, Jr., and Harry Rubenstein. Design for Victory: Posters on the American Home Front. 1941–1945. Princeton: Princeton Architectural Press, 1998.

Rubenstein, Harry and William Bird, Jr. Design for Victory: Posters on the American Home Front, 1941–1945 Princeton, Princeton Architectural Press, 1998.

Rubenstein, Harry and Peter Liebhold. "Berween a Rock and a Hard Place." *Labor's Heritage* 9 (Spring 1998).

Smith, Barbara Clark. "Revolution in Boston." In Boston National Historical Park and Freedom Trail Handbook. Washington, D.C.: National Park Service, 1998. Taylor, Lonn. "The Big Bend and the Imagination." The Journal of Big Bend Studies 10 (1998).

National Museum of the American Indian

Arellano, Carmen. Die Bücher der Maya, Mixteken und Azteken. Die Schrift und ihre Funktion in vorspanischen und kolonialen Codices. Carmen Arellano and Peer Schmidt, eds. Eichstätt/Frankfurt: Vervuert 1998, 2d ed. (revised and extended).

. "Der Schreiber und seine Schreibutensilien in Mesoamerika. Zur Stellung des Schreibers vor und nach der Ankunft der Europäer." In Die Bücher der Maya, Mixteken und Azteken. Die Schrift und ihre Funktion in vorspanischen und kolonialen Codices. Carmen Arellano and Peer Schmidt, eds. pp. 201–234. Eichstätt/Frankfurt: Vervuert 1998, 2d ed.

. "Alemania-Latinoamérica. Un modelo de entrenamiento intercultural." In *International Communication in Business: Theory and Practice*, edited by Robert Gibson, pp. 195–202. (European Network for Communication, Development in Business and Education). Sternenfels; Berlin: Verlag Wissenschaft und Praxis, 1998 (Coauthor: Adriana Spadoni).

consribuciones a la arqueología, etnobistoria, etnolingüística y etnografía de las Américas. Sabine Dedenbach, Carmen Arellano, Eva König and Heiko Prümers, eds., pp. 473–493. (Bonner Amerikanistische Studien, 30). Markt Schwaben: Verlag Sauerwein 1998.

_____. 50 Años de Estudios Americanistas en la Universidad de Bonn. Nuevas constribuciones a la arqueología, etnobistoria, etnolingüística y etnografía de las Américas. Sabine Dedenbach, Carmen Arellano, Eva König and Heiko Prümers, eds. (Bonner Amerikanistische Studien, 30). Markt Schwaben: Verlag Sauerwein 1998.

- Carroll, S. "Temporary Protection of a Tel Site Excavation in Central Turkey." *Conservation and Management of Archaeological Sites* 2, no. 3, James and James Publishing Ltd. (London, 1998): 155–162.
- de Montaño, Marty Kreipe. Coyote in Love with a Star. Tales of the People series for children, National Museum of the American Indian, Smithsonian Institution. Copublished by NMAI and Abbeville Press, 1998.
- Ganteaume, Cécile R. "Western Apache Tailored Deer Hide Shirts: Their Resemblance to Full Dress Coats Worn by Officers in the U.S. Army and Possible Meaning." American Indian Art Magazine (1998): 44-55;104.
- Johnson, Tim, ed. Spirit Capture: Photographs from the National Museum of the American Indian. Copublished by NMAI and Smithsonian Institution Press, 1998.

"Keepers of the Power: Story as Covenant in the Films of Loretta Todd, Shelley Niro and Christine Welsh." In Kay Armatage et al., eds. *Gendering the Nation: Canadian Women's Cinema*. University of Toronto Press, 1998.

Kaminitz, Marian. "Cultural Partnerships at the National Museum of the American Indian." In *Critical Issues in the Conservation of Ethnographic Materials*, CAC Workshop, 1998, Canadian Association for Conservation of Cultural Property.

Kaplan, Emily et al. "Analisis tecnico de geros pintados de los Periodos Inca y Colonial." *Iconos*, no. 2 (July–December 1999): 30–38. (Journal published by Yachay Wasi, Instituto Superior de Conservacion, Restauracion y Turismo, Lima, Peru.)

- Medicine Crow, Joseph. Brave Wolf and the Thunderbird. Tales of the People series for children, National Museum of the American Indian, Smithsonian Institution. Copublished by NMAI and Abbeville Press, 1998.
- Rapkievian, Carolyn. "Interpreting Native Cultures from the Native Perspective." Paper presented at conference on "Communication and Museography for the 21st Century" in Madrid, Spain, 4–7 May 1998, and published as part of conference proceedings by host, Spanish Ministry of Education and Culture.
- West, W. Richard. Speech to Smithsonian Institution Conference at the Louvre, 14 January 1998. Transcript published in *Connaissance Des Artes* (July 1998): 66–73.

National Museum of Natural History

Office of the Director

- Smith, C.L., J.C. Tyler, H. Andreyko and D.M. Tyler. 1998.
 Behavioral ecology of the sailfin blenny, *Emblemaria* pandionis (Pisces: Chaenopsidae), in the Caribbean off Belize. American Mus. Novitates, 3232: 1–40, 27 figs.
- Sorbini, L. and J.C. Tyler. 1998. A new genus and species of Eocene surgeon fish (Acanthuridae) from the Eocene of monte Bolca, Italy, with similarities to the Recent Zebrasoma. Museo Civico Storia Naturale Verona, Studi e Ricerche sui Giacimenti Terziari di Bolca, 7: 7–19, 5 figs.
- ------. 1998. A new species of the Eocene surgeon fish genus *Pesciarichthys* from Monte Bolca, Italy (Acanthuridae), with comments on caudal peduncle armature and supraneurals in acanthurids. Museo Civico Storia Naturale Verona, Studi e Ricerche sui Giacimenti Terziari de Bolca, 7: 21-34, 5 figs.
- Tyler, J.C. and L. Sorbini. 1998. A new genus and species of primitive triggerfish from the Eocene of Monte Bolca, Italy; the earliest known balistoid (Tetradontiformes).
 Museo Civico Storia Naturale Verona, Studi e Ricerche sui Giacimenti Terziari di Bolca, 7: 43–65, 7 figs.

Department of Anthropology

- Afable, Patricia. 1998. Review. Asian-Americans: From Racial Category to Multiple Identities, by Juanita Tamayo Lott. *Philippine Arts, Letters, and Media Council Update, Nov.-December, 1998* Washington, D.C.

- Arnoldi, Mary Jo. 1998. Where Art and Ethnology Met: the 1922 Exhibition of the Herbert Ward collection at the Smithsonian. *The Scramble for Art in Central Aftrica*. E. Schildkrout and C. Keim, eds. Cambridge University Press, New York.
- Conklin, Harold C. and William C. Sturtevant. 1998. "Floyd Glenn Lounsbury" [death notice]. Anthropology Newsletter 39(6):29.
- Crowell, A.L. and D.H. Mann. 1998. Archaeology and Coastal Dynamics of Kenai Fjords National Park, Alaska. Government Printing Office, Washington, D.C.
- Fitzhugh, William. 1998. "Archaeology." Arktis/Antarktis. Catalogue of an exhibition. Kunst und Ausstellungshalle der Bundesrepublik Deutschland, Bonn, pp. 24–31.
- , ed. 1998. Arctic Studies Center Neusletter, 6. Arctic Studies Center, Department of Anthropology, National Museum of Natural History, Smithsonian Institution, Washington, D.C.
- ------. 1998. "Arctic Studies Center, Smithsonian
- russiske omrader folger ikke de spilleregler, vi kender fra Vesten." *Polarfronten* 1:11.
- . 1998. "Searching for the Grail: Virtual Archeology in Yamal and Circumpolar Theory." *Ethnografisk Raekke* 18:88–118. Danish National Museum, Copenhagen. Publications of the National Museum Ethnographical Series 18. R. Gilberg and H.C. Gullov, eds. Copenhagen.

- Fitzhugh, W.W. and A.L. Crowell, eds. 1998. Crossroads of Continents: Cultures of Siberia and Alaska. Smithsonian Institution Press, Washington, D.C.
- Fleming, Paula Richardson. 1998. "A Portion of the Promises Made to Us Have Not Been Fulfilled: Little Crow and the Sioux Revolt of 1862." Native Nations: Journeys in American Photography. Booth-Clibborn Editions and Barbican Art Gallery, London, pp. 169–184.
- Galera, Virginia, Douglas H. Ubelaker, and Lee-Ann Hayek. 1998. "Comparison of Macroscopic Cranial Methods of Age Estimation Applied to Skeletons from the Terry Collection." Journal of Forensic Sciences 43(5):933–939.
- Goddard, Ives. 1998. "Recovering Arapaho Etymologies by Reconstructing Forwards," *Mir Curad: Studies in Honor of Calvert Watkins (Innsbrucker Beiträge zur Sprachwissenschaft* (92) Institut für Sprachwissenschaft der Universität Innsbruck, Innsbruck.
- ------. 1998. "Encounters with Frank Siebert." Maine History 37(3):86-89.
- ------. 1998. [Linguistic editor.] Plateau (Handbook of North American Indians 12). Strithsonian Institution, Washington, D.C.

- ———. 1998. Synonymy in the chapter Flathead in *Plateau* (*Handbook of North American Indians 12*), p. 312. Smithsonian Institution, Washington, D.C.

- . 1998. Synonymy in the chapter Nez Perce in *Plateau* (*Handbook of North American Indians 12*), pp. 437–438. Smithsonian Institution, Washington, D.C.
- Greene, Candace S. 1998. "Courting and Counting Coup: Cheyenne Ledger Art at Gilcrease." *Gilcrease Journal* vol. 6(1): 4–19.
- Homiak, John P. 1998. "Movements of Jah people: from soundscape to mediascape." *Religion, Diaspora and Cultural Identity: A Reader in the Anglophone Caribbean.* John Puis, ed. Gordon & Breach Publishers, Newark, N.J., pp. 87–122.
- Hull-Walski, Deborah, Suzanne Jenkins, Lisa Palmer, Helena Wright, and Elaine Johnston. 1998. "Staff Responsibilities" in *Smithsonian Directive 600*. Smithsonian Institution, Washington, D.C.
- Humphrey, Johanna, Rachel Allen, Bryna Freyer, Susan McFarland, Katharine Stewart, Susan Wilkerson, Ildiko DeAngelis. 1998. "Documentation" in *Smithsonian Directives* 600. Smithsonian Institution, Washington, D.C.
- Hunt, D.R. and B. Frohlich. 1998. "Non-destructive computerized tomographic investigation of a saponified body from the late 18th century." *American Journal of Physical Anthropology, Supplement* 26:123-4 abstract.
- Kaeppler, Adrienne 1998. Airplanes and Saxophones: Post-War Images in the Visual and Performing Arts. *Echoes of Pacific War*. Deryck Scarr, Niel Gunson, Jennifer Terrell, eds. Target Oceania, Canberra, pp. 38–63.
- . 1998. "Dance and the Concept of Style." Dance, Style, Youth, Identities, edited by Theresa Buckland and Georgiana Gore. Keynote address, *Proceedings of the 19th Symposium of the ICTM Study Group on Ethnochoreology*. Czech Academy of Sciences, Prague.
- . 1998. "Iles Tonga. Danse Lakalaka." Audiotape, photos, drawings, and written entry for a Musee de L'homme double-CD *Dances of the World*.

-----. 1998. "Kava Bowls as Centerpieces for Performance." Gestern und Heute-Traditionen in der Sudsee, Markus Schindlbeck, ed. Verlag von Dietrich Reimer. Baessler-Archiv for 1997, Neue Folge Band XLV, Berlin, pp. 47-61.

. 1998. Review. In Oceania: Visions, Artifacts, Histories, by Nicholas Thomas. Journal of the Polynesian Society 107(4):432–33.

. 1998. "Tonga and Samoa." Arts of the Pacific. Douglas Newton, ed. Barbier-Mueller, Geneva.

Kaeppler, Adrienne L. and Jacob Love, eds. 1998. Australia and the Pacific Islands, Volume 9 of Garland Encyclopedia of World Music. Garland Publishing Company, New York (with audio CD).

Kaupp, P. Ann and Roger Shuy. 1998. "Medicine, Law, and Education." In Anthropology Explored, Ruth O. Selig and Marilyn R. London, eds. Smithsonian Institution Press, Washington, D.C.

Kaupp, P. Ann, Ruth O. Selig, Alison S. Brooks, JoAnne Lanouette, eds. 1998. AnthroNotes, National Museum of Natural History Publication for Educators, 20(1).

Kress, W.J., W.R. Heyer, P. Acevedo, J. Coddington, D. Cole, T.L. Erwin, B.J. Meggers, M. Pogue, R.W. Thorington, R.P. Vari, M.J. Weitzman, and S.H. Weitzman. Amazonian biodiversity: assessing conservation priorities with taxonomic data. *Biodiversity and Conservation* 7:1577–1587.

Krupnik, Igor. 1998. Foreword. In T.I. Pika (comp.), The Land of Yamal: Album of Yamal Expeditions by V. Evladov. Bilingual catalog. Moscow. Pp. 5–16 (in English and in Russian).

. 1998. "Understanding Reindeer Pastoralism in Modern Siberia: Ecological Continuity versus State Engineering." *Changing Nomads in a Changing World* Ginat, J. and A. Khazanov, eds. Sussex Academic Press, Portland, Oregon, pp. 223–242.

Krupnik, Igor and Natalya Narinskaya. 1998. Zhivoi Yamal/Living Yamal Exhibit Catalog. Moscow: Sovetskii sport, 64 pp. Bilingual Russian-English edition (to be published in November).

Krupnik, Igor and Marc G. Stevenson. 1998. Inuit, Whaling, and Sustainability. AltaMira Press, Walnut Creek and London. Laughlin, Robert. 1998. "El Renacimiento Maya: Sna Jtz'ibajom, La Casa del Escritor," *la Noticia*, September 25, p. 42.

Laughlin, Robert M., Francisco Alvarez Q., Diego Mendoz Guizman. 1998. "A Traveller to the Other World: In Memory of Anselmo Perez." *Cultural Survival Quarterly*, Spring, 69.

Laughlin, Robert M. and Kathleen J. Bragdon. 1998. "Mayan Indians and the Passamaquoddy of Maine." *Anthropological Linguists Aid in Cultural Survival*, Smithsonian Institution Press, Washington.

London, M. and D.R. Hunt. 1998. "Morphometric segregation of commingled remains using the femoral head and acetabulum. "American Journal of Physical Anthropology, Supplement 26:152 (abstract).

Loring, Steven. 1998. "In Torngak's Realm: the Nineteenth-Century Photography of Moravian Missionaries in Labrador." *Imaging the Arctic*, J.C.H. King and Henrietta Lidchi, eds. British Museum Press, London. pp. 207–220.

Manhein, Mary H., Ginesse Listi, N. Eileen Barrow, Robert E.
Barsley, Robert Musselman, and Douglas H. Ubelaker.
1998. "New Tissue Depth Measurements for American Adults and Children" Proceedings of American Academy of Forensic Sciences IV:187-188 (abstract).

Mann, D.H., T.D. Hamilton, A.L. Crowell, and B.P. Finney. 1998. Climatic Changes, Sea-Level, and Geological Disturbances in the Gulf Alaska Region During the Holocene, Arctic Anthropology.

Marino, Cesare. 1998. The Remarkable Carlo Gentile: Italian Photographer of the American Frontier. Nevada City, Calif.: Carl Mautz Publ.

Meggers, Betty. 1998. Entries for Amazonía, Ananatuba, Brasil, Arqueología de, Humaitá, Tradición, Lagoa Santa, Policroma, Tradición, Santarem, Taquara, Umbu, Tradición. *Diccionario de Arqueología*, José Alcina Franch, coord. Alianza Editorial, Madrid.

------. 1998. Evolución y Difusión Cultural. Enfoques Téoricos para la Investigación Arqueológica, *Tomo Ediciiones* Abya-Yala, Quito (Spanish translations of 12 articles with a new introduction).

-----. 1998. Foreword. Mexican Rural Development and the Plumed Serpent by Betty B. Faust, Bergin & Garvey, Westport pp. xi-xiii.

. 1998. "Jomon-Valdivia similarities: convergeance or contact?" Across before Columbus? Donald Y. Gilmore and Linda S. McElroy, eds. NEARA Publications, Edgecomb, Maine. Pp. 10–21 (reprint).

. Evolución y difusión cultural. Enfoques téoricos para la investigación arqueológica, Tomo 1. *Ediciones Abya-Yala*, *Quito.* 300 pp., illus. (Spanish translations of 12 articles with a new introduction).

La cerámica temprana en América del Sur.)invención independiente o difusión? *Revista de Arqueología Americana* 13:7–40 (julio-diciembre 1997).

. Review. J.L. Sorenson and M.H. Raish: Pre-Columbian contact with the Americas across the oceans. *Pre-Columbiana* 1:135; Revista do Museu de Arqueologia e Etnologia, São Paulo, 8:298.

. O paraíso ilusório revisitado. *Revista do Museu de* Arqueologia e Etnologia, São Paulo, 8:33–55.

Desenvolvimento cultural pré-histórico nas terras baixas tropicais da América do Sul, Amazonas e Orinoco. Fronteiras: Revista de História UFMS 2(4):9–38.

Merrill, William L. 1998. "Rarámuri Easter" Performing the Renewal of Community: Indigenous Easter Rituals in North Mexico and Southwest United States. N.R. Crumrine and R.B. Spicer, eds. University Press of America, Lanham, Maryland.

Mudar, Karen M., Erica Bubniak Jones, and John W. Verano. 1998. "Cultural identity and mortuary behavior: An examination of the Hand Site cemetery (44SN22) Southampton County, Virginia." Archaeology of Eastern North America 26:133–162.

Norton, D.W., A.L. Crowell, and R.A. Gangloff. 1998. Museum Studies: Diversity and Convergence in Two Pre-Baccalaureate Programs. Alberta Museums Review.

Odess, Daniel. 1998. The Archaeology of Interaction: Views from Style and Material Exchange in Dorset Society *American Antiquity* 63(3):417-435

Ortner, D.J. 1998. The history and evolution of human infections diseases. XIII European Meeting of the Paleopathology Association, Abstracts. Prague-Pilsen, Czech Republic, Charles University (abstract).

Male/female immune reactivity and its implications for interpreting evidence in human skeletal paleoplathology. Sex and Gender in Paleopathological Perspective. A.L. Grauer and P. Stuart-Macadam, eds. Cambridge University Press, New York. Pp. 79–92.

T.D. Stewart (1901–1997): Anthropologist, administrator, educator, gentleman. American Anthropologist 100:990–994.

Ortner, D.J. and S. Mays. 1998. "Dry-Bone Manifestations of Rickets in Infancy and Early Childhood." International Journal of Osteoarchaeology 8:45–55.

Ousley, Stephen D. and Richard L. Jantz. 1998. "The Forensic Data Bank: Documenting Skeletal Trends in the United States." Forensic Osteology, Advances in the Identification of Human Remains, Second Edition. K.J. Reichs, ed. Charles C. Thomas, Springfield, Illinois. Pp. 297–315.

Rose, Carolyn. 1998. "Conservation and Collections Care Resources." *Management and Care of Herbaria Collections.*D. Metsger and S. Byers, eds. Society for the Preservation of Natural History Collections, Iowa City, Iowa.

Rose, Carolyn L., Susan Blaine, Joanne London, Edward
McManus, Lisa Palmer, and Dianne van der Reyden. 1998.
"Preservation" in *Smithsonian Directive 600*. Smithsonian Institution, Washington, D.C., pp. 58–72.

Sakashita, R., N. Inoue, T. Kamegai, and D.R. Hunt. 1998. "Dental attrition and disease in several Pacific Ocean Island populations—Jomonese, Ainu, Maori and Aleut." *American Journal of Physical Anthropology*, Supplement 26:193 (abstract).

Scherer, Joanna Cohan. 1998. "A Preponderance of Evidence: the 1852 Omaha Indian Delegation Daguerrotypes Recovered" *The Daguerreian Annual for 1997*, pp. 146–158 (revised).

Selig, Ruth Osterweis. 1998. "Acknowledgments." Anthropology Explored: The Best of Smithsonian AnthroNotes. Ruth Osterweis Selig and Marilyn R. London, eds. Smithsonian Institution Press, Washington, D.C., pp. xvii–xviii.

. 1998. "Introduction: Investigating the Origins, Nature, and Cultures of Humankind." Anthropology Explored: The Best of Smithsonian AnthroNotes, Ruth Osterweis Selig and Marilyn R. London, eds. Smithsonian Institution Press, Washington, D.C., pp. 1–10.

Selig, Ruth Osterweis and Marilyn R. London, eds. 1998. Anthropology Explored: The Best of Smithsonian AnthroNotes. Smithsonian Institution Press, Washington, D.C., 348 pp.

Selig, Ruth Osterweis and Bruce D. Smith. 1998. "A Quiet Revolution: Origins of Agriculture in Eastern North America." Anthropology Explored: The Best of Smithsonian AnthroNotes, Ruth Osterweis Selig and Marilyn R. London, eds. Smithsonian Institution Press, Washington, D.C., pp. 178–192.

Selig, Ruth Osterweis and Dennis J. Stanford. 1998. "Bones and Stones—or Sheep? Studying the First Americans." Anthropology Explored: The Best of Smithsonian AnthroNotes, Ruth Osterweis Selig and Marilyn R. London, eds. Smithsonian Institution Press, Washington, D.C., pp. 150–158.

- Smith, Bruce. 1998. Between Foraging and Farming. Science 279:1651–1652.
- Sturtevant, William C. 1998. "Mary R. Haas and Ethnology." Anthropological Linguistics, 39(4):590-593.
- . General Editor, 1998. *Plateau*, vol. 12 (Deward E. Walker, Jr., vol. ed.), *Handbook of North American Indians*, Smithsonian Institution, Washington, D.C.
- . 1998. "Boundaries of the Culture Area" in *Plateau*, vol. 12 (Deward E. Walker, Jr., vol. ed.) *Handbook of North American Indians*, Smithsonian Institution, Washington, D.C., pp. xiii–xvi.
- -------. 1998. Tupinamba Chiefdoms? In Chiefdoms and Chieftaincy in the Americas, M. Redmond, ed. University Press of Florida, Gainesville, Florida.
- Srurtevant, William C. and Inge Kleivan. 1998. "Two early photographs of an Inughuaq (Polar Eskimo)." *Imaging the Arctic*, J.C.H. King and Henrietta Lidchi, eds. Published for the Trustees of the British Museum by British Museum Press, London, pp. 24–28.
- Sturtevant, William C. and Deward E. Walker, Jr., 1998. Preface to *Plateau*, vol. 12 (Deward E. Walker, Jr., vol. ed.), *Handbook of North American Indians*, Smithsonian Institution, Washington.
- Taylor, Paul Michael. 1998. "A Collector and His Museum: William Louis Abbott (1860–1936) and the Smithsonian." In *Treasure Hunting: the Collectors and the Collecting of Indonesian Artifacts* (Kees van Dijk and Reimar Schefold, eds.). Proceedings of a conference commemorating the 125th anniversary of the founding of the Volkenkundig Museum Nusantara, Delft, Netherlands, October 1989.
- . 1998. edited translation: *The Sultanate of Ternate in the Moluccas*, by F.S.A. de Clercq. Translated, with an Introduction by Paul Michael Taylor. In Smithsonian Institution Libraries Electronic Editions. Web site: http://www.sil.si.edu/elecedns.htm; original Dutch: Bijdragen tot de kennis der Residentie Ternate (Leiden: E.J. Brill, 1890).
- Ubelaker, Douglas H. 1998. Alex Hrdlicka's Role in the History of Forensic Anthropology (abstract). *Proceedings of the American Academy of Sciences* IV:187–188.
- ——. 1998. FORDISC 2.0: Personal Computer Forensic Discriminant Functions (book review). International Journal of Osteoarchaeology 8:128–133.
- . 1998. Interproximal groves in old world dentitions. Pp. 153–171 in *Tiempo, Población y Sociedad:Homenaje al Maestro Arturo Romano Pacheco,* María Teresa Jaén Esquivel, Sergio López Alonso, Lourdes Márquez Morfin, and Parcicia O. Hernández E., eds. México: Instituto Nacional de Antropologíca e Historia.

- _____. 1998. The Use of Forensic Anthropology (review). Journal of Forensic Identification 48(1):45-47.
- Ubelaker, Douglas H., Eric Baccino, Alain Zerilli, and E. Oger. 1998. "Comparison of Methods for Assessing Adult Age at Death on French Autopsy Samples" (abstract). Proceedings of American Academy of Forensic Sciences IV:174–175.
- Ubelaker, D.H. and L. Newson. 1998. "Skeletal evidence for health in ancient Ecuador" (abstract). American Journal of Physical Anthropology, Supplement 26, p. 221.
- Ubelaker, D.H. and Ildiko Pap. Skeletal Evidence for Health and Disease in the Iron Age of Northeastern Hungary. International Journal of Osteoarcheology 8:231-251.
- Walker, Deward E., Jr., volume ed. 1998. Plateau, vol. 12 of Handbook of North American Indians, general ed., William C. Sturtevant, Smithsonian Institution, Washington, D.C.
- Walsh, Jane. nd. "Collections as Currency" in commemorative volume for William Sturtevant, D.C., submitted for publication.
- ——. 1998. "John Peabody Harrington, a biographical sketch," American National Biography, Oxford University Press. in press
- Zeder, Melinda. 1998. Regional Patterns of Animal Exploitation in the Khabur Basin, 7000 to 1500 B.C. In Man and the Animal World: Studies in Archaeozoology. Archaeology, Anthropology and Palaeolinguistics in memoriam Sándor Bokonyvi. P. Anreiter, L. Bartosiewicz, E. Jerem and W. Meid, eds, Archaeolingua Vol. 8, Budapest.

Department of Botany

- Acevedo-Rodríguez, P. 1997. Two new species of Serjania sect. Serjania (Sapindaceae). Brittonia 48: 498–502.
- Boggan, J. 1998. The cultivated species of Chirita. Gloxinian 48(2): 14–23 (Illustrated).
- DeFilipps, R.A. 1998. Historical connections between the discovery of Brazil and the neotropical brazilwood, Caesalpinia echinata Lam. Archives of Natural History 25(1):103–108.

DePriest, P.T. and B.W. Hale. 1998. A validation and a nomenclatoral change in Parmotrema (Ascomycotina: Parmeliaceae). Mycotaxon 67: 207–209.

———. 1998. New combinations in the parmelioid genera (Ascomycotina: Parmeliaceae). Mycotaxon 67:201–206.

Dickison, W.C. and A.L. Weitzman. 1998. Floral morphology and anatomy of Bonnetiaceae. J. Torrey Bot. Soc. 125: 268–286.

Dorr, L.J. 1997. Jean Prosper Abraham (1 January 1930–May 1996), Madagascar. AETFAT Bulletin 44: 38 [obituary].

 . 1997. Botanical libraries and herbaria in N. America.
 4. The Samuel Botsford Buckley---Rebecca Mann Dean mystery. Taxon 46(4): 661–687.

[Dorr, L.J.]. 1998. J.J. Wurdack ... The Washington Post May 16: B9 [Reprinted in Patowmack Papers 34(4): 3. 1998] [obituary].

Dorr, L.J. 1998. Review. Kalanchoe (Crassulacées) de Madagascar and Plantes médicinales de Madagascar by P. Boiteau and L. Allorge-Boiteau. Taxon 47(1): 231–233.

. 1998. Review. Guide to the National Anthropological Archives, Smithsonian Institution (rev. and enlarged), by J.R. Glenn. Taxon 47(1): 209.

. 1998. Review. Guide to the Ewan Papers, compiled by D. Holland et al., eds. Taxon 47(2): 533.

. 1998. S.B. Buckley. SHNH Newsletter 61: 7 [notice].

. 1998. John J. Wurdack, 1921–1998. Plant Science Bulletin 44(2): 41 [reprinted, with changes, The Plant Press I(4): 5. 1998] [obituary].

. 1998. John J. Wurdack—botanist, tropical explorer, and gardener. ASPT Newsletter 12(1): 708 [obituary].

J. Koechlin et al., eds. Taxon 47(3): 783–784.

Ensermu, K. and R.B. Faden. 1997. Commelinaceae. Pp. 339–374. In S. Edwards, D. Sesebe, and I. Hedberg, eds., Flora of Ethiopia, Vol. 6. National Herbarium, Addis Ababa University, Ethiopia and Uppsala, Sweden.

Evans, T.M. and R.B. Faden. 1998. Homoplasy in the Commelinaceae: a comparison of different classes of morphological characters. Pp. 19–20. In Anonymous, Monocots II. Second International Conference on the Comparative Biology of the Monocotyledons and Third International Symposium on Grass Systematics and Evolution, 27 September–2 October 1998, University of New South Wales, Sydney. Abstracts. University of New South Wales, Sydney.

Faden, R.B. 1998. Floral biology of nectarless flowers: the example of Commelinaceae. P. 20. In Anonymous, Monocots II. Second International Conference on the Comparative Biology of the Monocotyledons and Third International Symposium on Grass Systematics and Evolution, 27 September–2 October 1998, University of New South Wales, Sydney, Australia. Abstract. University of New South Wales, Sydney.

------. 1998. Commelinaceae. Pp. 109–128. In K. Kubitzki, ed., The Families and Genera of Vascular Plants. Vol. 4. Flowering Plants, Monocotyledons: Alismatanae and Commelinanae (except Gramineae). Springer, Berlin, Heidelberg, New York.

------. 1998. Review. The Illustrated Companion to Gleason and Cronquist's Manual, by N.H. Holmgren, Potowmack Papers 34, No. 5: 13.

Faust, M.A. 1998. Mixotrophy in tropical benthic dinoflagellates. Pp. 390–393. In B. Regueta, J. Blanco, M.L. Fernandez and T. Wyatt, eds., Harmful Algae. Xunta de Galicia and Intergovernmental Oceanographic Commission of UNESCO, Paris, France.

———. 1998. Morphology and life cycle events in Pyrophacus steinii (Schiller) Wall et Dale (Dinophyceae). J. Phycology 34: 173–179.

- Ferrucci, M.S. and P. Acevedo-Rodríguez. 1997. New and noteworthy species in the Paullinieae tribe (Sapindaceae). Brittonia 48: 441–448.
- ———. 1998. Cardiospermum cuchujaquense (Sapindaceae), a new species from Sonora, Mexico. Novon 8: 235–238.
- Feuillet, C. 1998. Passiflora amoena and P. fuchsiiflora. Passiflora 8:3.

Feuillet, C. and O. Poncy. 1998. Aristolochiaceae. Pp. 1–23, 26–31. In A.R.A. Görts-van Rijn, ed., Flora of the Guianas. Royal Bot. Gard., Kew, Richmond.

Funk, V.A. 1998. Biogeographical patterns and evolution on the Hawaiian Islands: the good, the bad, and the unusual.
Willi Hennig Society Symposium on Historical Biogeogaphy: a Critique, p. 37 (abstract).

Funk, V.A. and N. Morin. 1998. Southeastern Herbaria: Who has what from where and prognosis for the future. Botanical Research Inst. of Texas, symposium Flora of the Southeast U.S., abstracts p. 8 (abstract).

Funk, V.A. and K.S. Richardson. 1998. Using limited data to design a protected area system in Guyana. Amer. J. Bot., abstracts 85: 130 (abstract).

Gulledge, R.A. and M.A. Faust. 1998. Dinoflagellates on CD-ROM: Multimedia dinoflagellate identification. Pp. 16–17. In T. Wyall, ed., Harmful Algal News No. 17. The Intergovernmental Oceanographic Commission of UNESCO, Paris, France.

Ivanova, N.V., P.T. DePriest, V.K. Bobrova and A.V. Troitsky. 1998. Introny gruppy I v grybnoi 18S rDNK lishainikov semeystva Umbilicariaceae. [Group I introns in the fungal 18S rDNA of the lichen family Umbilicariaceae.] Doklady Rossiyskoi Akademii Nauk 363: 400–404 [in Russian].

_____. 1998. Cultivar registration. Passiflora 8:2.

Kearns, D.M., W.W. Thomas, G.C. Tucker, R. Kral, K.
Camelbeke, D.A. Simpson, A.A. Reznicek, M.S. Gonzalez-Elizondo, M.T. Strong, and P. Goetghebeur. 1998.
Cyperaceae. Pp. 486–663. In J.A. Steyermark, P.E. Berry, and B. Holst eds., Flora of the Venezuelan Guayana.
Missouri Botanical Garden Press, St. Louis, Missouri.

Kelloff, C.L. and G.S. McKee. 1998. A New Species of Hecistopteris From Guyana, South America. American Fern Journal 88(4):155–157.

Kuzoff, R.K., J.A. Sweere, D.E. Soltis, P.S. Soltis and E.A. Zimmer. 1998. The phylogenetic potential of entire 26S rDNA sequences in plants. Mol. Biol. Evol. 15: 251–263.

Kvist, L.P., L.E. Skog and M. Amaya-Márquez. 1998. Los generos de Gesneriaceas de Colombia. Caldasia 20: 12–28 [in Spanish with English abstract].

Littler, M.M. and D.S. Littler. 1998. An undescribed fungal pathogen of reef-forming crustose coralline algae discovered in American Samoa. Coral Reefs 17(2): 144.

. 1997. An illustrated marine flora of the Pelican Cays, Belize. Bulletin of the Biological Society of Washington 9: 1–149.

Mosyakin, S.L. and W.L. Wagner. 1998. Notes on two alien taxa of Rumex L. (Polygonaceae) naturalized in the Hawaiian Islands. Bishop Mus. Occas. Pap. 55: 39–44.

Nicolson, D.H. 1998. R.S. Cowan (1921–1997). Taxon 47: 520–530 [obituary and publications].

. 1998. Richard Sumner Cowan. Plant Press 1(1):5 [obituary].

. 1998. Obituaries of Frans Antonie Stafleu and Richard Sumner Cowan. Flora North America Newsletter 11(4): 35–36.

Nowicke, J.W., M. Takahashi and G.L. Webster. 1998. Pollen morphology, exine structure and systematics of Acalyphoideae (Euphorbiaceae) Part I. Tribes Clutieae (Clutia), Pogonophoreae(Pogonophora), Chaetocarpeae (Chaetocarpus, Trigonopleura). Review of Palaeobotany and Palynology 102: 115–152.

Peterson, P.M. and O. Morrone. 1997 (1998). Allelic variation in the amphitropical disjunct Lycurus setosus (Poaceae: Eragrostideae). Madroño 44: 334–346.

Peterson, P.M. and A.M. Planchuelo. 1998. Bromus catharticus in South America (Poaceae: Bromeae). Novon 8: 53–60.

Peterson, P.M., R.J. Soreng, and G. Davidse. 1998. Proposal to conserve the name Elionurus (Poaceae, Andropogoneae) with that spelling. Taxon 47: 737-738.

Peterson, P.M., R.D. Webster, and J. Valdes-Reyna. 1997. Genera of New World Eragrostideae (Poaceae: Chloridoideae). Smithsonian Contributions to Botany 87: 1-50.

Pruski, J.F. 1997. Proposal to conserve the name Acanthospermum against Centrospermum (Compositae: Heliantheae). Taxon 46: 805–806.

Mutisieae), a new generic record for Ecuador. Novon 8: 67-69.

. 1998. Helianthus porteri (A. Gray) Pruski (Compositae), a new combination validated for the Confederate Daisy. Castanea 63: 74–75.

Pruski, J.F. and S.F. Smith. 1997. Tapeinostemon sessiliflorum (Gentianaceae), a new combination for a Guayana endemic. Brittonia 49: 346–349.

Richardson, K.S. and V.A. Funk. 1998. Using limited data to design a protected area system in Guyana. Society for Conservation Biology, symposium on setting conservations priorities: decisions with uncertain data, abstracts p. 75 (abstract)

Skog, L.E. and L.P. Kvist. 1998. Novae Gesneriaceae Neotropicarum VII: new publications. Novon 7: 413–416 [dated "1997"].

Soreng, R.J. 1998. An infrageneric classification for Poa in North America, and other notes on sections, species, and subspecies of Poa, Puccinellia, and Dissanthelium (Poaceae: Poeae). Novon 8(2): 187–202.

Soreng, R.J. and J.I. Davis. 1998. Phylogenetics and character evolution in the grass family (Poaceae): simultaneous analysis of morphological and chloroplast DNA restriction site character sets. Bot. Rev. 64(1): 1–85.

Soreng, R.J. and E.E. Terrell. 1998. Taxonomic notes on Schedonorus, a segregate genus from Festuca or Lolium, with a new nothogenus, xSchedololium, and new combinations. Phytologia 83(2): 84–86.

Stenroos, S. and P.T. DePriest. 1998. Small insertions at a shared position in the SSU rDNA of Lecanorales (lichen-forming Ascomycetes). Current Genetics 33: 124–130.

Strong, M.T. 1997. Machaerina (Cyperaceae) in South America. Novon 7: 308–319.

Strong, M.T. and P. Goetghebeur. 1998. (1328–1329) Two proposals to conserve names in Bulbostylis (Cyperaceae). Taxon 47: 155–156.

Sytsma, K.J., D.A. Baum, A. Rodriquez, W.J. Hahn, L. Katinas, W.L. Wagner and P. C. Hoch. 1998. An ITS phylogeny for Onagraceae: congruence with three molecular data sets. Amer. J. Bot. Suppl. 85(6): 160–161 (abstract).

Turquer, J., J.P. Quod, A. Coute and M.A. Faust. 1998.
Assemblages of benthic dinoflagellates and monitoring of harmful species in Reunion Island, SW Indian Ocean, 1993–1996. Pp. 44–47. In B. Reguera, J. Blanco, M.L.
Fernandez and T. Wyatt, eds., Harmful Algae. Xunta de Galicia and Intergovernmental Oceanographic Commission of UNESCO, Paris, France.

Wagner, W.L. 1998. Species status for a Sonoran Desert annual member of Oenothera sect. Anogra. Novon 8: 307–310.

Wagner, W.L. and D.H. Lorence. 1998. A new, dioecious species of Hedyotis (Rubiaceae) from Kaua'i, Hawaiian Islands, and the taxonomy of Kaua'i Hedyotis schlechtendahliana resolved. Novon 8: 311–317.

- Wagner, W.L. and R.K. Shannon. 1998. Notes on Hawaiian Melicope (Rutaceae). Bishop Mus. Occas. Paps. 56: 15–17.
- Walker, W. and L.J. Dorr. 1998. A note on indigenous uses of Dypsis decaryi in southern Madagascar. Principes 42(3): 136–139.
- Wang Wentsai, Pan Kaiyu, Li Zhenyu, A.L. Weitzman, and L.E. Skog. 1998. Gesneriaceae. Pp. 244–401. In Wu Zheng-yi and P.H. Raven, eds., Flora of China, vol. 18. Science Press and Missouri Botanical Garden Press, Beijing and St. Louis.
- Weitzman, A.L. 1998. Neotatea (Clusiaceae). Pp. 308–310. In The Flora of the Venezuelan Guayana, vol. 4.
- Weitzman, A.L., L.E. Skog, W.T. Wang, K.Y. Pan, and Z.Y. Li. 1998. New taxa, new combinations, and notes on Chinese Gesneriaceae. Novon 7: 423–435 [publication date "1997"].
- Wen, J., S. Shi, R.K. Jansen and E.A. Zimmer. 1998. Phylogeny and biogeography of Aralia sect. Aralia (Araliaceae). Amer. J. Bot. 85: 866–875.
- Yatskievych, G. and W.L. Wagner. 1998. (1374) Proposal to amend Art. 46.6 to avoid "Anonymous" as author of a name. Taxon 47: 773–774.

Department of Entomology

- Adis, J., Amorim, M.A., Erwin, T.L., and Bauer, T. 1997. On Ecology, Life History and Survival Strategies of a Wing-Dimorphic Ground Beetle (Col.: Carabidae: Odacanthini: *Colliuris*) Inhabiting Central Amazonian Inundation Forests. Studies on Neotropical Fauna and Environment, Swets & Zeitlinger, 32: 174–192 [10 figs.].
- Alarie, Y., Wang, L., Nilsson, A.N., and Spangler, P.J. 1997.
 Larval Morphology of Four Genera of the Tribe Hyphydrini Sharp (Coleoptera: Dytiscidae: Hydroporinae) with an Analysis of Their Phylogenetic Relationships. Annals of the Entomological Society of America, 90(6): 709–735.
- Boobar, L.R., Spangler, P.J., Gibbs, K.E., Longcore, J.R., and Hopkins, K.M. 1998. Predaceous Diving Beetles in Maine: Faunal List and Keys to Subfamilies. Northeastern Naturalist, 5(1): 1–20.
- Corrales, J.F. and Epstein, M.E. 1997. Review of Costa Rican Venadicodia, with descriptions of two new species and localities for V. *ruthea* (Lepidoptera: Limacodidae). Revista de Biologia Tropical, 45(3): 1093–1105 [28 figs.].
- Davis, D.R. 1998. A World Classification of the Harmacloninae, a New Subfamily of Tineidae (Lepidoptera: Tineoidea). Smithsonian Contributions to Zoology, 597: 1–81 [346 figs.].
- . 1998. A Revision of the Genus *Lamyristis* Meyrick (Lepidoptera: Psychidae) and Proposal of a New Related Genus *Acoremata* from Southeast Asia. Proceedings of the Entomological Society of Washington, 100(1): 114–125 [31 figs.].

- Epstein, M.E. 1998. Environmental Auditing: Butterflies (Lepidoptera: Papilionoidea and Hesperioidea) of Roxborough State Park, Colorado, USA: Baseline Inventory, Community Attributes, and Monitoring Plan. Environmental Management, 22(2): 287–295 [3 figs.].
- Dalceridae). Tropical Lepidoptera, 8(2): 49–59 [39 color figs.]. Feller, I.C. and Mathis, W.N. 1997. Primary Herbivory by
- Wood-Boring Insects along an Architectural Gradient of *Rhizophora mangle*. Biotropica, 29(4): 440–451 [3 figs.; 3 tables].
- Flint, O.S., Jr., and Bueno-Soria, J. 1998. Studies of Neotropical Caddisflies LVI: Descriptions of Five New Species of the Genus *Metrichia* Ross (Trichoptera: Hydroptilidae) from Pakitza, Peru, with a Checklist and Bibliography of the Described Species of the Genus. Proceedings of the Entomological Society of Washington, 100(3): 489–496 [12 figs.].
- Flint, O.S., Jr. 1998. New species and records of *Climacia* from the Neotropics (Neuroptera, Sisyridae). Acta Zoologica Fennica, 209: 107–117 [39 figs.].
- ———. Studies of Neotropical Caddisflies, LIII: A Taxonomic Revision of the Subgenus Curgia of the Genus Chimarra (Trichoptera: Philopotamidae). Smithsonian Contributions to Zoology, 594: 1–131 [446 figs.; 26 maps]
- Froeschner, R.C. 1995. *Rolstonus rolstoni*, New Genus and New Species of Acanthosomatidae from Argentina (Heteroptera: Pentatomoidea: Ditomotarsini). Journal of the New York Entomological Society, 103(4): 360–363 [3 figs.].
- Furth, D.G. 1997. Alticinae of Israel and Adjacent Areas: Smaller Genera (Coleoptera: Chrysomelidae). Isreal Journal of Entomology, 31: 121–146.
- Glassberg, J., Opler, P., Pyle, R.M., Robbins, R.K., and Tuttle, J. 1998. There's no need to release
- butterflies-they're already free. American Butterflies, 6: 2. Griswold, C.E., Coddington, J.C., Hormiga, G. and Scharff,
- N. 1998. Phylogeny of the orb-web building spiders (Araneae, Orbiculariae: Deinopoidea, Araneoidea). Zoological Journal of the Linnean Society, 123: 1–99 [48 figs.].
- Henry, T.J. and Froeschner, R.C. 1998. Catalog of the Stilt Bugs, or Berytidae, of the World (Insecta: Hemiptera: Heteroptera). Contributions of the American Entomological Institute, 30(4): 1–72 [I fig.].
- Heraty, J. and M.E. Schauff 1998. Mandibular teeth in Chalcidoidea: function and phylogeny. Journal of Natural History 32: 1227–1244.
- LaFontaine, J.D. 1998. Noctuoidea, Noctuidae (Part). The Moths of America North of Mexico, 1–348.
- Liebhert, J.K. and Polhemus, D.A. 1997. R.C.L. Perkins: 100 Years of Hawaiian Entomology. Pacific Science, 51(4): 343–355 [8 figs.].

------. 1997. Comparisons to the Century Before: The Legacy of R.C.L. Perkins and *Fauna Hawaiiensis* as the Basis for a Long-Term Ecological Monitoring Program. Pacific Science, 51(4): 490–504.

- Malikul, V. {illust.}. Eastern Butterflies, by P.A. Oplet. The Peterson Field Guide Series, Houghton Mifflin Co., Boston, 1–486.
- Mathis, W.N. and Zatwarnicki, T. 1998. A Review of the West Indian Species of *Mimapsilopa* Cresson (Diptera: Ephydridae). Proceedings of the Entomological Society of Washington, 100(1): 7–24 [33 figs.].
- Mathis, W.N. 1997. Shore Flies of the Belizean Cays (Diptera: Ephydridae). Smithsonian Contributions to Zoology, 592: 1–77 [258 figs.; 6 tables].

- Moffert, M.W. [photographer]. 1998. Planet of the Beetles, by D. H. Chadwick. National Geographic, 193(3): 100–119.
- Polhemus, D.A. 1997. Phylogenetic Analysis of the Hawaiian Damselfly Genus *Megalagrion* (Odonata: Coenagrionidae): Implications for Biogeography, Ecology, and Conservation Biology. Pacific Science, 51(4): 395–412 [9 figs.; 1 table].
 ———. 1998. Two New Species of Water Striders

(Heteroptera: Gerridae) from the Philippines. Proceedings of the Entomological Society of Washington, 100(2): 261–268 [9 figs.].

- Polhemus, D.A. and Polhemus, J.T. 1997. A Review of the Genus Limnometra Mayr in New Guinea, with the Description of a Very Large New Species (Hereroptera: Gerridae). Journal of the New York Entomological Society, 105(1-2): 24–39 [15 figs.].

Schauff, M.E. 1998. New Eulophidae (Hymenoptera) reared from citrus leafminer, *Phyllacnistis citrella* Stainton (Lepidoptera: Gracillariidae). Proceedings of the Entomological Society of Washington, 100: 256–260.

Schauff, M.E. and LaSalle, J. 1998. The relevance of systematics to biological control: protecting the investment in research. Pp. 425–436. In Pest Managment—Future Challenges. Volume I. Proceedings of the 6th Australian Applied Entomological Conference, Brisbane 29 September–2 October 1998.

Schauff, M.E., LaSalle, J., and Coote, L. 1997. Family Eulophidae, pp. 327–429. In Annotated keys to the genera of Nearctic Chalcidoidea (Insecta: Hymenoptera), G. Gibson, J. Huber, and J. Woolley, eds. NRC Reseach Press, Ottawa.

- Schauff, M.E., LaSalle, J., and Wijeseskara, A. 1998. The Genera of Chalcid Parasites (Hymenoptera: Chalcidoidea) of Citrus Leafminer, *Phyllocnistis citrella* Stainton (Lepidoptera: Gracillariidae). Journal of Natural History 32: 1001–1056.
- Spangler, P.J. 1997. Two new species of the aquatic beetle genus Macrelmis Motschulsky from Venezuela (Coleoptera: Elmidae: Elminae), Insecta Mundi, 11(1): 1–20.
- Spangler, P.J. and Decu, V. 1998. Coleoptera Aquatica, pp. 1031–1046. In Encyclopaedia Biospeologica, Juberthie, C. and Decu, V., eds., Société de Biospéologie, Bucarest.
- Tormos, J., Krombein, K.V., Asis, J.D., and Gayubo, S.F. 1998. Descriptions of Mature Larvae of Two Amiseginae, With a Dicussion of Larval Characters in the Chrysididae (Hymenoptera). Annals of the Entomological Society of America, 91(5): 598–601 [13 figs.].
- Wetterer, J.K., Schultz, T.R. and Meier, R. 1998. Phylogeny of Fungus-Growing Ants (Tribe Attini) Based on mtDNA Sequence and Morphology. Molecular Phylogenetics and Evolution, 9(1): 42–47.
- Wolda, H., O'Brien, C., and Stockwell, H.P. 1998. Weevil Diversity and Seasonality in Tropical Panama as Deduced from Light-Trap Catches (Coleoptera: Curculionoidea).
 Smithsonian Contributions to Zoology, 590: 1–79.

Department of Invertebrate Zoology

- Bayer, F.M. 1997. Narella nuttingi, a new gorgonacean ococoral of the Family Primnoidae (Anthozoa) from the eastern Pacific. Proceedings of the Biological Society of Washington IIO(4):511-519.
- . 1997. Umbellula Cuvier, (1797) (Cindaria, Anthozoa): proposed conservation as the correct original spelling, and corrections to the entries relating to Umbellularia Lamarck, 1801 on the Official Lists and Indexes of Names in Zoology. Bulletin of Zoological Nomenclature 54(1):14–18.
- Bayer, F.M. and A.A. Olsson. 1998. A review of the circumaustral gorgonacean genus *Fannyella* Gray, 1870 with descriptions of five new species. *Senckenbergiana Biologica* 77(2):161–204.
- Blow, W.C. and R.B. Manning. 1997. A new genus, Martinetta, and two new species of xanthoid crabs from the middle Eocene Santee limestone of South Carolina. Tulane Studies in Geology and Paleontology 30(3):171–180.
- Boury-Esnault, N. and K. Ruetzler. 1997. Thesaurus of sponge morphology. *Smithsonian Contributions to Zoology* 596:1-55.

Cairns, S.D. 1997. A generic revision and phylogenetic analysis of the Turbinoliidae (Cnidaria: Scleractinia). Smithsonian Contributions to Zoology 591:1-55.

------. 1998. Azooxanthellate Scleractinia (Cnidaria: Anthozoa) of Western Australia. *Records of the Australian Museum* 18:361–417.

Chace, F.A., Jr. 1997. The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonidae, Processidae, and Hippolytidae. Smithsonian Contributions to Zoology 587:1–106, figs. 1–29.

Fauchald, K. and G. Rouse. 1997. Polychaete systematics: Past and present. Zoologica Scripta 26(2):71–138.

Ferrari, F. and A. Benforado. 1998. Setation and setal groups on antenna I of *Ridgewayia klausruetzleri*, *Pleuromamma xiphias*, and *Pseudocalanus elongatus* (Crustacea: Copepoda: Calanoida) during the copepodid phase of their development. *Proceedings of the Biological Society of Washington* 111(1):209–221.

Ferraris, J.D. and J.L. Norenburg. 1997. Oxygen uptake during repeated exposure to temperature change:
Pysiological divergence in Panamanian cognate pairs and latitudinally distant populations of decapod Crustacea.
Marine Ecology 18(2):127–146.

Fornshell, J. and F. Ferrari. 1998. Oceanography in high school setting. The Oceanography Society Magazine 11:153–154.

Heard, R.W. and R.B. Manning. 1997. Austinixa, a new genus of pinnotherid crab (Crustacea: Decapoda: Brachyura), with the description of A. hardyi, a new species from Tobago, West Indies. Proceedings of the Biological Society of Washington 110(3):393-398.

Hershler, R. and D. Sada 1998. A systematic review of the hydrobiid snails (Gastropoda: Rissoidea) of the Great Basin, western United States. Part I. Genus Pyrgulopsis. The Velsger 41(1):1–132

Kabat, A.R. 1998. Superfamily naticoidea. In P.L. Beesley, G.J.B. Ross and A. Wells, eds., *Mollusca: The southern* synthesis. Fauna of Australia, CSIRO Publishing, Melbourne B(5):790-792.

Kensley, B. 1998. Estimates of species diversity of free-living marine isopod crustaceans on coral reefs. *Coral Reefs* 17:83–88.

Kensley, B. and R. Heard. 1997. Tridentella ornata (Richardson 1911), new combination: records of hosts and localities (Crustacea: Isopoda: Tridentellidae). Proceedings of the Biological Society of Washington 110(3):422-425.

Kensley, B., M. Ortiz and M. Schotte 1997. New records of marine Isopoda from Cuba (Crustacea:Percarida). Proceedings of the Biological Society of Washington 110(1):74-98. Kornicker, L.S. 1997. The four faces of the maxilla (Ostracoda: Cypridinidae). Journal of Crustacean Biology 17(4):654–658, figs. 1–2.

Kornicker, L.S. and B.A. Thomassin. 1998. Ostracoda (Myodocopina) of Tulear reef complex, SW Madagascar. Smithsonian Contributions to Zoology 595:1–134.

Kornicker, L.S. and E. Harrison-Nelson. 1997. Myodocopid Ostracoda of Pillar Point Harbo, Half Moon Bay, California. Smithsonian Contributions to Zoology 593:1-53, figs.1-28.

Kornicker, L.S. and T.M. Iliffe. 1998. Myodocopid Ostracoda (Halocypridina, Cladocopina) from anchialine caves in the Bahamas, Canary Islands, and Mexico. *Smithsonian Contributions to Zoology* 599:1-93.

Lu, H. and K. Fauchald. 1998. Description of *Eunice weintraubi* and *E. wai*, two new species of eunicid polychaetes from northern Gulf of Mexico. *Proceedings of the Biological Society* of Washington 111(1):230–240.

Manning, R.B. and T.Y. Chan. 1997. The Genus Faughnia from Taiwan, with the description of a new species (Stomatopoda: Parasquillidae). Journal of Crustacean Biology 17(3):546-554.

McLaughlin, P.A. and R. Lemaitre. 1997. Carcinization in the Anomura—fact or fiction? I. Evidence from adult morphology. Contributions to Zoology, Amsterdam 67(2)79–123.

Nates, S.F., D.L. Felder and R. Lemaitre. 1997. Comparative larval development in two species of the burrowing ghost shrimp Genus *Lepidophthalmus* (Decapoda: Callianassidae). *Journal of Crustacean Biology* 17(3):497–519.

Ortiz, M. and R. Lemaitre. 1997. Seven new amphipods (Crustacea: Peracarida: Gammaridea) from the Caribbean coast of South America. *Boletim de Investigaciones Marinas y Costeras* 26:71–104.

Perez Farfante, I. and B. Kensley. 1997. Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Ménoires du Muséum national d Histoire naturelle, Paris, series 4* 175:I-233.

Reid, J.W. 1997. Argyrodiaptomus nhumirim, a new species, and Austrinodiaptomus kleereloperi, a new genus and species, with redesction of Argyrodiapomus macrochaetus Brehm, new rank, from Brazil (Crustacea: Copepoda: Diaptomidae). Proceedings of the Biological Society of Washington 110(4):571-600.

Reid, J.W. and J.D. Spooner. 1998. Stolonicyclops beggiensis, new genus, new species, from Georgia, U.S.A. (Copepoda: Cyclopoida: Cyclopidae). Journal of Crustacean Biology 18(2):405–411.

Ruetzler, K. 1997. The role of psammobiontic sponges in the reef community. Proceedings of the &th International Coral Reef Symposium 2:1393–1398. Talbot, M.S. 1997. Doxomysis acanthia, a new leptomysinid (Crustacea: Mysidacea) from the northern Great Barrier Reef, Australia, with extensions to the known distributions of *D. australiensis* W.M. Tattersall, 1940 and *D. spinata* Murano, 1990, and a key to the genus Doxomysis. Proceedings of the Biological Society of Washington 110(3):426–438.

Tchesunov, A.V. and W.D. Hope. 1997. Thalassomermis megamphis n. gen., n. sp. (Mermithidae: Nemata) from the bathyal south Atlantic Ocean. Journal of Nematology 29(4):451-464.

Tudge, C.C. 1997. Phylogny of the Anomura (Decapoda, Crustacea): Spermatozoa and spermatophore morphological evidence. Contributions to Zoology, Amsterdam 67(2):125–141.

Tudge, C.C., B.G.M. Jamieson, L. Sandberg and C. Erseus. 1998. Ultrastructure of the mature spermatozoon of the king crab *Lithodes maja* (Lithodidae, Anomura, Decapoda): further confirmation of a lithodid-pagurid relationship. *Invertebrate Biology* 117(1):57–66.

Vecchione, M. 1997. Book Review Cephalopod Behaviour. by R.T. Hanlon and J.B. Messenger, 1996. Transactions of the American Fisheries Society 126(4):723-724.

Volkmer-Ribeiro, C. and K. Ruetzler. 1997. Pachyrotula, a new genus of freshwater sponges from New Caledonia (Porifera: Spongillidae). Proceedings of the Biological Society of Washington 110(4):489–501.

Department of Mineral Sciences

Benedix, G.K., McCoy, T.J., Keil, K., Bogard, D.D., and Garrison, D.H. 1998. A petrologic and isotopic study of winonaites: Evidence for early partial melting, brecciation, and metamorphism. *Geochimica et Cosmochimica Acta*, v. 62, pp. 2535–2553.

Bocarsly, A.B., Clark, C., Wu, Y., and Vicenzi, E.P. 1997. Inorganic Photolithography: Interfacial Multicomponent Pattern Generation. *Journal of Chemical Education*, v. 74, pp. 663–667.

Cerny, P., Ercit, T.S., Wise, M.A., Chapman, R., and Buck, H.M. 1998. Compositional, structural, and phase relationships in titanian ixiolite and titanian columbite-tantalite. *Canadian Mineralogist* v. 36, pp. 547–561.

De, B., Heaney, P.J., Hargraves, R.B., Vicenzi, E.P., and Taylor, P.T. 1998. The formation of polycrystalline diamond: The carbonado conumdrum. *Earth and Planetary Science Letters*, v. 164, pp. 421–133.

Dyar, M.D., Taylor, M.E., Lurz, T.M., Francis, C.A., Guidotti, C.V., and Wise, M.A. 1998. Inclusive chemical characterization of rourmaline: Mössbauer study of Fe valence and site occupancy. *American Mineralogist*, v. 83, pp. 848–864.

Ferry, J.M., Sorensen, S.S., and Rumble, D. III. 1998. Structurally controlled fluid flow during contact metamorphism in the Ritter Range pendant, California, U.S.A. Contributions to Mineralogy and Petrology, v. 130, pp. 358–378. Fiske, R.S., Cashman, K.V., Shibata, A., and Watanabe, K. 1998. Tephra dispersal from Myojinsho, Japan, during its shallow submarine eruption of 1952–1953: Bulletin of Volcanology, v. 59, pp. 262–275.

French, B.M. 1997. Memorial: Eugene M. Shoemaker (1928–1997), Meteoritics and Planetary Science, v. 32, p. 985.

French, B.M. and C.M. Anderson. 1997. "The man passing by on his way to the Moon" (memorial to E.M. Shoemaker), *The Planetary Report*, v. 17, no. 6, (Nov.-Dec., 1997), pp. 14–15.

Fritsch, S., Post, J.E. and Navrotsky, A. 1997. Energetics of low temperature polymorphs of manganese dioxides and oxyhydroxides. Geochimica et Cosmochimica Acta, 61, 2613–2616.

Giaramita, M., MacPherson, G.J., and Phipps, S.P. 1998. Petrologically diverse basalts from a fossil oceanic forearc in California: The Llanada and Black Mountain remnants of the Coast Range Ophiolite. *Geological Society of America Bulletin*, v. 110, pp. 553–571.

Keller, G., Liangquan, L., Stinnesbeck, W., and Vicenzi, E. 1998. The K/T mass extinction, Chicxulub and the impact-kill effect. *Bulletin Sociétié Géologique de France*, v. 169, n. 4, pp. 485–491.

Kimberly, P., Siebert, L., Luhr, J.F., and Simkin, T. 1998. Volcanoes of Indonesia, v. I.O (CD-ROM), Smithsonian Institution, Global Volcanism Program, Digital Information Series, GVP-I.

McCoy, T.J. 1998. A pyroxene-oldhamite clast in Bustee: Igneous aubritic oldhamite and a mechanism for the Ti entichment in aubritic troilite. *Antarctic Meteorite Research*, v. 11, 34–50.

McKeegan, K.D., Leshin, L.A., Russell, S.S., and MacPherson, G.J. 1998. Oxygen isotopic abundances in calcium-aluminum-rich inclusions from ordinary chondrites: Implications for nebular heterogeneity. *Science*, v. 280, pp. 414–418.

Melson, W.G., Post, J.E., Wise, M.A., Sorenson, S.S., Fiske, R.S., Luhr, J.F., MacPherson, G.J., and McCoy, T.J. 1997. Diamonds to diamonds: a tour of the Smithsonian's new Geology, Gems & Mineral Hall. *Geotimes*, December 1997.

Mittlefehldt D.W., McCoy, T.J., Goodrich, C.A., and Kracher, A. 1998. Non-chondritic meteorites from asteroidal bodies. In: Planetary Materials (J.J. Papike, ed.), *Reviews in Mineralogy*, v. 36, pp. 41–195.

Molodetsky, I.E., Vicenzi, E.P., and Law, C.K. 1998. Phases of titanium combustion in air. *Combustion and Flame*, v. 112, n. 4, pp. 522–532.

Peng, G., Luhr, J.F., and McGee, J.J. 1997. Factors controlling sulfur concentrations in volcanic apatite. *American Mineralogist*, v. 82, pp. 1210–1224.

Post, J.E. 1997. The National Gem Collection. Harry Abrams, Inc., New York, 144 pp.

Post, J.E., Wise, M.A., Feather, R.C., and Pohwat, P.W. 1998. The Smithsonian Institution's new hall of geology, gems, and minerals. *Rocks and Minerals*, v. 73, pp. 44–51.

- Rose, T.R., Wise, M.A. and Brown, C.D. 1997. Renewed mining at the western quarries of Mount Apatite, Maine. *Rocks and Minerals*, v. 72, pp. 44–48.
- Rouse, R.C., Dunn, P.J., Peacor, D.R., and Wang, L. 1998. Structural studies of the natural antimonian pyrochlores. *Journal of Solid State Chemistry*, v. 141, pp. 562–569.
- Russell S.S., McCoy T.J., Jarosewich E., and Ash, R.D. 1998. The Burnwell, Kentucky, low-FeO chondrite fall: Description, classification and origin. *Meteoritics and Planetary Science*, v. 33, pp. 853–856.
- Sharp, S.L., Kumar, G., Vicenzi, E.P., Bocarsly, A.B., and Heibel, M. 1998. Formation and structure of a tin-iron oxide solid-state system with potential applications in carbon monoxide sensing through the use of cyanogel chemistry. *Chemistry of Materials*, v. 10, pp. 880–885.
- Smeds, S-A., Uher, P., Cerny, P., Wise, M.A., Gustafsson, L., and Penner, P. 1998. Graftonite-beusite in Sweden: primary phases, products of exsolution, and distribution in zoned populations of granitic pegmatites. *Canadian Mineralogist*, v. 36, pp. 377–394.
- Snell, H.M., Snell, H.L., Davis-Merlin, G., Simkin, T.,
 Silberglied, R.E., 1996/7. Bibliografa de Galapagos
 1535–1995 (Galapagos Bibliography 1535–1995). Fundacion Charles Darwin, Quito, 321 pp.
- Sorensen, S.S., Dunne, G.C., Hanson, R.B., Barton, M.D., Becker, J., Tobisch, O.T., and Fiske, R.S. 1998. From Jurassic shores to Cretaceous plutons: Geochemical evidence for paleoalteration environments of metavolcanic rocks, Eastern California. *Geological Society of America Bulletin*, v. 110, pp. 326–343.
- Wise, M.A., Cerny, P., and Falster, A.U. 1998. Scandium substitution in columbite group minerals and ixiolite. *Canadian Mineralogist*, v. 36, pp. 673–680.
- Wu, Y., Pfenning, B.W., Sharp, S., Ludwig, D.R., Warren, C.J., Vicenzi, E.P., and Bocarsly, A.B. 1997. Light induced multielectron charge transfer processes occurring in a series of group 8-platinum cyanobridged complexes. *Coordination Chemistry Reviews*, v. 159, pp. 245–255.

Department of Paleobiology

- Aronson, R.B.; Precht, W.F.; and Macintyre, I.G. "Extrinsic Control of Species Replacement on a Holocene reef in Belize: The Role of Coral Disease." *Coral Reefs* 17 (3)(1998): 223–230.
- Baker, R.A., and DiMichele, W.A. "Resource Allocation in Late Pennsylvanian Coal-swamp Plants." *Palaios* 12 (2)(1997): 127-132.
- Bateman, R.M.; Crane, P.R.; DiMichele, W.A.; Kenrick, P.;
 Rowe, N.P.; Speck, Thomas; and Stein, W.E. "Early
 Evolution of Land Plants: Phylogeny, Physiology, and
 Ecology of the Primary Terrestrial Radiation." Annual
 Review of Ecology and Systematics. 29 (1998): 263–292.
- Beck, Allison, and Labandeira, C.C. "Early Permian Insect Folivory on a Gigantopterid-dominated Riparian Flora

from North-central Texas." Palaeogeography,

- Palaeoclimatology, Palaeoecology 142 (3/4)(1998): 139–173. Behrensmeyer, A.K.; Todd, N.E.; Potts, R.B.; and McBrinn, G.E. "Late Pliocene Faunal Turnover in the Turkana Basin, Kenya and Ethiopia." Science 278 (5343)(1997): 1589–1594.
- Benson, R.H. Review. "Miocene Stratigraphy—An Integrated Approach: Developments in Palaeontology and Stratigraphy, Volume 15," edited by A. Montanari, G.S. Odin, and R. Coccioni. *Palaios* 13 (6)(1998): 606–607.
- Bernasconi, M.P., and Stanley, D.J. "Molluscan Biofacies, their Distributions, and Current Erosion of the Nile Delta Shelf." *Journal of Coastal Research* 13 (4)(1997): 1201–1212.

Bijma, Jelle; Hernleben, Christoph; Huber, B.T.; Erlenkeuser, Helmut; and Kroon, Dick. "Experimental Determination of the Ontogenetic Sta Stable Isotope Variability in Two Morphotypes of *Globigerinella siphonifera* (d'Orbigny)." *Marine Micropaleontology* 35 (2)(1998): 141–160.

- Bowring, S.A., and Erwin, D.H. "A new Look at Evolutionary Rates in Deep Time: Uniting Paleontology and High-Precision Geochronology." *GSA Today* 8 (9)(1998): 1–8.
- Bowring, S.A.; Erwin, D.H.; Jin, Y.G.; Martin, M.W.; Davidek, K.; and Wang, W. "U/Pb Zircon Geochronology and Tempo of the End-Permian Mass Extinction." *Science* 280 (5366)(1998): 1039–1045.

Buzas, M.A., and Culver, S.J. "Assembly, Disassembly, and Balance in Marine Communities." *Palaiss* 13 (3)(1998): 263-275.

- Buzas, M.A., and Hayek, L.C. "SHE Analysis for Biofacies Identification." Journal of Foraminiferal Research 28 (3)(1998): 233-239.
- Cheetham, A.H., and Jackson, J.B.C. "The Fossil Record of Cheilostome Bryozoa in the Neogene and Quaternary of Tropical America: Adequacy for Phylogenetic and Evolutionary Studies." In *The Adequacy of the Fossil Record* (1998): 227–242. Edited by S.K. Donovan and C.R.C. Paul. Chichester, England: John Wiley and Sons, 312 pages.
- Chen, Zhongyuan, and Stanley, D.J. "Sea-level Rise on Eastern China's Yangrze Delta." Journal of Coastal Research 14 (1)(1998): 360–366.
- Culver, S.J., and Buzas, M.A. "Patterns of Occurrence of Benthic Foraminifera in Time and Space." In *The Adequacy* of the Fossil Record (1998): 207–226. Edited by S.K. Donovan and C.R.C. Paul. Chichester, England: John Wiley and Sons, 312 pages.
- Davies-Vollum, K.S., and Wing, S.L. "Sedimentological, Taphonomic, and Climatic Aspects of Eocene Swamp Deposits (Willwood Formation, Bighorn Basin, Wyoming)." *Palaios* 13 (1)(1998): 28–40.
- DiMichele, W.A. ONLINE "Love's Labour Lost? Or the Tragic Story of a Young Paleontologist Who Chooses Fossil Plants as his Life's Work Only to Discover at Age 50 that his Mother Thinks He Should Have Studied Dinosaurs ("Why Aren't You Ever on TV?")." *Palaia* 13 (5)(1998): 405–407.
- -------. "Those Were the Days." Review of "Macroevolution: Pattern and Process," by S.M. Stanley. *American Paleontologist* 6 (4)(1998): 13–14.

Domning, D.P.; Emry, R.J.; Portell, R.W.; Donovan, S.K.; and Schindler, K.S. "Oldest West Indian Land Mammal: Rhinocerotoid Ungulate from the Eocene of Jamaica." Journal of Vertebrate Paleontology 17 (4)(1997): 638-641.

- Emry, R.J.; Lucas, S.G.; Tyutkova, Lyubov; and Wang, Banyue. The Ergilian-Shandgolian (Eocene-Oligocene) Transition in the Zaysan Basin, Kazakstan. In "Dawn of the Age of Mammals in Asia" (1998): 298–312. Edited by K.C. Beard and M.R. Dawson. Bulletin of Carnegie Museum of Natural History 34.
- Emry, R.J., Tyutkova, Lyubov, Lucas, S.G., and Wang, Banyue. "Rodents of the Middle Eocene Shinzhaly Fauna of Eastern Kazakstan." *Journal of Vertebrate Paleontology* 18 (I)(1998): 218–227.
- Erwin, D.H. "After the End: Recovery from Extinction." Science 279 (5355)(1998): 1324–1325.
- Review. "The Origin of Animal Body Plans; A Study in Evolutionary Biology," by Wallace Arthur. *Palaios* 13 (6)(1998): 608.
- Galili, Ehud; Stanley, D.J.; Sharvit, Jacob; and Weinstein-Evron, Mina. "Evidence for Earliest Olive-oil Production in Submerged Settlements off the Carmel Coast, Israel." *Journal* of Archaeological Science 24 (12)(1997): 1141–1150.
- Graus, R.R., and Macintyre, I.G. "Global Warming and the Future of Caribbean Coral Reefs." *Carbonates and Evaporites* 13 (1)(1998): 43-65.
- Greenstein, B.J.; Curran, H.A.; and Paldolfi, J.M. "Shifting Ecological Baselines and the Demise of Acropora cervicornis in the Western North Atlantic and Caribbean Province: A Pleistocene Perspective." Coral Reefs 17 (3)(1998): 249–261.
- Greenstein, B.J.; Pandolfi, J.M.; and Curran, H.A. "The Completeness of the Pleistocene Fossil Record: Implications for Stratigraphic Adequacy." In *The Adequacy of the Fossil Record* (1998): 77–109. Edited by S.K. Donovan and C.R.C. Paul. Chichester, England: John Wiley and Sons, 312 pages.
- Hayek, L.C., and Buzas, M.A. "SHE Analysis: an Integrated Approach to the Analysis of Forest Biodiversity." In *Forest Biodiversity Research, Monitoring and Modeling* (1998): 311–321.
 Edited by Francisco Dallmeier and J.A. Comiskey. Paris: UNESCO and Parthenon Publishing Group, 671 pages.
- Houston, R.M., and Huber, B.T. "Evidence of Photosymbiosis in Fossil Taxa? Ontogenetic Stable Isotope Trends in Some Late Cretaceous Planktonic Foraminifera." *Marine Micropaleontology* 34 (1)(1998): 29–46.

Korth, W.W., and Emry, R.J. A New Species of Autolithomys (Rodentia, Eomyidae) from the Chadronian (late Eocene) of Wyoming. Paludicola 1 (3)(1997): 112–116.

Labandeira, C.C. Letter. "Permian Pollen Eating." Science 277 (5331)(1997): 1422–1423.

———. "Early History of Arthropod and Vascular Plant Associations." Annual Review of Earth and Planetary Sciences 26 (1998): 329–377.

. "How Old is the Flower and the Fly?" Science 280 (5360)(1998): 57–59.

- ———. "Plant-insect Associations from the Fossil Record." Geotimes 43(9)(1998): 18–24.
- . "The Role of Insects in Late Jurassic to Middle Cretaceous Ecosystems." In "Lower and Middle Cretaceous Terrestrial Ecosystems" (1998): 105–124. Edited by S.G. Lucas, J.I. Kirkland, and J.W. Estep. New Mexico Museum of Natural History and Science Bulletin 14.
- Lessios, H.A., and Macintyre, I.G., editors. *Proceedings of the* 8th International Coral Reef Symposium Volumes 1 and 2 (1997). Balboa, Panama: Smithsonian Tropical Research Institute, 2,119 pages.
- Liu, Chengjie; Olsson, R.K.; and Huber, B.T. "A Benthic Paleohabitat for *Praepararotalia* Gen. Nov. and *Antarcticella* Loeblich and Tappan." *Journal of Foraminiferal Research* 28 (1)(1998): 3–18.
- Lucas, S.G.; Emry, R.J.; and Foss, S.G. Taxonomy and Distribution of *Daeodon*, an Oligocene-Miocene Entelodont (Mammalia: Artiodactyla) from North America. *Proceedings* of the Biological Society of Washington III (2)(1998): 425–435.
- Lucas, S.G.; Emry, R.J.; and Tleuberdina. *Franconictis* (Mammalia: Carnivora) from the late Oligocene of Eastern Kazakstan. *Proceedings of the Biological Society of Washington* 111 (3)(1998): 502–510.
- Lucas, S.G.; Kordikova, E.G.; and Emry, R.J. "Oligocene Stratigraphy, Sequence Stratigraphy and Mammalian Biochronology North of the Aral Sea, Central Kazakstan." In "Dawn of the Age of Mammals in Asia" (1998): 313–348.
 Edited by K.C. Beard and M.R. Dawson. Bullesin of Carnegie Museum of Natural History 34.
- Macintyre, I.G. 1997, "Reevaluating the Role of Crustose Coralline Algae in the Construction of Coral Reefs." In *Proceedings of the 8th International Coral Reef Symposium* Volume I (1997): 725–730. Balboa, Panama: Smithsonian Tropical Research Institute, 2,119 pages.
- Macintyre, I.G., and Reid, R.P. "Recrystallization in Living Porcelaneous Foraminifera (Archaias angulatis): Textural Changes without Mineralogical Alteration." Journal of Sedimentological Research 68 (1)(1998): 11-19.
- Mamay, S.H.; Hook, R.W.; and Hotton, Nicholas III. "Amphibian Eggs from the Lower Permian of North-Central Texas." *Journal of Vertebrate Paleontology* 18(1)(1998): 80–84.
- Manchester, S.R.; Dilcher, D. L.; and Wing, S.L. "Attached Leaves and Fruits of Myrtaceous Affinity from the Middle Eocene of Colorado, USA." *Review of Palaeobotany and Palynology* 102 (3–4)(1998): 153–163.
- Neuman, R.B.; Bruton, D.L.; and Pojeta, John, Jr. "Fossils from the Ordovician 'Upper Hovin Group' (Caradoc-Ashgill), Trondheim Region, Norway." *Geological Survey of Norway* Bulletin 432 (1997): 25–57.

Oliver, W.A., Jr. "Evolutionary Relationships of the Zaphrentidae and Craspedophyllida (Rugose Corals, Devonian) in Eastern North America." *Geological Society of America Special Paper* 321 (1997): 317–325.

------. "Ptenophyllids in Eastern North America." Coral Research Bulletin 5 (1997): 203–209.

Paldolfi, J.M. "Roles for Worms in Reef-building." Coral Reefs 17 (2)(1998): 120.

Phillips, T.L., and DiMichele, W.A. "A Transect through a Clastic-Swamp to Peat-Swamp Ecotone in the Springfield Coal, Middle Pennsylvanian Age of Indiana, U.S.A." *Palaios* 13 (2)(1998): 113–128.

Reid, R.P., and Macintyre, I.G. "Carbonate Recrystallization in Shallow Marine Environments: A Widespread Diagenetic Process Forming Micritized Grains." *Journal of Sedimentological Research* 68 (5)(1998): 928–946.

Stanley, D.J. Nile Delta: A Geological Excursion (1997). Washington, D.C.: Deltas-Global Change Program, Smithsonian Institution, 189 pages.

Stanley, D.J., and Bernasconi, M.P. "Relict and Palimpsest Depositional Patterns on the Nile Shelf Recorded by Molluscan Faunas." *Palaios* 134 (1)(1998): 79–86.

Stanley, D.J., and Goodfriend, G.A. "Rapid Subsidence and Consequent Sea-level Rise at Northern Suez Canal Entrances, Egypt." *Nature* 388 (6640)(1997): 335–336.

Stanley, D.J.; Mart, Yossi; and Nir, Yaacov. "Clay Mineral Distributions to Interpret Nile Cell Provenance and Dispersal. II. Coastal Plain from Nile Delta to Northern Israel." Journal of Coastal Research 13 (2)(1997): 506–533.

Stanley, D.J.; Nir, Yaacov; and Galili, Ehud. "Clay Mineral Distributions to Interpret Nile Cell Provenance and Dispersal. III. Offshore Margin from between Coastal Plain from Nile Delta to Northern Israel." *Journal of Coastal Research* 14 (1)(1998): 196–217.

Stanley, D.J.; Schepis, K.; Arad, V.; and Bartov, Y. "Aswan High Dam, Geological and Environmental Research." *Geological Survey of Israel* Report GSI/21/97 (1997): 65 pages.

Stanley, D.J., and Warne, A.G. "Holocene Sea-level Change and Early Human Utilization of Deltas." GSA Today 7 (12)(1997): 1–7.

Steneck, R.S.; Macintyre, I.G.; and Reid, R.P. "A Unique Algal Ridge System in the Exuma Cays, Bahamas." Coral Reefs 16 (1)1997: 29–37.

Steneck, R.S.; Miller, T.E.; Reid, R.P.; and Macintyre, I.G. "Ecological Controls on Stromatolite Development in a Modern Reef Environment: A Test of the Ecological Refuge Paradigm." Carbonates and Evaporites 13 (1)(1998): 48–65.

Visscher, P.; Reid, R. P.; Bebout, B.M.; Hoeft, S.E.; Macintyre, I.G.; and Thompson, J. "Formation of Lithified Micrite Laminae in Modern Marine Stromatolites (Bahamas): The Role of Sulfur Cycling." American Mineralogist 83 (II-12)(1998): 1482–1491. Waller, T.R. "Origin of the Molluscan Class Bivalvia and a Phylogeny of Major Groups." In *Bivalvia: An Eon of Evolution. Paleontological Studies Honoring Norman D. Newell* (1998): 1-45. Edited by P.A. Johnston and J.W. Haggart. Calgary: University of Calgary Press, 461 pages.

Wilf, Peter; Wing, S.L.; Greenwood, D.R.; and Greenwood, C.L. "Using Fossil Leaves as Paleo-rain Gauges—an Eocene Example." *Geology* 26 (3)(1998): 203–206.

Wing, S.L. "Tertiary Vegetational History of North America as a Context for Mammalian Evolution." In Evolution of Tertiary Mammals of North America: Volume I: Terrestrial Carnivores, Ungulates, and Ungulatelike Mammals (1998): 37-65. Edited by C.L. Janis and K.M. Scott. Cambridge: Cambridge University Press, 691 pages.

Wing, S.L., and Boucher, L.D. "Ecological Aspects of the Cretaceous Flowering Plant Radiation." Annual Reviews of Earth and Planetary Science 26 (1998): 379–421.

Yochelson, E.L. "Walcott in Scotland." *The Edinburgh Geologist* Issue No. 30 (1997): 7–11.

. Review of "Historical Perspective of Early Twentieth Century Carboniferous Paleobotany in North America," edited by P.C. Lyons, E.D. Morey, and R.H. Wagner. *Earth Sciences History* 16 (1)(1997): 55–56.

-------. Charles Doolittle Walcott, Paleontologist (1998). Kent, Ohio: Kent University Press, 510 pages.

 "Walcott, Charles Doolittle." In Biographical Dictionary of American and Canadian Naturalists and Environmentalists (1998): 803–807. Edited by K.B. Sterling, R.P. Harmond, G.A. Cevarco, and L.F. Hammond. Westport, Connecticut: Greenwood Publishing Group, 960 pages.

. "A Field Geologist/Paleontologist in Western Utah: C.D. Walcott and his Work in the House Range 1903 and 1905." *Brigham Young University Geology Studies* 43 (1998): 189–207.

. "Arthur Brown—the Forgotten 'Assistant for all Seasons." *Marella* Number 7 (1998): 10–14.

. "Franco Rasetti—Atomic Physicist, Paleontologist, and Naturalist." *Marella* Number 6 (1998): 10–11.

. Review of "Penguins of the World," by Wayne Lynch. Science Books & Films 34 (2)(1998): 45.

———. Review of "Linnaeus—the Man and his Work," edited by Tore Frängsmyr. *Earth Sciences History* 16 (2)(1998): 162–163.

———. Review of "Life's Splendid Drama: Evolutionary Biology and the Reconstruction of Life's Ancestry 1860–1940," by P.J. Bowler. Earth Sciences History 16 (2)(1998): 168–169.

- Yochelson, E.L., and Fedonkin, M.A. "The Type Specimen (Middle Cambrian) of the Trace Fossil Archaeonassa Fenton and Fenton." Canadian Journal of Earth Sciences 34 (9)(1997): 1210–1219.
- Yochelson, E.L., and Roper, C.F. Vignette No. 301: "Harald A. Rehder—The Club's Man for all Mollusks." Cosmos Club Bulletin 51 (5)(1998): 26–27.

Department of Vertebrate Zoology

- Alexander, B.A., C.D. Michener, and A.L. Gardner. 1998.
 Dasypodidae Borner, 1919 (Insecta, Hymenoptera):
 Proposed Emendation of Spelling to Dasypodaidae, so
 Removing the Homonymy with Dasypodidae Gray, 1821
 (Mammalia, Xenarthra). Bulletin of Zoological Nomenclature 55(1):24-28.
- Altig, R., R.W. McDiarmid, K.A. Nichols and P.C. Ustach. 1998. A Key to the Anuran Tadpoles of the United States and Canada. Contemporary Herpetology Information Series 1998(2): http://vmsweb.selu.edu/~pcsd4805/chis/ 1998/2/index.html#families.
- American Ornithologists' Union. 1998. Checklist of North American Birds, 7th ed. American Ornithologists' Union, Washington, D.C. 829 pp. (Note: R. Banks, Chair of Comm. on Classification and Nomenclature)
- Baker, E.A. and B.B. Collette. 1998. Mackerel from the Northern Indian Ocean and the Red Sea are Scomber australasicus, not Scomber japonicus. Ichthyological Research, 45(1):29-33.
- Baldwin, C.C. 1998. Book review. Fishes, Crayfishes, and Crabs. Louis Renard's Natural History of the Rarest Curiosities of the Seas of the Indies. Volume I: Commentary and English Text; Volume II: Facsimile and Plates. Edited by T.W. Pietsch. The Quarterly Review of Biology, 73:58.
- Beckoff, M. and Elzanowski, A. 1997. Collecting Birds: the Importance of Moral Debate. Bird Conservation International 7:357-361.

Bermingham, E., Coates, A., Cruz D., G., Emmons, L., Foster, R.B., Leschen, R., Seutin, G., Thorn, S., Wcislo, W., Werfel, B. 1998. Geology and Terrestrial Flora and Fauna of Cayos Cochinos, Honduras. *Rev. Biol. Trop.*, 46. Supl. (4):15–37.

Bunch, T.D., S. Wang, R.S. Hoffmann, et al. Reprint. Abstract. 1997. Diploid Chromosome Number and Karyotype of the Tibetan Argali (*Ovis ammon bodgsoni* Blyth, 1840). 10th N.A. Colloquium on Gene Mapping and Cytogenetics in Human and Domestic Species, p. 28.

Burney, D.A., H.F. James, F.V. Grady, J.-G.
Rafamantanantsoa, H. Ramilisonina, T. Wright, and J.B.
Cowart. 1997. Environmental Change, Extinction and Human Activity: Evidence from Caves in NW Madagascar. Journal of Biogeography, 24:755-767

Carleton, M.D., and S.M. Goodman. 1998. New Taxa of Nesomyine Rodents (Muroidea: Muridae) from Madagascar's Northern Highlands, with Taxonomic Comments on Previously Described Forms. *Fieldiana: Zoology*, New Series, 90:163–200.

Carleton, M.D., and E. Van der Straeten. 1997. Morphological Differentiation among Subsaharan and North African Populations of the *Lemnisonnys barbarus* Complex (Rodentia: Muridae). *Proceedings of the Biological Society of Washington*, 110: 640–680.

Chaloupka, M., and G. Zug. 1997. A Polyphasic Growth Function for the Endangered Kemp's Ridley Sea Turtle, Lepidochelys kempii. Fishery Bulletin 95: 849–856.

- Collette, B.B. 1998. Review. Fishes of the Chesapeake Bay.E. Murdy, R. Birdsong, and J. Musick. Exper. Mar. Biol. Ecol., 25:163–166.
- Collette, B.B., and N.V. Parin. 1998. Flyingfishes and their Allies, pp. 144–147. In J.R. Paxton and W.E. Eschmeyer, eds., *Encyclopedia of Fishes*. 2d ed. Academic Press, San Diego.

de Queiroz, K. Misunderstandings about the Phylogenetic Approach to Biological Nomenclature: A Reply to Liden and Oxelman. Zoologica Scripta 26(1): 67–70.

Dove, C. 1997. Quantification of Microscopic Feather Characters Used in the Identification of North American Plovers. *Condor* 99:47–57.

Emmons, L.H. 1998. Mammal Fauna of Parque Noel Kempff Mercado. In T. Killeen and T. Schulenberg, eds., A Biological Assessment of Parque Nacional Noel Kempff Mercado, Bolivia. RAP Working Papers, 10:129–143, 341–347.

Emmons, L.H., and Maria Guiomar Vucetich. 1998. The Identity of Winge's *Lasiaromys villosus* and the Description of a New Genus of Echimyid Rodent (Rodentia: Echimyidae). American *Museum Novitates*, No. 3223.

Emmons, L.H., B. Whitney, and D. Ross. 1998. Sounds of Neotropical Rainforest Mammals: An Audio Field Guide. Ithaca: Cornell Laboratory of Natural Sounds (sound CDs and booklet).

Frey, J.K., R.D. Fisher, L.A. Ruedas. 1997. Identification and Restriction of the Type Locality of the Manzano Mountains Cottontail, Sylvilagus cognatus Nelson. Proceedings of the Biological Society of Washington 110(3):329–331.

Gardner, A.L. 1988. [Letters to the Editor] Red Wolf Specimen Identity. *Conservation Biology* 12(3):499.

Gardner, A.L., and C.B. Robbins. 1998. Generic Names of Northern and Southern Fur Seals (Mammalia: Otariidae). *Marine Mammal Science*, 14(3):544–551.

Goodman, S.M., and M.D. Carleton. 1998. The Rodents of the Reserve Speciale d'Anjanaharibe-Sud, Madagascar. *Fieldiana: Zoology, New Series*, 90:201–221. Gotte, S.W. and R.P. Reynolds. 1997. Observations on the Effects of Alcohol vs. Formalin Storage of Amphibian Larvae. (Text of a talk presented at the "Preservation and curation of early life history stages of fishes, amphibians, and reptiles" workshop at the 1997 ASIH meetings.) On USGS Patuxent Wildlife Research Center homepage at www.pwrc.nbs.gov, under the Research Showcase in What's New section.

Graves, G.R. 1997. Geographic Clines of Age Ratios of Black-throated Blue Warblers (*Dendroica caerulescens*). *Ecology* 78:2524–2531.

-------. 1997. Colorimetric and Morphometric Gradients in Colombian Populations of Dusky Antbirds (*Cercomacra tyrannina*), with a Description of a New Species, *Cercomacra parkeri*. Ornithological Monographs 48:21-35

. 1998. Taxanomic Notes on Hummingbirds (Aves: Trochilidae).1. Eriocnemis dyselius Elliot, 1872 is a Melanistic Specimen of Eriocnemis cupreoventris (Fraser, 1840). Proceedings of the Biological Society of Washington, 111(2):420–425.

Handley, C.O., Jr., and B.R. Handley. 1998. Franklin's Gull at Assateague Island, Virginia. *Raven*, 69(1): 44-45.

Heyer, W.R. 1997. Geographic Variation in the Frog Genus Vanzolinius (Anura: Leptodactylidae). Proceedings of the Biological Society of Washington, 110(3): 338–365.

 Hoelzel, A., C.W. Potter, and P.B. Best. 1998. Genetic
 Differentiation Between Parapatric 'Nearshore' and 'Offshore' Populations of the Bottlenose Dolphin.
 Proceedings of the Royal Society of London B, 265:1177–1184.

Hoffmann, R.S. 1997. [Abstract] Both the Quick and the Dead: Changes in Mammal Communities at the End of the Ice Age. Seventh International Theriological Congress, Acapulco, Mexico, 6–12 September, 1997. Abstracts, p. 140.

Isler, M.L. 1997. A Sector-based Ornithological Geographic Information System for the Neotropics. Ornithological Monographs, 48:345–354.

Isler, M.L., P.R. Isler, and B.M. Whitney. 1997. Biogeography and Systematics of the *Thamnophilus punctatus* (Thamnophilidae) Complex. Ornithological Monographs, 48:355–381.

 . 1998. Use of Vocalizations to Establish Species Limits in Antbirds (Passeriformes: Thamnophilidae). The Auk, 115(3):577–590.

Jackman, T., J.B. Losos, A. Larson, and K. de Queiroz. 1997. Phylogenetic Studies of Convergent Adaptive Radiations in Caribbean Anolis Lizards, pp. 535–557. In Molecular Evolution and Adaptive Radiation, T.J. Givnish and K.J. Sytsma, eds. Cambridge University Press, Cambridge, England.

- James, H.F., and D.A. Burney. 1997. The Diet and Ecology of Hawaii's Extinct Flightless Waterfowl: Evidence from Coprolites. Biological Journal of the Linnean Society 62:279-297.
- Jewett, S.L., and B.B. Collette. 1997. Obituary: Ernest A. Lachner, 1915–96. *Copeia* 1997(3):650–659.

Johnson, G.D., and C. Patterson. 1997. The Gill-arches of Gonorynchiform Fishes. South African Journal of Science, 93: 594C600.

Jones, C., R.S. Hoffmann, D.W. Rice, et al. 1997. Revised Checklist of North American Mammals North of Mexico, 1997. Occasional Papers Museum of Texas Tech University 173: 1–19.

Kalko, E.K.V. 1997. Diversity in tropical bats, pp. 13–43. In
H. Ulrich, ed., *Tropical biodiversity and systematics*.
Proceedings of the International Symposium on
Biodiversity and Systematics in Tropical Ecosystems, Bonn, 1994. Zoologisches Forschungsinstitut und Museum
Alexander Koenig, Bonn, Germany.

Kalko, E.K.V., H.-U. Schnitzler, I. Kaipf, and A.D. Grinnell. 1998. Echolocation and Foraging Behavior of the Lesser Bulldog Bat, Noctilio albiventris: Preadaptations for Piscivory, Behavioral Ecology and Sociobiology, 42:305-319

Kizirian, D.A., and R.W. McDiarmid. 1998. A New Species of Bachta (Squamata:Gymnophthalmidae) with Plesiomorphic Limb Morphology. Herpetologica 54(2):245–53.

Kulbicki, M., and J.T. Williams. 1997. Checklist of the Shorefishes of Ouvéa Atoll. Atoll Research Bulletin.

Losos, J.B., and K. de Queiroz. 1997. Darwin's Lizards. Natural History 106(11):34-39.

Losos, J.B., T.R. Jackman, A. Larson, K. de Queiroz, and L. Rodriguez Schettino. 1998. Contingency and Determinism in Replicated Adaptive Radiations of Island Lizards. *Science*, 279(5359):2115–2118.

Ludwig, C.A. 1998. Type Locality and Taxonomic Status of Saltator plumbiceps "Baird, MS." Lawrence, 1867 (Aves: Passeriformes: Cardinalidae). Proceedings of the Biological Society of Washington, 111(2):418–419.

Lyapunova, E.A., T.B. Bunch, N.N. Vorontsov, and R.S. Hoffmann. 1997. Chromosome Sets and the Taxonomy of Severtsov Wild Sheep. *Russian Journal of Zoology*, 1(3):1083–1093.

Medellin, R.A., A.L. Gardner, and J.M. Aranda. 1998. The Taxonomic Status of the Yucatan Brown Brocket, Mazama pandora (Mammalia: Cervidae). *Proceedings of the Biological Society of Washington* 111(1):1-14.

Munroe, T.A. 1998. Systematics and Ecology of Tonguefishes of the Genus *Symphurus* (Cynoglossidae: Pleuronectiformes) From The Western North Atlantic Ocean. *Fishery Bulletin* 96(1):1–182. Musser, G.G., M.D. Carleton, E.M. Brothers, and A.L. Gardner. 1998. Systematic Studies of Oryzomyine Rodents (Muridae, Sigmodontinae): Diagnoses and Distribution of Species Formerly Assigned to Oryzomys "capito." Bulletin of the American Museum of Natural History, No. 236. 376 pp.

Olson, S.L. 1997. Review. Tertiary Avian Localities of Europe. Jiri Mlikovsky. Auk, 114(3):537–538.

. 1997. Review. John Gould the Bird Man: Associates and Subscribers. Gordon C. Sauer. Auk, 114(3):540-541.

. 1998. Notes on the Systematics of the Rockrunner Achaetops (Passeriformes, Timaliidae) and its Presumed Relatives. Bulletin of the British Ornithologists' Club, 118(1):47-52.

Olson, S.L., and C.A. Walker. 1997. A Trans-Atlantic Record of the Fossil Tropicbird *Heliadornis ashbyi* (Aves: Phaethontidae) from the Miocene of Belgium. *Proceedings of the Biological Society of Washington* 110(4): 624–628.

Ora, H., R. Fisher, I. Ineich, T. Case, R. Radtkey and G. Zug. 1998. A New *Lepidodactylus* (Squamata: Gekkonidae) from Vanuatu. *Herpetologica*, 54(3): 325–332.

Parenti, L.R., and K.D. Louie. 1998. Neostethus djajaorum, New Species, from Sulawesi, Indonesia, the First Phallostethid Fish (Teleostei, Atherinomorpha) Known from East of Wallace's Line. The Raffles Bulletin of Zoology. 46(1):1–12.

Parenti, L.R. and K. Rebecca Thomas. 1998. Pharyngeal Jaw Morphology and Homology in Sicydiine gobies (Teleostei: Gobiidae) and Allies. *Journal of Morphology*. 237:257–274.

Parham, J.F. and G.R. Zug. 1998. Age and Growth of Loggerhead Sea Turtles (*Caretta caretta*) of Coastal Georgia: an Assessment of Skeletochronological Age Estimates. *Bulletin Marine Science*, [1997] 61(2): 287-304.

Rasmussen, P.C. 1998. A New Scops Owl from Great Nicobar Island. Bulletin of the British Ornithologists Club, 118(3):141–153.

------. 1998. Is the Imperial Pheasant Lophura imperialis a hybrid? Work in Progress and a Call for Information. Tragopan, 9:8–10.

Robbins, M.B., G.R. Graves, and J.V. Remsen, Jr. 1997. In Memoriam: Theodore A. Parker III, 1953–1993. Ornithological Monographs 48:1–5.

Rodda, G.H., T.H. Fritts, G. Perry, and E.W. Campbell III. 1998. Managing Island Biotas: Can Indigenous Species Be Protected from Introduced Predators Such as the Brown Treesnake? Transactions 63rd North American Wildlife and Natural Resources Conference, 1998: 95–108.

Rowlands, B.W., T. Trueman, S.L. Olson, M.N. McCulloch, and R.K. Brooke. 1998. The Birds of St. Helena, An Annotated Checklist. *BOU Checklist No. 16*. British Ornithologists' Union. 295 pp.

Savage, J.M., and W.R. Heyer. 1997. Digitial Webbing Formulae for Anurans: A Refinement. *Herpetological Review*, 28:131.

Simmons, N.B., and C.O. Handley, Jr. 1998. A Revision of *Centronycteris* Gray (Chiroptera: Emballonuridae) with notes on natural history. *American Museum Novitates*, 3239:1–28, 8 figs. Springer, V.G., and M.E. Anderson. 1997. Catalog of Type Specimens of Recent fishes in the National Museum of Natural History, Smithsonian Institution, 8: Suborder Zoarcoidei (Anarhichadidae, Bathymasteridae, Pholidae, Ptilichthyidae, Scytalinidae, Stichaeidae, Zoarcidae). Smithsonian Contributions to Zoology 589:1–27.

Springer, V.G., H. Bath, and J.E. Randall. 1998. Remarks on the Species of the Indian Ocean Fish Genus Alloblennius Smith-Vaniz & Springer 1971 (Blenniidae). Aqua, Journal of Ichthyology and Aquatic Biology, 3(1):19-24.

Steppan, S.J. 1998. Phylogenetic Relationships and Species Limits within Phyllotis (Rodentia: Sigmodontinae): Concordance between mtDNA Sequence and Morphology. *Journal of Mammalogy* 79(2):573-593.

Steppan, S.J., and U. Pardinas. 1998. Two New Fossil Muroids from the Early Pleistocene of Argentina: Phylogeny and Paleocology. *Journal of Vertebrate Paleontology* 18(3):640–649.

Stafford, B.J., and R.W. Thorington, Jr. 1998. Carpal Development and Morphology in Archontal Mammals, *Journal of Morphology*, 235:135–155.

Thorington, R.W., Jr., K. Darrow, and C.G. Anderson. 1998. Wingtip Anatomy and Aerodynamics in Flying Squirrels. *Journal of Mammalogy*, 79:245-250.

Thorington, R.W., Jr., K. Darrow, and A.D.K. Betts. 1997. Comparative Myology of the Forelimb of Squirrels (Sciuridae). *Journal of Morphology* 234:155–182.

Webster, W.D., C.O. Handley, Jr., and P.J. Soriano. 1998. Glossophaga Longirostris. Mammalian Species, 576:1-5, 3 figs.

Weitzman, S.H. 1997. Problems in Systematic Studies of Rosy Tetras and their Significance for Aquarists. *Tropical Fish Hobbyist*, 46(3):150–159.

. 1998. Review. So Fruitful a Fish: Ecology, Conservation, and Aquaculture of the Amazon's Tambaqui. Araujo-Lima, Carlos and Michael Goulding. (Ills.) NY: Columbia University Press 1977. Xvi + 144 pp. In AAAS, Science Books and Films, 34(2):41-42.

Weitzman, S.H., and H.-G. Evers. 1998. Zur Geschichte von Tanichthys albonubes und Hemigrammocypris Lini. TI Aquaristik Fachmagazin, NR.144, Jahrgang 30(6):40–46.

Weitzman, S.H., and L. Palmer. 1998. Phantom Tetras, a Brief Account of their Ichthyological and Aquarium History. *Tropical Fish Hobbyist*, 43(11):124–132.

Whitney, B.M., J.F. Pacheco, P.R. Isler, and M.L. Isler. 1995. Hylopezus nattereri (Pinto, 1937) is a Valid Species (Passeriformes: Formicariidae). Ararajuba, 3:37–42.

Zimmer, K.J., T.A. Parker III, M.L. Isler, and P.R. Isler. 1997. Survey of a Southern Amazonian Avifauna: The Alta Floresta Region, Mato Grosso, Brazil. Ornithological Monographs, 48:887–918.

- Zug, G. 1997. Review. Tadpoles. Science Books & Films 33(2):52. ———. 1998. Galápagos Tortoise Nomenclature: Still
- Zug, G.R., Carl H. Ernst, and R.V. Wilson. 1998. Lepidochelys olivacea. Olive Ridley Sea Turtle, Tortuga Golfina, Lora. Catalogue American Amphibians & Reptiles, 653.1–13.
- Zug.G. and B.J. Gill. 1997. Morphological Variation of *Emoia murphy* (Lacertilia: Scincidae) on Islands of the South-West Pacific J. Roy Society New Zealand 27(2): 235–242.
- Zug, G., Kalb, and Luzar. 1997. Age and Growth in Wild Kemp's Ridley Seaturtles *Lepidochelys kempii* from Skeletochronological Data. *Biological Conservation* 80: 261–268.
- Zug, G., and A. Leviton, eds. 1996. Gecko Fauna of the USSR and Neighboring Regions by Szczerbak and Golubev. Translation. Society for the Study of Amphibians and Reptiles.

Office of Biodiversity

- Alonso, A. and F. Dallmeier, eds. 1998. Biodiversity Assessment of the Lower Urubamba Region, Peru. Cashiriari-3 Well Site and the Camisea and Urubamba Rivers. SI/MAB Series #2. Smithsonian Institution/MAB Biodiversity Program. Washington, D.C.
- Burnhein, C.M. 1998. Habitat abundance patterns of fish communities in three Amazonia rainforest streams, pp. 65–77. In A.L. Val, and V.M.F. Almeida-Val eds., *Biology of Tropical Fishes*, INPA, Manaus.
- Colket, E., and D.E. Wilson. 1998. Taphozous hildegardeae. Mammalian Species, 597:1–3.
- Comiskey, J.A. and F. Dallmeier. 1998. Forest biodiversity research and monitoring in the new world. In *Forest Biodiversity in North, Central and South America and the Caribbean: Research and Monitoring* (F. Dallmeier, and J.A. Comiskey, eds.). Man and the Biosphere Series, Vol. 21. UNESCO and The Parthenon Publishing Group. Carnforth, Lancashire, U.K. pp. 740–756.
- Comiskey, J.A., F. Dallmeier, and R.B. Foster. 1998. Forest structure and diversity in managed and unmanaged rainforest of Beni, Bolivia. In Forest Biodiversity in North, Central and South America and the Caribbean: Research and Monitoring (F. Dallmeier and J.A. Comiskey, eds.). Man and the Biosphere Series, Vol. 21. UNESCO and The Parthenon Publishing Group. Carnforth, Lancashire, U.K. pp 663–680.

- Dallmeier, F. and J.A. Comiskey, Eds. 1998. Forest Biodiversity in North, Central and South America and the Caribbean: Research and Monitoring. Man and the Biosphere Series, Vol 21. UNESCO and The Parthenon Publishing Group. Carnforth, Lancashire, UK.
- Dallmeier, F. and J.A. Comiskey, and F.N. Scatena. (1998).
 Five years of forest dynamics following disturbance by Hurricane Hugo in the Luquillo Forest of Puerto Rico. In Forest Biodiversity in North, Central and South America and the Caribbean: Research and Monitoring (F. Dallmeier and J.A. Comiskey, eds.). Man and the Biosphere Series, Vol. 21.
 UNESCO and The Parthenon Publishing Group.
 Carnforth, Lancashire, U.K. pp. 231–248.
- Didham, R.K. 1998. Altered leaf-litter decomposition rates in tropical forest fragments. *Oecologia*. II6:397–406.
- Ferreira, L.V., and J. Rankin-de-Merona. 1998. Floristic composition and structure of a one-hectare plot in terra firme forest in central Amazonia. In F. Dallmeier and J.A. Comiskey, eds., Forest Biodiversity in North, Central, and South America and the Caribbean: Research and Monitoring. Man and the Biosphere Series, Vol. 22, UNESCO and the Parthenon Pub. Corp. Carnforth, Lancashire U.K.
- Foster, M.S. and Terborgh, J. 1998. Impact of a rare storm event on an Amazonian forest. *Biotropica* 30, no. 3: 470–474.
- Gascon, C. and T.E. Lovejoy. 1998. Ecological impacts of forest fragmentation in central Amazonia. Zoology, Analysis of Complex Systems 101: 273–280.
-, R. Mesquita, N. Higuchi. 1998. Tropical logging and the World Bank. *Science Letters*. Science 281: 1453.
- Graham, R.T., F. Dallmeier, and J.A. Comiskey. 1998.
 Quantitative ethnobotany: a tool for linking permanent plot research to forest use in the Beni Biosphere Reserve, Bolivia. In Forest Biodiversity in North, Central and South America and the Caribbean: Research and Monitoring (F. Dallmeier and J.A. Comiskey, eds.). Man and the Biosphere Series, Vol. 21. UNESCO and The Parthenon Publishing Group. Carnforth, Lancashire, U.K. pp. 701–713.

Laurance, W.F. 1998. Dynamics and biomass of Amazonian forest fragments. ITTO Tropical Forest Update 8(1):12-13.

- . 1998. Timber production and biodiversity conservation in tropical rain forest (book review). *Environmental Conservation* 25:283.

- ———. 1998. A long-term study of Amazonian forest fragments. CTFS Summer 1998:14.
- —, S.G. Laurance, and P. Delamônica. 1998. Tropical forest fragmentation and greenhouse gas emissions. Forest Ecology and Management. 110:173–180.
- , P. Delamônica. 1998. Ilhas de sobrevivência. *Ciência Hoje* 24(142):26–31.
-, L.V. Ferreira, C. Gascon, and T.E. Lovejoy. 1998. Biomass loss in forest fragments. *Science* 282:1610–1611.

Owen-Ashley, N.T., and D.E. Wilson. 1998. Micropreropus pusillus. Mammalian Species, No. 577:1-5.

Phillips, O.L., Y. Mahli, N. Higuchi, W.F. Laurance, P. Nunez, V.R. Vasquez, S.G. Laurance, L.V. Ferreira, M. Stern, S. Brown, J. Grace. 1998. Changes in the carbon balance of tropical forests: evidence from long-term plots. *Science* 282:439-441.

Ray, G.J., F. Dallmeier, and J.A. Comiskey. 1998. The structure of two subtropical dry forest communities on the Island of St. John, U.S. Virgin Islands. In *Forest Biodiversity in North. Central and South America and the Caribbean: Research and Monitoring* (F. Dallmeier and J.A. Comiskey, eds.). Man and the Biosphere Series, Vol. 21. UNESCO and The Parthenon Publishing Group. Carnforth, Lancashire, U.K. pp. 367–384.

Stergios, B., J.A. Comiskey, F. Dallmeier, A. Licata, and M. Niⁿo. 1998. Species diversity and structural aspects of semi-deciduous lowland gallery forests in the western Llanos of Venezuela. In *Forest Biodiversity in North, Central and South America and the Caribbean: Research and Monitoring* (F. Dallmeier and J.A. Comiskey, eds.). Man and the Biosphere Series, Vol. 21. UNESCO and The Parthenon Publishing Group. Carnforth, Lancashire, U.K. pp. 449–479.

Venticinque, E.M., and H.G. Fowler. 1998. Sheet-web regularity: fixed allometric relationship in the social spider Anelosimus eximius, *Ciência e Cultura* 50: 371–373.

Vieira, R.S., and H. Hofer. 1998. Efeito de forrageamento de Echiton burchelli sobre a aranofauna de liteira em uma floresta tropical de terra firme na Amazônia central. Acta Amazonica 28:345–351.

Whittaker, A. 1998. Observation on the vocalization behavior and distribution of the glossy-backed becard (Pachyramphus surinamis), a poorly known canopy inhabitant of the Amazonian rainforest. *Ararajuba* 6: 37–41.

Wilson, D.E. 1998. Karl Koopman, 1920–1997 (obituary). Bat News, 48:6.

Laboratory of Molecular Systematics

Braun, M.J. and R.T. Brumfield. 1998. Enigmatic phylogeny of skuas: an alternative hypothesis. Proceedings of the Royal Society (London), Series B 265: 995–999. Gemmill, C.E.C. 1998. A new narrow endemic species of loulu (Arecaceae) from Wai'oli Valley, Kaua'i, Hawaiian Islands. Novon 8:18–22.

Gemmill, C.E.C. and K.J. Johnson. 1998. Paleoecology of a late paleocene (tiffanian) megaflora from the northern great divide basin, Wyoming. Palaios 12:439–448.

Gemmill, C.E.C., T.A. Ranker, D. Ragone, S.P. Perlman, and K.R. Wood. 1998. Conservation genetics of the endangered endemic Hawaiian genus Brighamia (Campanulaceae). American Journal of Botany 85:528-539.

Glenn, T.C., H.C. Dessauer, and M.J. Braun. 1998. Characterization of microsatellite DNA Loci in American alligators. Copeia 1998 (3): 591–601.

Kuzoff, R.K., J.A. Sweere, D.E. Soltis, P.S. Soltis and E.A. Zimmer. The Phylogenetic Potential of Entire 26S rDNA Sequences in Plants. Mol. Bio. Evol. 15 (3):251–263. 1998.

McArthur, A.G. and V. Tunnicliffe. Relics and antiquity revisited in the modern vent fauna. 1998. In Modern Ocean Floor Processes and the Geological Record, K. Harrison and R. Mills, eds. Geological Society Special Publication 148: 271–291.

Rogers, J.S. and D.L. Swofford. 1998. A fast method for approximating maximum likelihoods of phylogenetic trees from nucleotide sequences. Systematic Biology 47:77–89.

Steppan, S.J. and U.F.J. Pardiñas. 1998. Two new fossil muroids (Sigmodontinae: Phyllotini) from the early Pleistocene of Argentina: Phylogeny and Paleoecology. Journal of Vertebrate Paleontology. 18(3):640–649.

Tunnicliffe, V., A.G. McArthur and D. McHugh. 1998. A biogeographical perspective of the deep-sea hydrothermal vent fauna. Advances in Marine Biology, 34: 355–442.

Wen, J., R.K. Jansen and E.A. Zimmer. 1998. Phylogeny and biogeography of Aralia sect. Aralia (Araliaceae). American Journal of Botany 85: 866–875. 1997.

Smithsonian Marine Station at Link Port

Ahyong, Shane T. and Raymond B. Manning. 1998. Two new species of *Erugosquilla* from the Indo-West Pacific (Crustacea: Stomatopoda: Squillidae). *Proceedings of the Biological Society of Washington*, 111(3): 653–662.

Balser, Elizabeth J. 1998. Cloning by Ophiuroid Echinoderm Larvae. *Biological Bulletin*, 194: 187–193.

Bieler, Rüdiger and Paula M. Mikkelsen. 1998. Ammonicera in Florida: Notes on the Smallest Living Gastropod in the United States and Comments on Other Species of Omalogyridae (Heterobranchia). The Nautilus, 111(1): 1–12.

Buzas, Martin A. and Lee-Ann C. Hayek. 1998. SHE Analysis for Biofacies Identification. *Journal of Foraminiferal Research*, 28(3): 233–239.

Felder, Darryl L. and Raymond B. Manning. 1998. A new ghost shrimp of the genus *Lepidophthalmus* from the Pacific Coast of Colombia (Decapoda: Thalassinidea: Callianassidea). *Proceedings of the Biological Society of Washington*, Vol. 111(2): 398–408.

- Frick, Jennifer E. 1998. Evidence for matrotrophy in the viviparous holothuroid echinoderm, Synaptula hydriformis. Invertebrate Biology, 117(2): 169–179
- Harvey, Alan W. 1998. Genes for asymmetry easily overruled. Nature, 392: 345–346.
- Hines, Anson H., Fernando Alvarez and Sherry A. Reed. 1997.
 Introduced and Native Populations of a Marine Parasitic Castrator: Variation in Prevalence of the Rhizocephalan Loxothylacus panopaei in Xanthid Crabs. Bulletin of Marine Science, 61(2): 197–214.
- Jivoff, Paul. 1997. Sexual Competition Among Male Blue Crab, *Callinectes sapidus*. *Biological Bulletin*, 193: 368–380.
- Manning, Raymond B. 1998. A new genus and species of pinnotherid crab (Crustacea, Decapoda, Brachyura) from Indonesia. Zoosystema, 20(2): 357–362.
- Pleijel, Fredrik. 1998. Phylogeny and classification of Hesionidae (Polychaeta). Zoologica Scripta, 27(2): 89–163.
- Roper, C.F.E. and M. Vecchione. 1997. In Situ Observations Test Hypotheses of Functional Morphology in *Mastigoteuthis* (Cephalopoda, Oegopsida). *Vie Milieu* (France) 47(2): 87–93.
- Roper, Clyde F.E., and Katharina Mangold. 1998. A Systematic Analysis of *Illex coindetii*. In *Food and Agricultural Organization* (U.N.) International Recruitment Program.
- Roper, Clyde F.E., C.C. Lu and Michael Vecchione. 1998. A Revision of the Systematics and distribution of *Illex* Species (Cephalopoda: Ommastrephidae). In Systematics and Biogeography of Cephalopods, Volume II. *Smithsonian Contributions to Zoology*, Number 586: 405–423.
- Wise, John B. 1998. Morphology and Systematic Position of *Rissoella caribaea* Rehder, 1943 (Gastropoda: Heterobranchia: Rissoellidae). *The Nautilus*, 111(1): 13–21.

National Portrait Gallery

Office of the Director

- Fern, Alan. Foreword to *Celebrity Caricature in America* by Wendy Wick Reaves. New Haven: Yale University Press, 1998.
- ———. Introduction to Misch Kohn: Beyond the Tradition by Jo Farb Hernandez. Monterey, California: Monterey Museum of Art, 1998.
- ———. "Obituary: Lillian Miller." Proceedings of the American Antiquarian Society 107, part 2 (1998): 238–43.
- -----. "A Tribute: Lillian B. Miller (1923–1997)." American Art 12, no. 1 (Spring 1998): 92–95.

Center for Electronic Research and Outreach Services

Sisum, Deborah L. "A Most Favorable and Striking Resemblance: The Virginia Portraits of Cephas Thompson." Journal of Early Southern Decorative Arts 23, no. 1 (Summer 1997): 1–101.

Department of Painting and Sculpture

- Christman, Margaret C.S. "The Seneca Falls Convention, July 19–20, 1848." Leaflet and virtual exhibition to mark the 150th anniversary of the first organized demand for woman's suffrage in America.
- Fortune, Brandon Brame. "'Not above Reproach': The Career of Lucy Lee-Robbins." American Art 12 (Spring 1998): 40–65.
- Miles, Ellen G. "'Memorials of great & good men who were my friends': Portraits in the Life of Oliver Wolcott, Jr." *Proceedings of the American Antiquarian Society* 107, part 1 (1997): 105–59.
- . In American Paintings in the Detroit Institute of Arts, vol.2. New York: Hudson Hills Press, 1997. Catalogue entries, including artists' biographies, on paintings by Ellen Kendall Baker, Thomas Mickell Burnham, Thomas Eakins, and Lewis Thomas Ives, pp. 16–17, 34–39, 78–83, 146–48.

Department of Photographs

- Panzer, Mary C. "Great Success in the USA" [Introduction]. Halsman: A Retrospective. Boston: Little, Brown and Company, Bulfinch Press, 1998.
- ------. "Does Crime Pay?" Journal of the Archives of American Art 37 (Spring 1997): 17–24.

Department of Prints and Drawings

Reaves, Wendy Wick. *Celebrity Caricature in America*. New Haven: Yale University Press, 1998.

Department of History

- Barber, James G. George C. Marshall: Soldier of Peace. Washington, D.C.: National Portrait Gallery and The George C. Marshall Foundation, 1997.
- Voss, Frederick. Faces of TIME: 75 Years of Time Magazine Cover Portraits. Boston: Little, Brown and Company, Bulfinch Press, 1998.

National Postal Museum

Office of the Director

Bruns, James H. Turk Bird: The High-flying Life and Times of Eddie Gardner. Washington, D.C.: National Postal Museum, 1998.

Research Services Department

Pope, Nancy. Illustrated Guide to the National Postal Museum. Washington, D.C.: National Postal Museum, 1998.

Smithsonian Center for Materials Research and Education

Baker, Mary T. "Thermal History Studies in Ancient and Modern Rubber." Polymer Preprints: Division of Polymers, American Chemical Society 39, no. 2 (1998): 1253–1254.

Ballard, Mary W. "Conference Reports: The Care and Preservation of Modern Materials in Costume Collections." *American Institute for Conservation News* 23, no. 3 (May 1998): 19.
———. "An IPM Checklist for Planning and Implementing Pest Control on Art and Artifact Collections" (reprint). *Collections Caretaker* 1, no. 3 (Spring 1998): 4–5.

------. "Mysteries and Speculations." Textile Conservation Newsletter, no. 34 (Spring 1998): 20-21.

- Ballard, Mary W. and Norman Indictor. "Some Attitudes Towards Carbon-14 Dating of Textiles." In *Eastern Analytical Symposium Abstracts*, no. 294. p 105. 1998.
- Ballard, Mary W. and Thomas Parker. "Take Care to Follow Pesticide Regulations" (reprint). *Collections Caretaker* 1, no. 3 (Spring 1998): 2–3.
- Beaubien, Harriet F., Susan B. Peschken, and C. Mei-An Tsu. "Artifact Conservation during the 1997 Field Season." In Harappa Archaeological Research Project, Harappa Excavations 1997, edited by Meadow, Kenoyer, and Wright, pp. 23–29. March 25, 1998.

Brady, J.E., J.W. Ball, Ronald L. Bishop, D.C. Pring, N. Hammond, and R.A. Housley. "The Lowland Maya 'Protoclassic'." Ancient Mesoamerica 9, no. 1 (1998): 17–38.

Erhardt, W. David. "Drying Oils: Their Chemistry and Properties." In *Painted Wood: History and Conservation*, edited by V. Dorge and F.C. Howlett, pp. 17–32. Los Angeles: The Getty Conservation Institute, 1998.

Goodway, Martha. "News of Archaeometallurgy." Society for Archaeological Sciences Bulletin 21, no. 1/2 (January-June 1998): 14–15.

Kaplan, Emily and Harriet F. Beaubien. "Artifact
Conservation during the 1994 Study Season." In Preliminary Report of the Cerén Project, 1996 Field Season, edited by Payson
D. Sheets and Linda A. Brown, pp. 26-31. Boulder:
Department of Anthropology, University of Colorado, 1998.

- Mann, Robert W., Melanie E. Feather, Charles S. Tumosa, and K.N. Schneider. "A Blue Encrustation Found on American MIA Bones from Vietnam." *Forensic Science International* 97, no. 2–3 (1998): 79–86.
- Mecklenburg, Marion F., Charles S. Tumosa, and W. David Erhardt. "Structural Response of Painted Wood Surfaces to Changes in Ambient Relative Humidity." In *Painted Wood: History and Conservation*, edited by V. Dorge and F.C. Howlett, pp. 464–483. Los Angeles: The Getty Conservation Institute, 1998.
- Richard, Mervin, Marion F. Mecklenburg, and Charles S. Tumosa. "Technical Considerations for the Transport of Panel Paintings." In *The Structural Conservation of Panel Paintings*, edited by Kathleen Dardes and Andrea Rothe, pp. 525–556. Los Angeles: The Getty Conservation Institute, 1998.
- Rosenthal, Ellen F. and Harriet F. Beaubien. "Artifact Conservation during the 1996 Field Season." In Preliminary Report of the Cerén Project, 1996 Field Season, edited by Payson D. Sheets and Linda A. Brown, pp. 18–25. Boulder:
- Department of Anthropology, University of Colorado, 1998. Tumosa, Charles S. "Articles from the International Journal of Osteology of Forensic Interest." *Mid-Atlantic Association of Forensic Scientists Newsletter* 26, no. 2 (1998): 9–12.
- Tumosa, Charles S., Mark H. McCormick-Goodhart, and Marion F. Mecklenburg. "The Physical Properties of Photographic Film Polymers Subjected to Cold Storage Environments." *Polymer Preprints: Division of Polymers, American Chemical Society* 39, no. 2 (1998): 1245–1246.
- von Endr, David W. "Heritage Preservation Report to SPNHC." In Society for the Preservation of Natural History Collections 1998 Annual Report, p. 33. 1998.
- von Endt, David W. and P. Edward Hare. "The Stability of Collagen and Keratin in Museums: Nitrogen-Containing Heterocycles Found in Bone, and the Preservation of Keratin in Ethanol and Formalin." In Perspectives in Amino Acid and Protein Geochemistry, A Symposium, 1998, p. 29. 1998.
- Williams, Donald C. "A Survey of Adhesives for Wood Conservation." In *The Structural Conservation of Panel*

Paintings, edited by Kathleen Dardes and Andrea Rothe, pp. 79–86. Los Angeles: The Gerty Conservation Institute, 1998.

Smithsonian Astrophysical Observatory

- Abdali, S.; Christensen, F. E.; Schnopper, H. W.; Gerward, L.;
 Wiebicke, H.-J.; Halm, I.; Louis, E.; Voorma, H.-J.; Spiller, E.
 A.; and Tarrio, C. "Objective Crystal Spectrometer (OXS) on the Spectrum-X-y Satellite: Crystal Calibrations." In *EUV*, X-Ray, and Gamma-Ray Instrumentation for Astronomy VIII, SPIE Proceedings, vol. 3114, eds. O. H. Siegmund and M. A.
 Gurnmin, p. 358. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1997.
- Accomazi, A.; Grant, C. S.; Eichhorn, G.; Kurtz, M. J.; and Murray, S. S. "Mirroring the ADS Bibliographic Databases." In Astronomical Data Analysis and Software and Systems VII, Astronomical Society of the Pacific Conference Series, vol. 145, eds. R. Albrecht, R. N. Hook, and H. A. Bushouse, p. 395. San Francisco: Astronomical Society of the Pacific, 1998.
- Adams, N. R.; Walter, F. M.; and Wolk, S. J. "Rotation Periods of Low-Mass Stars of the Upper Scorpius OB Association." *Astronomical Journal* 116 (1998): 237.
- Alcala, J. M.; Covino, E.; Neuhäuser, R.; Sterzik, M.; and Torres, G. "High-Resolution Spectroscopy of Weak-Line T Tauri Star Candidates in Orion." In Cool Stars in Clusters and Associations: Magnetic Activity and Age Indicators, Memorie della Societa Astronomica Italiana, vol. 68, eds. G. Micela, R. Pallavicini, and S. Sciortino, p. 1077. Firenze: Memorie della Societa Astronomica Italiana, 1998.
- Allen, C. L.; Plucinsky, P. P.; McNamara, B. R.; and Edgar, R.
 J. "Analysis of the AXAF HRMA+ACIS Effective Area Measurements from the XRCF." In X-Ray Optics, Instruments, and Missions, SPIE Proceedings, vol. 3444, eds. R.
 B. Hoover and A. B. C. Walker, II, p. 198. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1998.
- Allen, L.; Habbal, S. R.; and Hu, Y.-Q. "Thermal Coupling of Protons and Neutral Hydrogen in the Fast Solar Wind." *Journal of Geophysical Research* 103 (1998): 6551.
- Alves, J.; Hartmann, L.; Briceno, C.; and Lada, C. J. "Optical Outburst of a Pre-Main Sequence Object." Astronomical Journal 113 (1997): 1395.
- Anderson, S. W.; Smrekar, S. E.; Stofan, E. R.; Guest, J. E.; and Wood, B. "A Pulsaring Lava Flow Inflation Mechanism Revealed in Surface Fractures." In *Lunar and Planetary Science XXIX*, #1387. Houston, Texas: Lunar and Planetary Institute, 1998.

Antonelli, L. A.; Butler, R. C.; Piro, L.; Celidonio, G.;
Coletta, A.; Tesseri, A.; De Libero, C.; Garcia, M. R.;
Muench, A.; Tollestrup, E.; Callanan, P. J.; and McCarthy,
J. "IIGRB 971214." *IAU Circular No. 6792* (1997): I.

- Antonucci, E.; Giordano, S.; Benna, C.; Kohl, J. L.; Noci, G.; Michels, J.; and Fineschi, S. "Signature of Open Magnetic Field Lines in the Extended Solar Corona and of Solar Wind Acceleration." In *Fifth SOHO Workshop: The Corona and Solar Wind Near Minimum Activity, ESA SP-404*, p. 175. Paris: ESA Publications Division, 1997.
- Ashenberg, J., and Lorenzini, E. C. "Dynamical Characteristics of a Tethered Stabilized Satellite." Journal of Guidance, Control, and Dynamics 20 (1997): 1265.
- ------. "Dynamics of a Dual-Probe Terhered System." Journal of Guidance, Control, and Dynamics 20 (1997): 1265.
- Auerhammer, J. M.; Brandt, G.; Scholze, F.; Thornagel, R.;
 Ulm, G.; Wargelin, B. J.; McDermott, W. C.; Norton, T.
 J.; Evans, I. N.; and Kellogg, E. M. "High-Accuracy
 Calibration of the HXDS Flow Proportional Counter for
 AXAF at the PTB Laboratory at BESSY." In X-Ray Optics, Instruments, and Missions, SPIE Proceedings, vol. 3444, eds.
 R. B. Hoover and A. B. Walker, II, p. 19. Bellingham,
 Washington: SPIE - The International Society for Optical
 Engineering, 1998.
- Ayres, T. R.; Simon, T.; Stern, R. A.; Drake, S. A.; Wood, B. E.; and Brown, A. "The Coronae of Moderate-Mass Giants in the Hertzsprung Gap and the Clump." *Astrophysical Journal* 496 (1998): 428.
- Babb, J. F., and Kirby, K. P. "Molecule Formation in Dust-Poor Environments." In *The Molecular Astrophysics of Stars and Galaxies - A Volume Honouring Alexander Dalgarno*, eds. T. W. Hartquist and D. A. Williams, p. II. Oxford, England: Oxford University Press, 1998.
- Backman, D.; Acosta, S.; Stencel, R.; and Stauffer, J. "Dust Disks Around Main Sequence Stars." Astrophysics and Space Science 255 (1998): 91.
- Balakrishnan, N.; Dalgarno, A.; and Billing, G. D. "Multiquantum Vibrational Transitions in O₂(v,25) + O₂(v=0) Collisions." *Chemical Physics Letters* 288 (1998): 657.
- Balakrishnan, N.; Forrey, R. C.; and Dalgarno, A. "Quenching of H₂ Vibrations in Ultracold ³He and ⁴He Collisions." *Physical Review Letters* 80 (1998): 3224.
- . "Threshold Phenomena in Ultracold Atom-Molecular Collisions." *Chemical Physics Letters* 280 (1997): 1.
- Balakrishnan, N.; Kharchenko, V.; and Dalgarno, A. "Quantum Mechanical and Semiclassical Studies of N + Na Collisions and Their Application to Thermalization of Fast N Atoms." Journal of Chemical Physics 108 (1998): 943.
- Balakrishnan, N.; Kharchenko, V.; Forrey, R. C.; and Dalgarno, A. "Complex Scattering Lengths in Multichannel Atom-Molecular Collisions." *Chemical Physics Letters* 280 (1997): 5.
- Baliunas, S. L.; Donahue, R. A.; Soon, W.; and Henry, G. W. "Activity Cycles in Lower Main Sequence and Post Main Sequence Stars: The HK Project." In Cool Stars, Stellar Systems, and the Sun: Tenth Cambridge Workshop, Astronomical Society of the Pacific Conference Series, vol. 154, eds. R. A. Donahue and J. A. Bookbinder, p. 153. San Francisco: Astronomical Society of the Pacific, 1998.

Baliunas, S. L., and Jastrow, R. "Nature Speaks of Many Things, of Missing Flux and Butterfly Wings." World Climate Report (February 16) (1998): 6.

 Baliunas S. L., and Soon, W. H. "The Arctic Climate Frontier." World Climate Report (December 14) (1997): 6.
 "Beyond the Wild Frontier: The Sun-Climate Link."

World Climate Report (October 13) (1997): 6.

A Scientific Discussion of Climate Change, 17 pp. Washington, DC: Marshall Institute, 1997.

------. "The Life and Times of Alfonso Nino and Family." World Climate Report (June 15) (1998): 10.

------. "The Milky Way and the Clouds of Earth." World Climate Report (April 13) (1998): 10.

———. "Solar Variability and Global Climatic Change." In Global Warming: The Science and the Politics, ed. L. Jones, p. 77. Vancouver, British Columbia: The Fraser Institute, 1997.

. "The Summer of Our Discontent." World Climate Report (August 10) (1998): 10.

Bangham, M. E.; Lorenzini, E.; and Vestal, L. "Tether Transportation System Study." NASA Technical Publication, NASA/TP-1998-206959. Alabama: Marshall Space Flight Center, 1998.

Barnes, P. J.; McDermott, W. C.; Edgar, R. J.; and Kellogg, E. M. "Towards a Solid State Detector Response Function for AXAF Calibration." In Space Telescopes and Instruments V, SPIE Proceedings, vol. 3356, eds. P. Y. Bely and J. B. Breckinridge, p. 1046. Bellingham, Washington: SPIE -The International Society for Optical Engineering, 1998.

Barrado y Navascues, D., and Dupree, A. K. "Chromospheric Emission from Red Giants in the Open Cluster NGC 6940." In Cool Stars in Clusters and Associations: Magnetic Activity and Age Indicators, Memorie della Societa Astronomica Italiana, vol. 68, eds. G. Micela, R. Pallavicini, and S. Sciortino, p. 965. Firenze: Societa Astronomica Italiana, 1998.

Barret, D.; Olive, J. F.; Boirin, L.; Grindlay, J. E.; Bloser, P. F.; Chou, Y.; Swank, J. H.; and Smale, A. P. "4U 1915-05." IAU Circular No. 6793 (1997): 2.

Bartelmann, M., and Loeb, A. "Effects of Disks on Gravitational Lensing by Spiral Galaxies." Astrophysical Journal 503 (1998): 48.

Bear, D.; Chupp, T. E.; Cooper, K.; DeDeo, S.; Rosenberry, M. A.; Stoner, R. E.; and Walsworth, R. L. "Improved Frequency Stability of the Dual Noble Gas Maser." *Physical Review A* 57 (1998): 5006.

Benner, L. A. M.; Ostro, S. J.; Giorgini, J. D.; Jurgens, R. E.; Mitchell, D. L.; Rose, R.; Rosema, K. D.; Slade, M. A.;
Winkler, R.; Yeomans, D. K.; Campbell, D. B.; Chandler, J. F.; and Shapiro, I. I. "Radar Detection of Near-Earth Asteroids 2062 Aten, 2101 Adonis, 3103 Eger, 4544 Xanthus, and 1992 QN." *Icarus* 130 (1997): 296.

Bennett, R. A.; Wernicke, B. P.; and Davis, J. L. "Continuous GPS Measurements of Contemporary Deformation Across the Northern Basin and Range Province." *Geophysical Research Letters* 25 (1998): 563. Bennett, R. A.; Wernicke, B. P.; Davis, J. L.; Elósegui, P.; Snow, J. K.; Abolins, M. J.; House, M. A.; Stirewalt, G. L.; and Ferrill, D. A. "Global Positioning System Constraints on Fault Slip Rates in the Death Valley Region, California and Nevada." *Geophysical Research Letters* 24 (1997): 3073.

Bergin, E. A.; Melnick, G. J.; and Neufeld, D. A. "Post-Shock Chemical Lifetimes of Outflow Tracers and a Possible New Mechanism to Produce Water Ice Mantles." *Astrophysical Journal* 499 (1998): 777.

Biller, S.; Buckley, J. H.; Burdert, A. D.; Bussons Gordo, J.;
Carter-Lewis, D. A.; Fegan, D. J.; Gaidos, J.; Hillas, A. M.;
Krennrich, F.; Lamb, R. C.; Lessard, R.; McEnery, J.;
Mohanty, G.; Quinn, J.; Rodgers, A. J.; Rose, H. J.;
Samuelson, F. W.; Schubnell, M. S.; Sembroski, G.;
Skelton, P.; Weekes, T. C.; and Zweerink, J. "New Limits
to the IR Background: Bounds on Radiative Neutrino
Decay and on VMO Contributions to the Dark Matter
Problem." *Physical Review Letters* 80 (1998): 2992.

Bitran, H.; Alvarez, H.; Bronfman, L.; May, J.; and Thaddeus, P. "A Large Scale CO Survey of the Galactic Center Region." Astronomy and Astrophysics Supplement 125 (1997): 99.

Blake, R. L.; Burek, A. J.; Fitch, J. J.; Graessle, D. E.;
Romaine, S. E.; Schwartz, D. A.; Soufli, R.; Gullikson, E.
M.; Stonas, A.; and Underwood, J. H. "Feasibility Study of ALS Beamline 6.3.2 in the Calibration of AXAF: Initial Reflectivity Results." In X-Ray Optics, Instruments, and Missions, SPIE Proceedings, vol. 3444, eds. R. B. Hoover and A. B. C. Walker, II, p. 128. Bellingham, Washington: SPIE - The International Society for Optical Engineering, 1998.

Blitz, L., and Williams, J. P. "Molecular Clouds Are Not Fractal: A Characteristic Size Scale in Taurus." Astrophysical Journal (Letters) 488 (1997): L145.

Bocchino, F.; Barbera, M; and Sciortino, S. "An Optimized Time Screening Algorithm for ROSAT PSPC and HRI Observations." *Astronomy and Astrophysics Supplement* 129 (1998): 647.

Bock, J. J.; Kawada, M.; Lange, A. E.; Matsumoto, T.;
Uemizu, K.; Watabe, T.; Yost, S. A.; Fazio, G. G.; Forrest,
W. J.; Pipher, J. L.; and Price, S. D. "Rocket-Borne Instrument to Search for Infrared Emission from Baryonic Dark Matter in Galactic Halos." In *Infrared Astronomy Instrumentation, SPIE Proceedings*, vol. 3354, ed. A. M.
Fowler, p. 1139. Bellingham, Washington: SPIE — The International Society for Optical Engineering, 1998.

Bockel'ee-Morvan, D.; Gautier, D.; Lis, D. C.; Young, K.;
Keene, J.; Phillips, T.; Owen, T.; Crovisier, J.; Goldsmith,
P. F.; Bergin, E. A.; Despois, D.; and Wooten, A.
"Deuterated Water in Comet C/1996 B2 (Hyakutake) and
Its Implications for the Origins of Comets." *Icarus* 133 (1998): 147.

Bohm-Vitense, E.; Evans, N. R.; Carpenter, K.; Beck-Winchatz, B.; Morgan, S.; and Robinson, R. "The Dynamical and Beat Masses of the Beat Cepheid Y Carinae." In A Half Century of Stellar Pulsation Interpretations: A Tribute to Arthur N. Cox, Astronomical Society of the Pacific Conference Series, vol. 135, eds. P. A. Bradley and J. A. Guzik, p. 280. San Francisco: Astronomical Society of the Pacific, 1998.

- Bohm-Vitense, E.; Evans, N. R.; Carpenter, K.; Robinson, R.; and Beck-Winchatz, B. "The Dynamical Mass of the Beat Cepheid Y Carinae." In *The Scientific Impact of the Goddard High Resolution Spectrograph, Astronomical Society of the Pacific Conference Series*, vol. 143, eds. J. C. Brandt, T. B. Ake, III, and C. C. Petersen, p. 317. San Francisco: Astronomical Society of the Pacific, 1998.
- Bolatto, A. D.; Balm, S. P.; Bania, T. M.; Chamberlin, R. A.;
 Huang, M.; Ingalls, J. G.; Jackson, J. M.; Iane, A. P.; and Stark, A. A. "Neutral Carbon in the Magellanic Clouds: Probing the Metal-Poor Interstellar Medium." In Astrophysics from Antarctica, Astronomical Society of the Pacific Conference Series, vol. 141, eds. G. Novak and R. H. Landsberg, p. 196. San Francisco: Astronomical Society of the Pacific, 1998.
- Boroson, B.; Blair, W. P.; Davidsen, A. F.; Vrtilek, S. D.; Raymond, J.; Long, K. S.; and McCray, R. "Hopkins Ultraviolet Telescope Observations of Hercules X-1." *Astrophysical Journal* 491 (1997): 903.
- Botschwina, P.; Heyl, A.; Chen, W.; McCarthy, M. C.; Grabow, J. U.; Travers, M. J.; and Thaddeus, P. "The Isocyanopolyynes HC4NC and HC6NC: Microwave Spectra and Ab Initio Calculations." *Journal of Chemical Physics* 109 (1998): 3108.
- Bouchy, F.; Lestrade, J.-F., Ransom, R. R.; Bartel, N.; Ratner, M. I.; and Shapiro, I. I. "Possible Superluminal Motion in the High-Redshift Quasar 1338+331." Astronomy and Astrophysics 335 (1998): 145.
- Boulanger, F.; Bronfman, L.; Dame, T. M.; and Thaddeus, P. "CO and IRAS Observations of the Chamaeleon Molecular Clouds." Astronomy and Astrophysics 332 (1998): 273.
- Bouvier, J.; Stauffer, J. R.; Martin, E. L.; Barrado Y Navascues, D.; Wallace, B.; and Bejar, V. J. S. "Brown Dwarfs and Very Low-Mass Stars in the Pleiades Cluster: A Deep Wide-Field Imaging Survey." Astronomy and Astrophysics 336 (1998): 490.
- Brandenburg, A.; Saar, S. H.; and Turpin, C. R. "Time Evolution of the Magnetic Activity Cycle Period." Astrophysical Journal (Letters) 498 (1998): L51.
- Brandt, W. N.; Mathur, S.; Reynolds, C. S.; and Elvis, M. "X-Ray Absorption by Ionized Oxygen in ASCA Spectra of the Infrared Quasar IRAS 13349+2438." *Monthly Notices of* the Royal Astronomical Society 292 (1997): 407.
- Brickhouse, N. "Spectroscopic Preparation for AXAF and XMN." In Cool Stars, Stellar Systems, and the Sun: Tenth Cambridge Workshop, Astronomical Society of the Pacific Conference Series, vol. 154, eds. R. A. Donahue and J. A. Bookbinder, p. 487. San Francisco: Astronomical Society of the Pacific, 1998.
- Brickhouse, N. S., and Dupree, A. K. "Extreme Ultraviolet Explorer Observations of the W Ursa Majoris Contact Binary 44i Bootis: Coronal Structure and Variability." *Astrophysical Journal* 502 (1998): 918.

- Briceno, C.; Hartmann, L.; Stauffer, J.; and Martín, E. "A Search for Very Low-Mass Pre-Main-Sequence Stars in Taurus." *Astronomical Journal* 115 (1998): 2074.
- Brinkman, A. C.; Gunsing, C. J.; Kaastra, J. S.; Braeuninger, H. W.; Hartner, G. D.; Predehl, P.; Drake, J. J.; Juda, J. Z.; Juda, M.; Dewey, D.; Flanagan, K. A.; and Marshall, H. L. "Preliminary Test Results on Spectral Resolution of the Low Energy Transmission Grating Spectrometer on Board of AXAF." In *Grazing Incidence and Multilayer X-Ray Optical* Systems, SPIE Proceedings, vol. 3113, eds. R. B. Hoover and A. B. Walker, II, p. 181. Bellingham, Washington: SPIE— The International Society for Optical Engineering, 1997.
- Brodie, J.; Schroder, L.; Huchra, J.; Phillips, A.; Kissler-Pattig, M.; and Forbes, D. "Keck Spectroscopy of Protoglobular Clusters in NGC 1275." Astronomical Journal 116 (1998): 691.
- Bromley, B. C.; Press, W. H.; Lin, H.; and Kirshner, R. P. "Spectral Classification and Luminosity Function of Galaxies in the Las Campanas Redshift Survey." *Astrophysical Journal* 505 (1998): 25.
- Brotherton, M. S.; Van Breugel, W.; Smith, R. J.; Boyle, B. J.; Shanks, T.; Croom, S. M.; Miller, L.; and Becker, R. H. "Discovery of Radio-Loud Broad Absorption Line Quasars Using Ultraviolet Excess and Deep Radio Selection." Astrophysical Journal (Letters) 505 (1998): L7.
- Brown, T. M., and Christensen-Dalsgaard, J. "Accurate Determination of the Solar Photospheric Radius." *Astrophysical Journal (Letters)* 500 (1998): L195.
- Brown, T. M.; Ferguson, H. C.; Stanford, S. A.; and Deharveng, J. -M. "Color-Luminosity Relations for the Resolved Hot Stellar Populations in the Centers of M31 and M32." In *The Stellar Content of Local Group Galaxies*, *Proceedings of IAU Colloquium No. 192*, Astronomical Society of the Pacific Conference Series, vol. 192, eds. P. Whitelock and R. Cannon, p. 13. San Francisco: Astronomical Society of the Pacific, 1998.
- Buckley, J. H.; Akerlof, C. W.; Carter-Lewis, D. A.; Catanese, M.; Cawley, M. F.; Connaughton, V.; Fegan, D. J.; Finley, J. P.; Gaidos, J. A.; Hillas, A. M.; Krennrich, F.; Lamb, R. C.; Lessard, R.; McEnery, J. E.; Mohanty, G.; Quinn, J.; Rodgers, A. J.; Rose, H. J.; Rovero, A. C.; Schubnell, M. S.; Sembroski, G. H.; Srinivasan, R.; Weekes, T. C.; and Zweerink, J. "Constraints on Cosmic-Ray Origin from TeV Gamma-Ray Observations of Supernova Remnants." Astronomy and Astrophysics 329 (1998): 639.
- Burenin, R. A.; Vikhlinin, A. A.; Terekhov, O. V.; and Sazonov, S. Yu. "Search for a Correlation of Gamma-Ray Bursts with Quasars and Active Galactic Nuclei." Astronomy Letters 24 (1998): 427.
- Callanan, P.; McCarthy, J.; Garcia, M.; and McClintock, J. "XTE J2012+381." IAU Circular No. 6933 (1998): 2.
- Calver, N. "Disk Accretion in Pre-Main Sequence Stars" (Invited Review). In Proceedings of the &th Annual October Astrophysics Conference in Maryland, American Institute of Physics Conference Proceedings, vol. 431, eds. S. S. Holt and T.

Kallman, p. 485. Woodbury, New York: American Institute of Physics, 1998.

- ——. "Properties of Winds of T Tauri Stars" (Invited Review). In Herbig-Haro Flows and the Birth of Low Mass Stars, Proceedings of IAU Symposium No. 182, Astronomical Society of the Pacific Conference Series, eds. B. Reipurth and C. Bertout, p. 417. Dordrecht: Kluwer Academic Publishers, 1997.
- Carilli, C. L; Harris, D. E.; Pentericci, L.; Röttgering, H. J. A.; Miley, G. K.; and Bremer, M. N. "An X-Ray Cluster at Redshift 2.156?" Astrophysical Journal (Letters) 494 (1998): L143.
 ———. "An X-Ray Cluster at Redshift 2.156?" (Erratum) Astrophysical Journal (Letters) 496 (1998): L57.
- Carilli, C. L.; Menten, K. M.; Reid, M. J.; Rupen, M. P.; and Yun, M. S. "Redshifted Neutral Hydrogen 21 Centimeter Absorption Toward Red Quasars." Astrophysical Journal 494 (1998): 175.
- Carilli, C. L.; Perley, R.; Harris, D. E.; and Barthel, P. "Physics of Extragalactic Radio Sources." *The Physics of Plasmas* 5 (1998): 1981.
- Carleton, N. P.; Traub, W. A.; and Angel, J. R. P.
 "Interferometric Capability for the Magellan Project." In Astronomical Interferometry, SPIE Proceedings, vol. 3350, ed. R.
 D. Reasenberg, p. 733. Bellingham, Washington: SPIE -The International Society for Optical Engineering, 1997.
- Castelli, C. M.; Watson, D. J.; Wells, A. A.; Kent, B. J.;
 Barbera, M.; Collura, A.; and Bavdaz, M. "X-Ray and Optical Performance of the Flight Filters for the JET-X Telescope." In EUV, X-Ray, and Gamma-Ray Instrumentation for Astronomy VIII, SPIE Proceedings, vol. 3114, eds. O. H.
 Siegmund and M. A. Gurmin, p. 384. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1997.
- Castro-Tirado, A.; Gorosabel, J.; Walton, N.; Garcia, M. R.; McClintock, J. E.; Barton, E.; and Callanan, P. "XTE J2012+381." *IAU Circular 6931* (1998): 1.
- Catanese, M.; Akerlof, C. W.; Badran, H. M.; Biller, S. D.;
 Bond, I. H.; Boyle, P. J.; Bradbury, S. M.; Buckley, J. H.;
 Burdett, A. M.; Bussons Gordo, J.; Carter-Lewis, D. A.;
 Cawley, M. F.; Connaughton, V.; Fegan, D. J.; Finley, J. P.;
 Gaidos, J. A.; Hall, T.; Hillas, A. M.; Krennrich, F.; Lamb,
 R. C.; Lessard, R.; Masterson, C.; McEnery, J. E.; Mohanty,
 G.; Quinn, J.; Rodgers, A. J.; Rose, H. J.; Samuelson, F.
 W.; Schubnell, M. S.; Sembroski, G. H.; Srinivasan, R.;
 Weekes, T. C.; Wilson, C. W.; and Zweerink, J. "Discovery
 of 350 GeV Gamma Rays from the BL Lac Object
 IE2344+514." Astrophysical Journal 501 (1998): 616.
- Catanese, M.; Bradbury, S. M.; Breslin, A. C.; Buckley, J. H.;
 Carter-Lewis, D. A.; Cawley, M. F.; Dermer, C. D.; Fegan,
 D. J.; Finley, J. P.; Gaidos, J. A.; Hillas, A. M.; Johnson,
 W. N.; Krennrich, F.; Lamb, R. C.; Lessard, R.; Macomb,
 D. J.; McEnery, J. E.; Mohanty, G.; Quinn, J.; Rodgers,
 A. J.; Rose, H. J.; Samuelson, F. W.; Sembroski, G. H.;
 Srinivasan, R.; Weekes, T. C.; and Zweerink, J.

"Multiwavelength Observations of a Flare from Markarian 501." Astrophysical Journal (Letters) 487 (1997): L143.

- Chance, K. "Analysis of BrO Measurements from the Global Ozone Monitoring Experiment." *Geophysical Research Letters* 25 (1998): 3335.
- ————. "Improvement of the O₂ A Band Spectroscopic Database for Satellite-Based Cloud Detection." Journal of Quantitative Spectroscopy and Radiative Transfer 58 (1997): 375.
- Chance, K. V.; Park, K.; and Evenson, K. M. "Pressure Broadening of Far Infrared Rotational Transitions: 88.65 cm⁻¹ H₂O and 114.47 cm⁻¹ O₃." Journal of Quantitative Spectroscopy and Radiative Transfer 59 (1998): 687.
- Chartas, G.; Chuss, D.; Forman, W.; Jones, C.; and Shapiro, I. "X-Ray Detection of the Primary Lens Galaxy Cluster of the Gravitational Lens System Q0957+561." Astrophysical Journal 504 (1998): 661.
- Chen, H.; Grenfell, T. G.; Myers, P. C.; and Hughes, J. D. "Comparison of Star Formation in Five Nearby Molecular Clouds." Astrophysical Journal 478 (1997): 295.
- Chen, H.; Tafalla, M.; Greene, T. P.; Myers, P, C.; and Wilner, D. J. "IRAS 20050+2720: An Embedded Young Cluster Associated with a Multipolar Outflow." Astrophysical Journal 475 (1997): 163.
- Chen, W.; McCarthy, M. C.; Travers, M. J.; Gottlieb, E. W.; Munrow, M. R.; Novick, S. E.; Gottlieb, C. A.; and Thaddeus, P. "Laboratory Detection of a New Carbon Chain Radical: H₂CCCCN." *Astrophysical Journal* 492 (1997): 849.
- Cheng, F. H.; Horne, K.; Sion, E.; Hubeny, I.; and Vrtilek, S. D. "HST Synthetic Spectral Analysis of U Gem in Early and Late Quiescence: A Heared White Dwarf and Accretion Belt?" Astronomical Journal 114 (1997): 1165.
- Christian, D. J.; Drake, J. J.; and Mathioudakis, M. "Extreme Ultraviolet Explorer Right Angle Program Observations of Cool Stars." Astronomical Journal 115 (1998): 316.
- Churazov, E.; Sunyaev, R.; Gilfanov, M.; Forman, W.; and Jones, C. "The 6.4-keV Fluorescent Iron Line from Cluster Cooling Flows." Monthly Notices of the Royal Astronomical Society 297 (1998): 1274.
- Ciaravella, A.; Raymond, J. C.; Benna, C.; Fineschi, S.;
 Gardner, L. D.; Giordano, S.; O'Neal, R. H.; Reale, F.;
 Romoli, M.; Michels, J.; Antonucci, E.; Kohl, J. L.; and
 Noci, G. "Ultraviolet Spectroscopy of Coronal Mass
 Ejections." In New Perspectives on Solar Prominences,
 Proceedings of IAU Colloquium No. 167, Astronomical Society of
 the Pacific Conference Series, vol. 150, eds. D. Webb, D. Rust,
 and B. Schmeider, p. 370. San Francisco: Astronomical
 Society of the Pacific, 1998.
- Clarke, D. A.; Harris, D. E.; and Carilli, C. L. "Formation of Cavities in the X-Ray Emitting Cluster Gas of Cygnus A." Monthly Notices of the Royal Astronomical Society 284 (1997): 981.

Clement, R.; Garcia, M.; Reglero, V.; Suso, J.; and Fabregat, J. "Absolute Parameters for Binary Systems. II. The Late-Type System ZZ Ursae Majoris." *Astronomy and Astrophysics Supplement Series* 125 (1997): 529.

Close, L. M.; Roddier, F.; Hora, J. L.; Graves, J. E.; Northcott, M.; Roddier, C.; Hoffmann, W. F.; Dayal, A.; Fazio, G. G.; and Deutsch, L. "Adaptive Optics Infrared Imaging-Polarimetry and Optical HST Imaging of Hubble's Variable Nebula (R Monocerotis/NGC 2261): A Close Look at a Very Young Active Herbig Ae/Be Star." Astrophysical Journal 489 (1997): 210C.

Codella, C.; Welser, R.; Henkel, C.; Benson, P. J.; and Myers, P. C. "Four Dense Molecular Cores in the Taurus Molecular Cloud (TMC). Ammonia and Cyanodiacetylene Observations." Astronomy and Astrophysics 324 (1997): 203.

Coldwell, C. M.; Papaliolios, C. D.; and Traub, W. A. "First Visible-Light Measurements from the IOTA Interferometer." In Astronomical Interferometry, SPIE Proceedings, vol. 3350, ed. R. D. Reasenberg, p. 424.
Bellingham, Washington: SPIE - The International Society for Optical Engineering, 1997.

Comastri, A.; Fiore, F.; Guainazzi, M.; Matt, G.; Stirpe, G. M.; Zamorani, G.; Brandt, W. N.; Leighly, K. M.; Piro, L.; Molendi, S.; Parmar, A. N.; Siemiginowska, A.; and Puchnarewicz, E. M. "BeppoSAX Observations of Narrow-Line Seyfert 1 Galaxies. I. Ton S 180." Astronomy and Astrophysics 333 (1998): 31.

Conroy, M. A.; Roll, J. B., Jr.; Wyatt, W. F.; Mink, D. J.; and McLeod, B. A. "Coping with Data Deluge: A Data System for the Megacam." In Optical Astronomical Instrumentation, SPIE Proceedings, vol. 3355, ed. S. D'Ororico, p. 264. Bellingham, Washington: SPIE - The International Society for Optical Engineering, 1998.

- Cosmo, M. L., and Lorenzini, E. C. *Tethers in Space Handbook*, third edition. Greenbelt, Maryland: NASA Marshall Space Flight Center, 1997; also available at NASA web site http://infinity.msfc.nasa.gov.
- Coté, R., and Dalgarno, A. "Mechanism for the Production of Vibrationally Excited Ultracold Molecules of ⁷Li₂." *Chemical Physics Letters* 279 (1997): 50.
- ------. "Photoassociation Intensities and Trap Loss in Lithium." *Physical Review A* 58 (1998): 498.
- Coté, R.; Dalgarno, A.; Stwalley, W. C.; and Wang, H.
 "Potassium Scattering Lengths and Prospects for Bose-Einstein Condensation and Sympathetic Cooling." *Physical Review A* 57 (1998): R4118.
- Coude du Foresto, V.; Perrin, G.; Ruilier, C.; Mennesson, B. P.; Traub, W. A.; and Lacasse, M. G. "FLUOR Fibered Instrument at the IOTA Interferometer." In Astronomical Interferometry, SPIE Proceedings, vol. 3350, ed. R. D. Reasenberg, p. 856. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1997.
- Coyle, H. P.; Shapiro, I. I.; and Stroud, S. M. (editors). Project IMAGE: A Manual of Image-Based Activities Concerning Our Planet. Dubuque, Iowa: Kendall-Hunt, 1998.

- Craig, N., and Fruscione, A. "Optical Identification of Joint EUVE and ROSAT Detections in the Southern Hemisphere: Soft Active Galactic Nuclei." Astronomical Journal 114 (1997): 1356.
- Cranmer, S. R.; Field, G. B.; and Kohl, J. L. "The Impact of UVCS/SOHO Observations on Models of Ion-Cyclotron Resonance Heating of the Solar Corona." In Cool Stars, Stellar Systems, and the Sun: Tenth Cambridge Workshop, Astronomical Society of the Pacific Conference Series, vol. 154, eds. R. A. Donahue and J. A. Bookbinder, p. 592. San Francisco: Astronomical Society of the Pacific, 1998.
- Cranmer, S. R.; Field, G. B.; Noci, G.; and Kohl, J. L. "The Impact of UVCS/SOHO Observations on Models of Ion-Cyclotron Resonance Heating of the Solar Corona." In 31st ESLAB Symposium: Correlated Phenomena at the Sun, in the Heliosphere, and in Geospace, ESA SP-415, p. 89. Paris: ESA Publications Division, 1997.
- Cranmer, S. R.; Field, G. B.; Noci, G.; Strachan, L.; Panasyuk, A. V.; Romoli, M.; Fineschi, S.; Dobrzycka, D.; Raymond, J. C.; Suleiman, R. M.; and O'Neal, R. H. "UVCS/SOHO Empirical Models of Solar Coronal Holes." In *Fifth SOHO Workshop: The Corona and Solar Wind Near Minimum Activity*, *ESA SP-404*, p. 295. Paris: ESA Publications Division, 1997.
- Cruikshank, D. P.; Gladman, B.; Smith, R. M.; Jones, J. B.; Windridge, D.; Hall, P.; Graham, D.; Kavelaars, J. J.; Williams, G. V.; Aksnes, K.; and Marsden, B. G. "S/1997 U 1." *IAU Circular No. 6870* (1998): 1.
- Curiel, S.; Raga, A.; Raymond, J. C.; Noriega-Crespo, A.; and Canto, J. "HST Images of the High-Excitation Herbig-Haro Object HH32." *Astronomical Journal* 114 (1997): 2736.
- da Costa, L. N.; Wilmer, C. N. A.; Pellegrini, P. S.; Chaves, O. L.; Maia, A. G.; Geller, M. J.; Latham, D. W.; Kurtz, M. J.; Huchra, J. P.; Ramella, R.; Fairall, A. P.; Smith, C.; and Lipari, S. "The Southern Sky Redshift Survey." Astronomical Journal 116 (1998): 1.
- D'Alessio, P.; Cantó, J.; Calvet, N.; and Lizano, S. "Accretion Disks Around Young Objects. I. The Detailed Vertical Structure." *Astrophysical Journal* 500 (1998): 411.
- Dalgarno, A. "Atomic and Molecular Data for Cosmology." In Atomic and Molecular Data and Their Applications, American Institute of Physics Conference Proceedings, vol. 434, eds.
 P. J. Mohr and W. L. Wiese, p. 193. Woodbury, New York: American Institute of Physics, 1998.
- Davis, J. L., and Elgered, G. "The Spatio-Temporal Structure of GPS Water-Vapor Determinations." *Physics and Chemistry* of the Earth 23 (1998): 91.
- Dayal, A.; Hoffmann, W. F.; Bieging, J. H.; Hora, J. L.; Deutsch, L. K.; and Fazio, G. G. "Mid-Infrared (8-21 micron) Imaging of Proto-Planetary Nebulae." Astrophysical Journal 492 (1997): 603.

Dayal, A.; Hoffmann, W.; Bieging, J.; Hora, J.; Deutsch, L.; Fazio, G.; Meixner, M.; and Skinner, C. "Mid-Infrared Imaging of Dust Shells Around Young Planetary and Proto-Planetary Nebulae." In *Planetary Nebulae*, Proceedings of IAU Symposium No. 180, eds. H. J. Habing and H. J. G. L. M. Lamers, p. 347. Dordrecht: Kluwer Academic Publishers, 1997.

- Dewey, D.; Drake, J. J.; Edgar, R. J.; Michaud, K.; and Ratzlaff, P. "AXAF Grating Efficiency Measurements with Calibrated Nonimaging Detectors." In X-Ray Optics, Instruments, and Missions, SPIE Proceedings, vol. 3444, eds. R. B. Hoover and A. B. C. Walker, II, p. 48. Bellingham, Washington: SPIE - The International Society for Optical Engineering, 1998.
- Dewey, D.; Flanagan, K. A.; Marshall, H. L.; Baluta, C.;
 Canizares, C. R.; Davis, D. S.; Davis, J. E.; Fang, T. T.;
 Huenemoerder, D. P.; Kastner, J. H.; Schulz, N. S.; Wise,
 M. W.; Drake, J. J.; Juda, J. Z.; Juda, M.; Brinkman, A. C.;
 Gunsing, C. J.; Kaastra, J. S.; Hartner, G. D.; and Predehl,
 P. "Toward the Calibration of the HERGS Effective Area."
 In *Grazing Incidence and Multilayer X-Ray Optical Systems*,
 SPIE Proceedings, vol. 3113, eds. R. B. Hoover and A. B.
 Walker, II, p. 144. Bellingham, Washington: SPIE The
 International Society for Optical Engineering, 1997.
- Dietrich, M.; Peterson, B. M.; Albrecht, P.; Altmann, M.; Barth, A. J.; Bennie, P. J.; Bertram, R.; Bochkarev, N. G.; Bock, H.; Braun, J. M.; Burenkov, A.; Collier, S.; Fang, L.-Z.; Francis, O. P.; Filippenko, A. V.; Foltz, C. B.; Gässler, W.; Gaskell, C. M.; Geffert, M.; Ghosh, K. K.; Hilditch, R. W.; Honeycutt, R. K.; Horne, K.; Huchra, J. P.; Kaspi, S.; Kümmel, M.; Leighly, K. M.; Leonard, D. C.; Malkov, Yu. F.; Mikhailov, V.; Miller, H. R.; Morrill, A. C.; Nobel, J.; O'Brien, P. T.; Oswalt, T. D.; Pebley, S. P.; Pfeiffer, M.; Pronik, V. I.; Qian, B.-C.; Robertson, J. W.; Robinson, A.; Rumstay, K. S.; Schmoll, J.; Sergeev, S. G.; Sergeeva, E. A.; Shapovalova, A. I.; Skillman, D. R.; Snedden, S. A.; Soundararajaperumal, S.; Stirpe, G. M.; Tao, J.; Turner, G. W.; Wagner, R. M.; Wagner, S. J.; Wei, J. Y.; Wu, H.; Zheng, W.; and Zou, Z. L. "Steps Toward Determination of the Size and Structure of the Broad-Line Region in Active Galactic Nuclei. XII. Ground-Based Monitoring of 3C390.3." Astrophysical Journal Supplement Series 115 (1998): 185.
- Digel, S. W.; Grenier, I. A.; Hunter, S. D.; Dame, T. M.; and Thaddeus, P. "Diffuse High-Energy Gamma-Ray Emission in Monoceros." In *Proceedings of the 4th Compton Symposium*, *American Institute of Physics Conference Proceedings*, vol. 410, eds.
 C. D. Dermer, M. S. Strickman, and J. D. Kurfess, p. 1188.
 Woodbury, New York: American Institute of Physics, 1997.
- Dobrzycka, D.; Dobrzycki, A.; Engels, D.; and Hagen, H-J. "HS 0551+7241: A New Possible Magnetic Cataclysmic Variable in the Hamburg-CfA Bright Quasar Survey." Astronomical Journal 115 (1998): 1634.
- Dobrzycka, D.; Strachan, L.; Miralles, M. P.; Kohl, J. L.; Gardner, L. D.; Smith, P. L.; Cranmer, S. R.; Guhathakurta, M.; and Fisher, R. "Comparison of SPARTAN and

UVCS/SOHO Observations." In Cool Stars, Stellar Systems, and the Sun: Tenth Cambridge Workshop, Astronomical Society of the Pacific Conference Series, vol. 154, eds. R. A. Donahue and J. A. Bookbinder, p. 607. San Francisco: Astronomical Society of the Pacific, 1998.

- Donahue, R. A.; Dobson, A. K.; and Baliunas, S. L. "Stellar Active Region Evolution: II. Identification and Evolution of Variance Morphologies in Ca II H and K Time Series." *Solar Physics* 171 (1997): 211.
- Donahue, M.; Voit, G. M.; Gioia, I.; Lupino, G.; Hughes, J. P.; and Stocke, J. T. "A Very Hot, High-Redshift Cluster of Galaxies: More Trouble for Omega 0=1." Astrophysical Journal 502 (1998): 550.
- Donnelly, R. H.; Markevitch, M.; Forman, W.; Jones, C.; David, L. P.; Churazov, E.; and Gilfanov, M. "Temperature Structure in Abell 1367." Astrophysical Journal 500 (1998): 138.
- Dooley, P. M.; Lewis, B. R.; Gibson, S. T.; Baldwin, K. G. H.; Cosby, P. C.; Price, J. L.; Copeland, R. A.; Slanger, T. G.; Thorne, A. P.; Murray; J. E.; and Yoshino, K. "A Comparative High-Resolution Study of Predissociation Linewidths in the Schumann-Runge Bands of O₂." Journal of Chemical Physics 109 (1998): 3856.
- Drake, J. J. "Excess Helium as an Explanation for Metal Deficiency in Coronal Plasma?" Astrophysical Journal (Letters) 496 (1998): L33.
- Drake, J. J.; Fruscione, A.; Hoare, M. G.; and Callanan, P. "A Deep Extreme Ultraviolet Explorer Observation of the Extreme Ultraviolet Transient RE J1255+266." Astrophysical Journal 493 (1998): 926.
- Dupree, A. K. "The IUE Legacy: Chromospheres and Winds in Cool Stars" (Invited Review). In Ultraviolet Astrophysics Beyond the IUE Final Archive, ESA SP-413, p. 75. Paris: ESA Publications Division, 1998.
- ————. "Observations of Wind Variability in Cool Stars." In Workshop on Cyclic Variability of Stellar Winds, eds. L. Kaper and A. W. Fullerton, p. 69. Berlin: Springer-Verlag, 1998.
- Dupree, A. K., and Brickhouse, N. S. "ORFEUS Observations of Luminous Cool Stars." Astrophysical Journal (Letters) 500 (1998): L33.
- Dupree, A. K.; Uitenbroek, H.; and Gilliland, R. "Hubble Space Telescope Observations of Betelgeuse." In *Pulsating Stars: Recent Developments in Theory and Observations, Proceedings of IAU* JD 24, eds. M. Takeuti and D. D. Sasselov, p. 51. Tokyo, Japan: Universal Academy Press, 1998.
- Durret, F.; Forman, W.; Gerbal, D.; Jones, C.; and Vikhlinin, A. "The Rich Cluster of Galaxies ABCG 85. III. Analyzing the ABCG 85/87/89 Complex." Astronomy and Astrophysics 335 (1998): 41.
- Eichhorn, G.; Accomazzi, A.; Grant, C. S.; Kurtz, M. J.; and Murray, S. S. "New Capabilities of the ADS Abstract and Article Service." In Astronomical Data Analysis and Software and Systems VII, Astronomical Society of the Pacific Conference Series, vol. 145, eds. R. Albrecht, R. N. Hook, and H. A. Bushouse, p. 378. San Francisco: Astronomical Society of the Pacific, 1998.

Eikenberry, S.; Fazio, G.; and Ransom, S. "'Rosat' Timing of the LMC Pulsar 0540-691." *Astrophysical Journal* 492 (1998): 754E.

Elgered, G.; Johansson, J. M.; Rönnäng, B. O.; and Davis, J. L. "Measuring Regional Atmospheric Water Vapor Using GPS." *Geophysical Research Letters* 24 (1997): 2663.

Elósegui, P.; Rius, A.; Davis, J. L.; Ruffini, G.; and Keihm, S. "A Regional GPS Experiment for Determining the Spatial and Temporal Variations of Water Vapor." In *Proceedings of ION-GPS '97* (Kansas City) Part I (1997): 241.

Elósegui, P.; Rius, A.; Davis, J. L.; Ruffini, G.; Keihm, S.; Bürki, B.; and Kruse, L. P. "An Experiment for Estimation of the Spatial and Temporal Variations of Water Vapor Using GPS Data." *Physics and Chemistry of the Earth* 23 (1998): 125.

Elsner, R. F.; O'Dell, S. L.; Ramsey, B. D.; Tennant, A. F.;
Weisskopf, M. C.; Kolodziejczak, J. J.; Swartz, D. A.;
Engelhaupt, D. E.; Garmire, G. P.; Nousek, J. A.; Bautz, M. W.; Gaetz, T. J.; and Zhao, P. "Calibration Results for the AXAF Flight Contamination Monitor." In X-Ray Optics, Instruments, and Missions, SPIE Proceedings, vol. 3444, eds. R. B. Hoover and A. B. C. Walker, II, p. 177.
Bellingham, Washington: SPIE - The International Society for Optical Engineering, 1998.

Elvis, M. "AXAF in Context: A Revolution." In The Hot Universe, Proceedings of IAU Symposium No. 188, eds. K. Koyama, S. Kitamoto, and M. Itoh, p. 79. Dordrecht: Kluwer Academic Publishers, 1998.

Elvis, M.; Fiore, F.; Giommi, P.; and Padovani, P. "X-Ray Spectral Survey of WGACAT Quasars. II. Oprical and Radio Properties of Quasars with Low-Energy X-Ray Cutoffs." *Astrophysical Journal* 492 (1998): 91.

Esin, A. A.; McClintock, J. E.; and Narayan, R. "Advection-Dominated Accretion and the Spectral States of Black Hole X-Ray Binaries: Application to Nova Muscae 1991." *Astrophysical Journal* 489 (1997): 865.

. "Advection-Dominated Accretion and the Spectral State of Black Hole X-Ray Binaries: Application to Nova Muscai 1991: Erratum." *Astrophysical Journal* 500 (1998): 523.

Esser, R.; Edgar, R. J.; and Brickhouse, N. S. "High Minor Ion Outflow Speeds in the Inner Corona and Observed Ion Charge States in Interplanetary Space." Astrophysical Journal 498 (1998): 448.

Esser, R., and Habbal, S. R. "Coronal Holes and the Solar Wind." In *Cosmic Winds and the Heliosphere*, eds. J. R. Jokipii, C. P. Sonett, and M. S. Giampapa, p. 297. Tucson: University of Arizona Press, 1997.

Evans, N. R.; Böhm-Vitense, E.; Beck-Winchatz, B.; Carpenter, K.; and Robinson, R. "The Mass of the Classical Cepheid S Muscae." In *The Scientific Impact of the Goddard* High Resolution Spectrograph, Astronomical Society of the Pacific Conference Series, vol. 143, eds. J. C. Brandt, T. B. Ake, III, and C. C. Petersen, p. 309. San Francisco: Astronomical Society of the Pacific, 1998.

Evans, N. R.; Boehm-Vitense, E.; Carpenter, K.; Beck-Winchatz, B.; and Robinson, R. "Classical Cepheid Masses: U Aquilae." Astrophysical Journal 494 (1998): 768.

Fabbiano, G. "Super-Eddington Sources in Galaxies." In The Hot Universe, Proceedings of IAU Symposium No. 188, eds. K. Koyama, S. Kitamoto, and M. Itoh, p. 93. Dordrecht: Kluwer Academic Publishers, 1998.

Falcke, H.; Goss, W. M.; Ho, L. C.; Marsuo, H.; Teuben, P.; Wilson, A.; Zhao, J.-H.; and Zylka, R. "Sgr A* and Company-Multiwavelength Observations of Sgr A* and VLA Search of 'Sgr A*'s' in LINERs." In *Radio Emission* from Galactic and Extragalactic X-Ray Sources, Proceedings of IAU Colloquium No. 164, vol. 144, eds. A. Zensus, G. Taylor, and J. Wrobel, p. 323. San Francisco: Astronomical Society of the Pacific, 1998.

Falcke, H.; Goss, W. M.; Matsuo, H.; Teuben, P.; Zhao, J.-H.; and Zylka, R. "The Simultaneous Spectrum of Sgr A* from 20 cm to 1 mm and the Nature of the mm-Excess." *Astrophysical Journal* 499 (1998): 731.

Fanson, J.; Fazio, G. G.; Houck, J.; Kelly, T.; Rieke, G.;
Tenerelli, D.; and Whitten, M. "The Space Infrared
Telecope Facility (SIRTF)." In Space Telescopes and
Instruments, SPIE Proceedings, vol. 3356, eds. P. Y. Bely and J.
B. Breckinridge, p. 478. Bellingham, Washington: SPIE—
The International Society for Optical Engineering, 1998.

Favata, F.; Mewe, R.; Brickhouse, N. S.; Pallavicini, R.; and Dupree, A. K. "A SAX/LECS X-Ray Observation of the Active Binary Capella." Astronomy and Astrophysics 324 (1997): L37.

Fazio, G. G., and Clemens, D. P. "SIRTF Surveys and Legacy Science." In New Horizons from Multi-Wavelength Sky Surveys, Proceedings of IAU Symposium No. 179, eds. B. J. McLean, D. A. Golombek, J. J. E. Hayes, and H. E. Payne, p. 109. Dordrecht: Kluwer Academic Publishers, 1998.

Fazio, G. G.; Hora, J. L.; Willner, S. P.; Stauffer, J. R.; Ashby, M. L. N.; Wang, Z.; Tollestrup, E. V.; Pipher, J. L.; Forrest, W. J.; McCreight, C.; Moseley, S. H.; Hoffmann, W. F.; Eisenhardt, P.; and Wright, E. L. "The Infrared Array Camera (IRAC) for the Space Infrared Telescope Facility (SIRTF)." In *Infrared Astronomical Instrumentation, SPIE Proceedings*, vol. 3354, ed. A. M. Fowler, p. 1024. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1998.

Feldman, W. C.; Habbal, S. R.; Hoogeveen, G.; and Wang, Y.-M. "Experimental Constraints on Solar Wind Structure Near the Sun." *Journal of Geophysical Research* 102 (1997): 26,905. Fich, M., and Lada, C. J. "A Deflected Molecular Jet in the Bipolar Outflow NGC 2264G." Astrophysical Journal (Letters) 484 (1997): L63.

. "An Atlas of CO Maps of the Bipolar Outflow NGC 2264G." Astrophysical Journal Supplement Series 117 (1998): 147.

Fiore, F.; Elvis, M.; Giommi, P.; and Padovani, P. "X-Ray Spectral Survey of WGACAT Quasars. I. Spectral Evolution and Low-Energy Cutoffs." *Astrophysical Journal* 492 (1998): 79.

Fiore, F.; Laor, A.; Elvis, M.; Nicastro, F.; and Giallongo, E. "The Variability Properties of X-Ray-Steep and X-Ray-Flat Quasars." Astrophysical Journal 503 (1998): 607.

Fiore, F.; Matt, G.; Cappi, M.; Elvis, M.; Leighly, K. M.; Nicastro, F.; Piro, L.; Siemiginowska, A.; and Wilkes, B. J. "ASCA Observations of Two Steep Soft X-Ray Quasars." *Monthly Notices of the Royal Astronomical Society* 298 (1998): 103.

Fischer, P.; Pryor, C.; Murray, S.; Mateo, M.; and Richtler, T. "Mass Segregation in Young Large Magellanic Cloud Clusters. I. NGC 2157." Astronomical Journal 115 (1998): 592.

Flanagan, K. A.; Schulz, N. S.; Murray, S. S.; Hartner, G. D.; and Predehl, P. "HETG High-Order Diffraction Efficiency." In X-Ray Optics, Instruments, and Missions, SPIE Proceedings, vol. 3444, eds. R. B. Hoover and A. B. C. Walker, II, p. 106. Bellingham, Washington: SPIE - The International Society for Optical Engineering, 1998.

Ford, E. C.; Van Der Klis, M.; and Kaaret, P. "Discovery of Kilohertz Quasi-Periodic Oscillations in the Atoll X-Ray Binary 4U 1705-44." Astrophysical Journal (Letters) 498 (1998): L41.

Forrey, R. C.; Balakrishnan, N.; and Dalgarno, A. "Quantum Mechanical Calculations of Rotational Transitions of H-H₂ Collisions." Astrophysical Journal 489 (1997): 1000.

Fox, D., and Loeb, A. "Do the Electrons and Ions in X-Ray Clusters Share the Same Temperature?" Astrophysical Journal 491 (1997): 459.

Frontera, F.; Costa, E.; Piro, L.; Muller, J. M.; Amati, L.; Feroci, M.; Fiore, F.; Pizzichini, G.; Tavani, M.; Castro-Tirado, A.; Cusumano, G.; Dal Fiume, D.; Heise, J.; Hurley, K.; Nicastro, L.; Orlandini, M.; Owens, A.; Palazzi, E.; Parmar, A. N.; In'T Zand, J.; and Zavattini, G. "Spectral Properties of the Prompt X-Ray Emission and Afterglow from the Gamma-Ray Burst of 1997 February 28." Astrophysical Journal (Letters) 493 (1998): L67.

Frontera, F.; Greiner, J.; Antonelli, L. A.; Costa, E.; Fiore, F.; Parmar, A. N.; Piro, L.; Boller, T.; and Voges, W. "High Resolution Imaging of the X-Ray Afterglow of GRB 970228 with ROSAT." Astronomy and Astrophysics 334 (1998): L69.

Fruscione, A. "AGN Variability: An Extreme Ultraviolet View from Deep EUVE Observations." Advances in Space Research 21 (1998): 83.

Fullerton, A. W.; Massa, D. L.; Prinja, R. K.; Owocki, S. P.; and Cranmer, S. R. "Wind Variability of B Supergiants: III. Corotating Spiral Structures in the Stellar Wind of HD 64760." Astronomy and Astrophysics 327 (1997): 699. Garay, G.; Moran, J. M.; Rodriguez, L. F.; and Reid, M. J. "The G19.6-0.2 Region of Star Formation: Molecular and Ionized Environs." *Astrophysical Journal* 492 (1998): 635.

Garcia, M. R.; Berlind, P.; Barton, E.; McClintock, J. E.; Callanan, P. J.; and McCarthy, J. "XTE J0421+560 and CI Camelopardalis." *IAU Circular No. 6865* (1998): 1.

Garcia, M. R.; Callanan, P. J.; Moraru, D.; McClintock, J. E.; Tollestrup, E.; Willner, S. P.; Hergenrother, C.; Robinson, C. R.; Kouveliotou, C.; and Van Paradijs, J. "Power-Law Decays in the Optical Counterparts of GRB 970228 and GRB 970508." Astrophysical Journal (Letters) 500 (1998): Lt05.

Garnavich, P. M.; Kirshner, R. P.; Challis, P.; Tonry, J.;
Gilliland, R. L.; Smith, R. C.; Clocchiatti, A.; Diercks, A.;
Filippenko, A. V.; Hamuy, M.; Hogan, C. J.; Leibundgut,
B.; Phillips, M. M.; Reiss, D.; Riess, A. G.; Schmidt, B. P.;
Schommer, R. A.; Spyromilio, J.; Stubbs, C.; Suntzeff, N.
B.; and Wells, L. "Constraints on Cosmological Models
from Hubble Space Telescope Observations of High-z
Supernovae." Astrophysical Journal (Letters) 493 (1998): L53.

Garnavich, P.; Suntzeff, N.; Phillips, M.; Smith, R. C.;
Clocchiatti, A.; Diercks, A.; Challis, P.; Schmidt, B.;
Filippenko, A. V.; Riess, A. G.; Leonard, D. C.; and Moran,
E. C. "Supernovae." *IAU Circular No. 6861* (1998): 1.

Gayley, K. G.; Owocki, S. P.; and Cranmer, S. R. "Sudden Radiative Braking in Colliding Hot-Star Winds." *Astrophysical Journal* 475 (1997): 786.

Ge, J.; Jacobsen, B. P.; Angel, J. R. P.; McGuire, P. C.;
Roberts, T.; McLeod, B.; and Lloyd-Hart, M.
"Simultaneous Measurements of Sodium Column Density and Laser Guide Star Brightness." In Adaptive Optical System Technologies, SPIE Proceedings, vol. 3353, eds. D. Bonaccini and R. K. Tyson, p. 242. Bellingham, Washington: SPIE— The International Society for Optical Engineering, 1998.

Geller, M.; Kurtz, M.; Wegner, G.; Thorstensen, J.; Fabricant, D.; Marzke, R.; Huchra, J.; Schild, R.; and Falco, E. "The Century Survey: A Deeper Slice of the Universe." *Astronomical Journal* 114 (1997): 2205.

George, I. M.; Nandra, K.; Laor, A.; Turner, T. J.; Fiore, F.; Netzer, H.; and Mushotzky, R. F. "Evidence of Absorption Due to Highly Ionized Gas in the Radio-Quiet Quasar PG III4+445." Astrophysical Journal 491 (1997): 508.

Ghavamian, P., and Garcia, M. "XTE J1946+274." IAU Circular No. 7022 (1998): 2.

Gingerich, O. "A Unique Copy of Flamsteed's *Historia Coelestis* (1712)." In *Flamsteed's Stars*, ed. F. Wilmoth, p. 189. Woodbridge, Suffolk: Boydell & Brewer, 1997.

-------. "The Journey Into Darkness." *Platt Valley Review* 26 (1998): 11.

Gingerich, O., and Voelkel, J. "Tycho Brahe's Copernican Campaign." Journal for the History of Astronomy 29 (1998): 1. Giommi, P.; Fiore, F.; Guainazzi, M.; Feroci, M.; Frontera, F.;
Ghisellini, G.; Grandi, P.; Maraschi, L.; Mineo, T.;
Molendi, S.; Orr, A.; Piraino, S.; Segreto, A.; Tagliaferri,
G.; and Treves, A. "The Complex 0.1-100 keV X-Ray
Spectrum of PKS 2155-304." Astronomy and Astrophysics 333 (1998): L5.

Giordano, S.; Antonucci, E.; Benna, C.; Kohl, J. L.; Noci, G.; Michels, J.; and Fineschi, S. "Solar Wind Acceleration in the Solar Corona." In 31st ESLAB Symposium: Correlated Phenomena at the Sun, in the Heliosphere, and in Geospace, ESA SP-415, p. 327. Paris: ESA Publications Division, 1997.

Giordano, S.; Antonucci, E.; Benna, C.; Romoli, M.; Noci, G.; Kohl, J. L.; Fineschi, S.; Michels, J.; and Naletto, C.
"Plume and Interplume Regions and Solar Wind Acceleration in Polar Coronal Holes Between 1.5 and 3.5R." In *Fifth SOHO Workshop: The Corona and Solar Wind Near Minimum Activity, ESA SP-404*, p. 413. Paris: ESA Publications Division, 1997.

Gizzi, C.; Patria, G.; Andersson, T.; Cinti, M. N.; Costa, E.;
Kaaret, P. E.; Soffitta, P.; and Tomsick, J. "Measurement of Transparency of Thin Beryllium X-Ray Windows by Means of Fluorescense Lines Produced by a Cm244 Alpha Source." In X-Ray, and Gamma-Ray Instrumentation for Astronomy VIII, SPIE Proceedings, vol. 3114, eds. O. H. Siegmund and M. A. Gummin, p. 657. Bellingham, Washington: SPIE— The International Society for Optical Engineering, 1997.

Gladman, B. J.; Nicholson, P. D.; Burns, J. A.; Kavelaars, J. J.; Marsden, B. G.; Williams, G. V.; and Offurt, W. B. "Discovery of Two Distant Irregular Moons of Uranus." *Nature* 392 (1998): 897.

Gomez, M., and Lada, C. J. "From Head to Sword, the Clustering Properties of Young Stars in Orion." *Astronomical Journal* 115 (1998): 1524.

Goodman, A. A.; Barranco, J. A.; Wilner, D. J.; and Heyer, M. H. "Coherence in Dense Cores. II: The Transition to Coherence." *Astrophysical Journal* 504 (1998): 223.

———. "Velocity Coherence in Dense Cores." Astrophysical Letters & Communications 37 (1998): 109.

Gordon, S. M.; Kirshner, R. P.; Long, K. S.; Blair, W. P.; Duric, N.; and Smith, R. C. "A New Optical Sample of Supernova Remnants in M33." Astrophysical Journal Supplement Series 117 (1998): 89.

Gorenstein, P. "Deployable Ultrahugh-Throughput X-Ray Telescope: Concept" (Invited Paper). In X-Ray Optics, Instruments, and Missions, SPIE Proceedings, vol. 3444, eds.
R. B. Hoover and A. B. C. Walker, II, p. 382. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1998.

Goudfrooij, P., and Trinchieri, G. "X-Ray Emission, Optical Nebulosity and Dust in Early-Type Galaxies. I. The Dusty Nebular Filaments in NGC 5846." Astronomy and Astrophysics 330 (1998): 123.

Graessle, D. E.; Blake, R. L.; Burek, A. J.; Dyson, S. E.; Fitch, J. J.; Schwartz, D. A.; and Soufli, R. "Modeling of Synchrotron Reflectance Calibrations of AXAF Iridium-Coated Witness Mirrors Over 2 to 12 keV." In X-Ray Optics, Instruments, and Missions, SPIE Proceedings, vol. 3444, eds. R. B. Hoover and A. B. C. Walker, II, p. 140. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1998.

Green, P. J. "Differences between the Optical/Ultraviolet Spectra of X-Ray Bright and X-Ray Faint QSOs." Astrophysical Journal 498 (1998): 170.

Green, P. J.; Aldcroft, T. A.; Garcia, M. R.; Slane, P.; and Vrtilek, J. "Using the Tycho Output Catalog for AXAF: Guiding and Aspect Reconstruction for Half-Arcsecond X-Ray Images." In *Hipparcos Venice '97, Proceedings of the ESA Symposium, ESA SP-402*, ed. B. Battrick, p. 187. Paris: ESA Publications Division, 1997.

Green, P. J., and Kurtz, M. "On the Ubiquity of Polluted Dwarfs." In Cool Stars, Stellar Systems, and the Sun: Tenth Cambridge Workshop, Astronomical Society of the Pacific Conference Series, vol. 154, eds. R. A. Donahue and J. A. Bookbinder, CD932. San Francisco: Astronomical Society of the Pacific, 1998.

Greene, T. P., and Lada, C. J. "Near-Infrared Spectra of Flat-Spectrum Protostars: Extremely Young Photospheres Revealed." Astronomical Journal 114 (1997): 2157.

 Grindlay, J. E. "Balloon-Borne Hard X-Ray Imaging and Future Surveys." Advances in Space Research 21 (1998): 999.
 ———. "Surveying the Hard X-Ray Sky: Imaging in Space and Time." Astronomische Nachrichten 319 (1998): 133.

Groot, P. J.; Galama, T. J.; Vreeswijk, P. M.; Wijers, R. A. M.
J.; Pian, E.; Palazzi, E.; Van Paradijs, J.; Kouveliotou, C.;
In't Zand, J. J. M.; Heise, J.; Robinson, C.; Tanvir, N.;
Lidman, C.; Tinney, C.; Keane, M.; Briggs, M.; Hurley, K.;
Gonzalez, J.-F.; Hall, P.; Smith, M. G.; Covarrubias, R.;
Jonker, P.; Casares, J.; Frontera, F.; Feroci, M.; Piro, L.;
Costa, E.; Smith, R.; Jones, B.; Windridge, D.;
Bland-Hawthorn, J.; Veilleux, S.; Garcia, M.; Brown, W.
R.; Stanek, K. Z.; Castro-Tirado, A. J.; Gorosabel, J.;
Greiner, J.; Jaeger, K.; Bohm, A. B.; and Fricke, K. J. "The
Rapid Decay of the Optical Emission from GRB 980326
and Its Possible Implications." Astrophysical Journal 502
(1998): 123.

Grossman, M.; Shapiro, I. I.; and Ward, R. B. Light and Color.
 Peterborough, New Hampshire: Cobblestone Press, 1997.
 ______. Thinking About the Earth and the Sun. Peterborough,

New Hampshire: Cobblestone Press, 1997. Guainazzi, M.; Matt, G.; Antonelli, L. A.; Fiore, F.; Piro, L.; and Ueno, S. "The X-Ray Spectrum and Variability of the Seyfert 2 Galaxy NGC 7172." *Monthly Notices of the Royal Astronomical Society* 298(3) (1998): 824.

Guirado, J. C.; Marcaide, J. M.; Ros, E.; Ratner, M. I.; Shapiro, I. I.; Quirrenbach, A.; and Witzel, A. "Submilliarcsecond Shift of the Brightness Peak of the Radio Sources 1928+738 and 2007+777." Astronomy and Astrophysics 336 (1998): 385.

- Gullbring, E.; Hartmann, L.; Briceño, C.; and Calver, N. "Disk Accretion Rates for T Tauri Stars." Astrophysical Journal 492 (1998): 323.
- Habbal, S. R.; Woo, R.; Fineschi, S.; O'Neal, R.; Kohl, J. L.; and Korendyke, C. "Origins of the Slow and the Ubiquitous Fast Solar Wind." Astrophysical Journal (Letters) 489 (1997): L103.
- Hailey, C. J.; Abdali, S.; Christensen, F. E.; Craig, W. W.;
 Decker, T. R.; Harrison, F. A.; and Jimenez-Garate, M.
 "Substrates and Mounting Techniques for the High-Energy Focusing Telescope (HEFT)." In X-Ray, and Gamma-Ray Instrumentation for Astronomy VIII, SPIE Proceedings, vol. 3114, eds. O. H. Siegmund and M. A. Gummin, p. 535.
 Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1997.
- Haiman, Z., and Loeb, A. "Detection of the First Star Clusters with NGST." In Science with the Next Generation Space Telescope, Astronomical Society of the Pacific Conference Series, vol. 133, eds. E. P. Smith and A. Koratkar, p. 251. San Francisco: Astronomical Society of the Pacific, 1998. ______. "Observational Signatures of the First Quasars."

Haisch, B.; Kashyap, V.; Drake, J. J.; and Freeman, P. "RXTE Observations of Proxima Centauri." Astronomy and Astrophysics 335 (1998): LIOI.

Halpern, J. P.; Eracleous, M.; and Forster, K. "E 0336-248: A New BL LAC Object Found By An Old Einstein." Astronomical Journal 114 (1997): 1736.

. "Optical and X-Ray Spectroscopy of 1E 0449.4-1823: Demise of the Original Type 2 QSO." *Astrophysical Journal* 501 (1998): 103.

- Hameury, J.-M.; Lasota, J.-P.; McClintock, J. E.; and Narayan, R. "Advection-Dominated Flows Around Black Holes and the X-Ray Delay in the Outburst of GRO J1655-40." Astrophysical Journal 489 (1997): 234.
- Hardcastle, M. J.; Birkinshaw, M.; and Worrall, D. M. "Magnetic Field Strengths in the Hotspots of 3C 33 and III." *Monthly Notices of the Royal Astronomical Society* 294 (1998): 615.

Hardcastle, M. J.; Lawrence, C. R.; and Worrall, D. M. "Extended and Compact X-Ray Emission from the Powerful Radio Galaxy 3C 220.1." *Astrophysical Journal* 504 (1998): 743.

Hardcastle, M. J.; Worrall, D. M.; and Birkinshaw, M. "Dynamics of the Radio Galaxy 3C449." Monthly Notices of the Royal Astronomical Society 296 (1998): 1098.

Harris, D. E.; Biretta, J. A.; and Junor, W. "X-Ray Variability in M87." Monthly Notices of the Royal Astronomical Society 284 (1997): L21.

Harris, D. E.; Leighly, K. M.; and Leahy, J. P. "X-Ray Emission from a Radio Horspot in 3C 390.3: Evidence for the Deflection of a Radio Jet by a Neighboring Galaxy." *Astrophysical Journal (Letters)* 499 (1998): L149.

- Harrus, I. M.; Hughes, J. P.; Singh, K. P.; Koyama, K.; and Asaoka, I. "Interpretation of the Center-Filled Emission from the Supernova Remnant W44." *Astrophysical Journal* 488 (1997): 781.
- Harrus, I. M.; Hughes, J. P.; and Slane, P. O. "Study of the Composite Supernova Remnant MSH 11-62." Astrophysical Journal 499 (1998): 273.

Hartmann, D.; Magnani, L.; and Thaddeus, P. "A Survey of High-Latitude Molecular Gas in the Northern Galactic Hemisphere." *Astrophysical Journal* 492 (1998): 205.

- Hartmann, L. Accretion Processes in Star Formation. Cambridge University Press, 1998.
- Hartmann, L.; Calvet, N.; Gullbring, E.; and D'Alessio, P. "Accretion and the Evolution of T Tauri Disks." Astrophysical Journal 495 (1998): 385.

Harwit, M.; Neufeld, D. A.; Melnick, G. J.; and Kaufman, M. J. "Thermal Water Vapor Emission from Shocked Regions in Orion." *Astrophysical Journal (Letters)* 497 (1998): L105.

Hasan, S. S.; Kneer, F.; and Kalkofen, W. "Spectral Line Radiation from Solar Small-Scale Magnetic Flux Tubes. II." *Astronomy and Astrophysics* 332 (1998): 1064.

- Heap, S. R.; Brown, T. M.; Hubeny, I.; Landsman, W.; Yi, S.; Fanelli, M.; Gardner, J. P.; Lanz, T.; Maran, S. P.; Sweigart, A.; Kaiser, M. E.; Linsky, J.; Timothy, J. G.; Lindler, D.; Beck, T.; Bohlin, R. C.; Clampin, M.; Grady, J.; Loiacono, J.; and Krebs, C. "Ultraviolet Spectral Dating of Stars and Galaxies." Astrophysical Journal (Letters) 492 (1998): L131.
- Henry, J. P.; Gioia, I.; Mullis, C.; Clowe, D.; Luppino, G.; Boehringer, H.; Briel, U.; Voges, W.; and Huchra, J. "The Discovery of a Redshift 0.8 Cluster of Galaxies in the North Ecliptic Pole Survey." Astronomical Journal 114 (1997): 1293.
- Heyrovsky, D., and Loeb, A. "Microlensing of an Elliptical Source by a Point Mass." *Astrophysical Journal* 490 (1997): 38.
- Hill, R.; Ferrarese, L.; Stetson, P.; Saha, A.; Freedman, W.;
 Ford, H.; Graham, J.; Hoessel, J.; Han, M.; Huchra, J.;
 Hughes, S.; Illingworth, G.; Kelson, D.; Kennicutt, R.;
 Bresolin, E.; Harding, P.; Turner, A.; Madore, B.; Sakai, S.;
 Silbermann, N.; Mould, J. R.; and Phelps, R. "The
 Extragalactic Distance Scale Key Project V. Photometry of
 the Brightest Stars in M100 and the Calibration of the
 WFPC2." Astrophysical Journal 496 (1998): 648.
- Hillas, A. M.; Akerlof, C. W.; Biller, S.; Buckley, J. H.;
 Burdett, A. M.; Carter-Lewis, D. A.; Catanese, M.; Cawley, M. F.; Fegan, D. J.; Finley, J. P.; Gaidos, J. A.; Krennrich, F.; Lamb, R. C.; Lang, M. J.; Mohanty, G.; Punch, M.;
 Reynolds, P. T.; Rodgers, A. J.; Rose, H. J.; Rovero, A.;
 Schubnell, M. S.; Sembroski, G. H.; Vacanti, G.; Weekes, T. C.; West, M.; and Zweerink, J. "Spectrum of TeV Gamma Rays from the Crab Nebulae." Astrophysical Journal 503 (1998): 744.
- Hillenbrand, L. A., and Hartmann, L. "A Preliminary Study of the Orion Nebula Cluster Structure and Dynamics." *Astrophysical Journal* 492 (1998): 540.
- Hillenbrand, L.; Strom, S.; Calvet, N.; Merrill, K.; Gatley, I.; Makidon, R.; Meyer, M.; and Skrutskie, M. "Circumstellar

Astrophysical Journal 503 (1998): 505.

Disks in the Orion Nebula Cluster." Astronomical Journal 116 (1998): 1816.

- Hoffmann, W. F.; Hora, J. L.; Fazio, G. G.; Deutsch, L. K.; and Dayal, A. "MIRAC2: a Mid-Infrared Array Camera for Astronomy." In *Infrared Astronomical Instrumentation*, SPIE Proceedings, vol. 3354, ed. A. M. Fowler, p. 647. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1998.
- Hoghoj, P.; Ziegler, E.; Susini, J.; Freund, A. K.; Joensen, K. D.; Gorenstein, P.; and Wood, J. L. "Focusing of Hard X-Rays with a W/Si Supermirror." NIMB Beam Interactions with Materials & Atoms 132 (1997): 528.
- Hooper, E. J. "Multiwavelength Observations of Quasars and Their Environments." *Publications of the Astronomical Society* of the Pacific 110 (1998): 879.
- Horner, D. J.; Lada, E. A.; and Lada, C. J. "A Near-Infrared Imaging Survey of NGC 2282." Astronomical Journal 113 (1997): 1788.
- Houser, J. L. "The Effect of Rotation on the Gravitational Radiation and Dynamical Stability of Stiff Stellar Cores." *Monthly Notices of the Royal Astronomical Society* 299(4) (1998): 1069.
- Hu, J. Y.; Qiu, Y. L.; Qiao, Q. Y.; Wei, J. Y.; Filippenko, A.
 V.; Martin, E. L.; Li, W. D.; Treffers, R. R.; Modjaz, M.;
 Moretti, S.; and Tomaselli, S. "Supernova 1997ef in UGC 4107." *IAU Circular No. 6783* (1997): 1.
- Huang, M.; Balm, S. P.; Bania, T. M.; Bolatto, A.;
 Chamberlin, R. A.; Ingalls, J. G.; Jackson, J. M.; Lane, A.
 P.; Rumitz, M.; Stark, A. A.; and Wilson, R. W. "Atomic Carbon in Galactic HII Regions." In Astrophysics from Antarctica, Astronomical Society of the Pacific Conference Series, vol. 141, eds. G. Novak and R. H. Landsberg, p. 192. San Francisco: Astronomical Society of the Pacific, 1998.
- Hudec, R.; Pina, L.; Inneman, A.; and Gorenstein, P. "Schmidt Wide Field X-Ray Telescope Prototype." Astronomische Nachrichten 319 (1998): 145.
- Hudson, M. J.; Lucey, J. R.; Smith, R. J.; and Steel, J. "Galaxy Clusters in the Perseus-Pisces Region - II. The Peculiar Velocity Field." *Monthly Notices of the Royal Astronomical Society* 291(3) (1997): 488.
- Hughes, J. P., and Birkinshaw, M. "A Measurement of the Hubble Constant from the X-Ray Properties and the Sunyaev-Zeldovich Effect of CL 0016+16." Astrophysical Journal 501 (1998): 1.
- "Another X-Ray-Discovered Poor Cluster of Galaxies Associated with CL 0016+16." Astrophysical Journal 497 (1998): 645.
- Hunter, T. R.; Neugebauer, G.; Benford, D. J.; Marthews, K.; Lis, D. C.; Serabyn, E.; and Phillips, T. G. "G34.24+0.13MM: A Deeply Embedded Proto-B-Star." Astrophysical Journal (Letters) 493 (1998): L97.
- Hussain, A. M.; Romaine, S. E.; Gorenstein, P.; Everett, J.;
 Bruni, R. J.; Clark, A. M.; Ruane, M. F.; and Fedyunin, Y.
 "Density vs Ar-Pressures for Optimization of DC-Magnetron Sputter Deposition of Ni/C Multilayers for

Hard X-Ray Telescopes." In Grazing Incidence and Multilayer X-Ray Optical Systems, SPIE Proceedings, vol. 3113, eds. R. B. Hoover and A. B. Walker, II, p. 260. Bellingham, Washington: SPIE - The International Society for Optical Engineering, 1997.

- Hwang, U.; Hughes, J. P.; and Petre, R. "The X-Ray Iron Emission from Tycho's Supernova Remnant." Astrophysical Journal 497 (1998): 833.
- Iafolla, V.; Lorenzini, E. C.; Milyukov, V.; and Nozzoli, S. "Gizero: New Facililty for Gravitational Experiments in Free Fall." In *Gravitation & Cosmology* (Russian Gravitational Society), vol. 3, No. 2(10) (1997): 151.
- Ingalls, J. G.; Bania, T. M.; Chamberlin, R. A.; Jackson, J. J.; Lane, A. P.; Rumitz, M.; and Stark, A. A. "AST/RO Observations of Southern Hemisphere High-Latitude Clouds." In Astrophysics from Antarctica, Astronomical Society of the Pacific Conference Series, vol. 141, eds. G. Novak and R. H. Landsberg, p. 200. San Francisco: Astronomical Society of the Pacific, 1998.
- Irvine, W. M.; Bergin, E. A.; Dickens, J. E.; Jewitt, D.; Lovell, A. J.; Matthews, H. E.; Schloerb, F. P.; and Senay, M. "Chemical Processing as the Source of Cometary HNC." *Nature* 393 (1998): 547.
- Jackson, J. M.; Lane, A. P.; and Stark, A. A. "AST/RO Observations of Neutral Atomic Carbon." In Astrophysics from Antarctica, Astronomical Society of the Pacific Conference Series, vol. 141, eds. G. Novak and R. H. Landsberg, p. 146. San Francisco: Astronomical Society of the Pacific, 1998.
- Jamieson, M. J., and Dalgarno, A. "How a Change in the Interaction Potential Affects the s-Wave Scattering Length." *Journal of Physics B: Atomic and Molecular Physics* 31 (1998): L219.
- Jastrow, R., and Baliunas, S. Mount Wilson Observatory: Generations of Greatness, 12 pp. Los Angeles: Mount Wilson Institute, 1997.
- Jayawardhana, R.; Fazio, G.; Eikenberry, E.; Hughes, D.; Hora, J.; Dayal, A.; Hoffmann, W.; and Deutsch, L. "Infrared Imaging of the Starburst Galaxy NGC 7469." In Star Formation Near and Far: Seventh Astrophysics Conference, American Institute of Physics Conference Proceedings, vol. 393, eds. S. S. Holt and L. G. Mundy, p. 303. Woodbury, New York: American Institute of Physics, 1997.
- Jayawardhana, R.; Fisher, S.; Hartmann, L.; Telesco, C.; Pina, R.; and Fazio, G. "A Dust Disk Surrounding the Young A Star HR4796A." Astrophysical Journal (Letters) 503 (1998): L79.
- Jones, C.; Donnelly, H.; Forman, W.; Markevitch, M.; Vikhlinin, A.; Churazov, E.; and Gilfanov, M. "The History of the Corna Cluster in X-Rays." In Untangling Coma Berenices: A New Vision of an Old Cluster, eds. A. Mazure, F. Casoli, F. Durret, and D. Gerbal, p. 161. Singapore: World Scientific Publishing Company, 1998.
- Kaaret, P. "The Unidentified Galactic Egret Sources." Advances in Space Research 21(1) (1998): 237.
- Kaaret, P.; Yu, W.; Ford, E. C.; and Zhang, S. N. "Correlation Between Fast Quasi-Periodic Oscillations and X-Ray

Spectral Shape in Atoll Sources." Astrophysical Journal (Letters) 497 (1998): L93.

- Kaitchuck, R. H.; Schlegel, E. M.; White, J. C. II; and Mansperger, C. S. "Spectroscopy of the Cataclysmic Variable UU Aquarii: s-Waves and Bright Spots." *Astrophysical Journal* 499 (1998): 444.
- Kallman, T.; Boroson, B.; and Vrtilek, S. D. "Simultaneous Hubble Space Telescope/Rossi X-Ray Timing Explorer Observations of Scorpius X-1." Astrophysical Journal 502 (1998): 441.
- Kaluzny, J.; Kubiak, M.; Szymanski, M.; Udalski, A.; Krzeminski, W.; Mateo, M.; and Stanek, K. Z. "The Optical Gravitational Lensing Experiment. Variable Stars in Globular Clusters - IV. Fields 104A-E in 47 Tuc." Astronomy and Astrophysics Supplement Series 128 (1998): 19.
- Kaluzny, J., and Stanek, K. Z. "Two Confirmed Cataclysmic Variables in the Old Stellar Cluster NGC 6791." *Astrophysical Journal* 491 (1997): 153.
- Kaluzny, J., Stanek, K. Z.; Garnavitch, P. M.; and Challis, P. "Two Confirmed Cataclysmic Variables in the Old Stellar Cluster NGC 6791." Astrophysical Journal 491 (1997): 153.
- Kaluzny, J.; Stanek, K. Z.; Krockenberger, M.; Sasselov, D.
 D.; Tonry, J. L.; and Mateo, M. "Distances to Nearby Galaxies Using Detached Eclipsing Binaries and Cepheids.
 I. Variables in the Field M31B." Astronomical Journal 115 (1998): 1016.
- Kaluzny, J.; Wysocka, A.; Stanek, K. Z.; and Krzeminski, W. "BVI CCD Photometry of the Globular Cluster 47 Tuc." Acta Astronomica 48 (1998): 439.
- Kaper, L.; Henrichs, H. F.; Fullerton, A. W.; Ando, H.; Bjorkman, K. S.; Gies, D. R.; Hirata, R.; Kambe, E.; McDavid, D.; and Nichols, J. S. "Coordinated Ultraviolet and H Spectroscopy of Bright O-Type Stars." Astronomy and Astrophysics 327 (1997): 281.
- Karovska, M.; Carilli, C.; and Mattei, J. "CH Cygni." IAU Circular No. 6970 (1998): 3.
- Karpen, J. T.; Antiochos, S. K.; Devore, C. R.; and Golub, L. "Dynamic Responses to Magnetic Reconnection in Solar Arcades." Astrophysical Journal 495 (1998): 491.
- Kashyap, V., and Drake, J. J. "Markov-Chain Monte Carlo Reconstruction of Emission Measure Distributions: Application to Solar Extreme-Ultraviolet Spectra." Astrophysical Journal 503 (1998): 450.
- Katagiri, H.; Sako, T.; Hishikawa, A.; Yazaki, T.; Onda, K.; Yamanouchi, K.; and Yoshino, K. "Experimental and Theoretical Exploration of Photodissociation of SO₂ via the Electronically Excited C ¹B₂ State: New Identification of the Dissociation Pathway." *Journal of Molecular Structure* 413-414 (1997): 589.
- Kennelly, E. J.; Brown, T. M.; Kotak, R.; Sigur, T. A. A.; Horner, S. D.; Korzennik, S. G.; Nisenson, P.; Noyes, R. W.; Walker, A.; and Yang, S. "The Oscillations of Tau Pegasi." Astrophysical Journal 495 (1998): 440.
- Kenter, A. T.; Chappell, J. H.; Kobayashi, K.; Kraft, R. P.; Meehan, G. R.; Murray, S. S.; Zombeck, M. V.; Fraser, G.

W.; Pearson, J. F.; Lees, J. E.; Brunton, A. N.; Pearce, S. E.; Barbera, M.; Collura, A.; and Serio, S. "Performance and Calibration of the AXAF High-Resolution Camera I: Imaging Readout." In *EUV, X-Ray, and Gamma-Ray Instrumentation for Astronomy VIII, SPIE Proceedings*, vol. 3114, eds. O. H. Siegmund and M.A. Gummin, p. 26. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1997.

- Kenyon, S. J.; Brown, D. I.; Tout, C. A.; and Berlind, P. "Optical Spectroscopy of Embedded Young Stars in the Taurus-Auriga Molecular Cloud." *Astronomical Journal* 115 (1998): 2491.
- Kenyon, S. J.; Lada, E. A.; and Barsony, M. A. "The Near-Infrared Extinction Law and Limits on the Pre-Main Sequence Population in the # Ophiuchi Molecular Cloud." *Astronomical Journal* 115 (1998): 252.
- Kenyon, S. J., and Luu, J. X. "Accretion in the Kuiper Belt. I. Coagulation and Velocity Evolution." Astronomical Journal 115 (1998): 2136.
- Kharchenko, V.; Balakrishnan, M.; and Dalgarno, A. "Thermalization of Fast Nitrogen Atoms in Elastic and Inelastic Collisions with Molecules of Atmospheric Gases." *Journal of Atmospheric and Solar Terrestrial Physics* 60 (1998): 95.
- Kilburn, M. R., and Wood, B. J. "Metal-Silicate Partitioning and the Incompatibility of S and Si During Core Formation." *Earth and Planetary Science Letters* 152 (1997): 139.
- Kim, D.-W., and Elvis, M. "X-Ray Selected Red, Absorbed
- Quasars." Astronomische Nachrichten 319 (1998): 28.
- Kim, D.-W.; Fabbiano, G.; and Mackie, G. "ROSAT X-Ray Observations of the Radio Galaxy NGC 1316 (Fornax A)." Astrophysical Journal 497 (1998): 699.
- Kiraga, M.; Paczynski, B.; and Stanek, K. Z. "The Color-Magnitude Diagram in Baade's Window Revisited." *Astrophysical Journal* 485 (1997): 611.
- Kirshner, R. P. "Supernova 1987A, the First Ten Years." Sky and Telescope, February (1997): 36.
- Kissler-Pattig, M.; Brodie, J.; Schroder, L.; Forbes, D.; Grillmair, C.; and Huchra, J. "Spectroscopy of Globular Clusters Around NGC1399." Astronomical Journal 115 (1998): 105.
- Kleyna, J.; Geller, M. J.; Kenyon, S. J.; Kurtz, M. J.; and Thorstensen, J. R. "A V and I CCD Mosaic Survey of the Ursa Minor Dwarf Spheroidal." Astronomical Journal 115 (1998): 2359.
- Kochanek, C. S.; Falco, E. E.; Schild, R. E.; Dobrzycki, A.; Engels, D.; and Hagen, H.-J. "SBS 0909+532: A New Double Gravitational Lens or Binary Quasar?" Astrophysical Journal 479 (1997): 678.
- Kohl, J. L.; Noci, G.; Antonucci, E.; Tondello, G.; Huber, M.
 C. E.; Cranmer, S. R.; Strachan, L.; Panasyuk, A. V.;
 Gardner, L. D.; Romoli, M.; Fineschi, S.; Dobrzycka, D.;
 Raymond, J. C.; Nicolosi, P.; Siegmund, O. H. W.;
 - Spadaro, D., Benna, C.; Ciaravella, A.; Giordano, S.;
 - Habbal, S. R.; Karovska, M.; Li, X.; Martin, R.; Michels, J.

G.; Modigliani, A.; Naletto, G.; O'Neal, R. H.; Pernechele, C.; Poletto, G.; Smith, P. L.; and Suleiman, R. M. "UVCS/SOHO Empirical Determinations of Anisotropic Velocity Distributions in the Solar Corona." *Astrophysical Journal (Letters)* 501 (1998): L127.

- Kohl, J. L.; Noci, G.; Antonucci, E.; Tondello, G.; Huber, M.
 C. E.; Gardner, L. D.; Nicolosi, P.; Fineschi, S.; Raymond,
 J. C.; Romoli, M.; Spadaro, D.; Siegmund, O. H. W.;
 Benna, C.; Ciaravella, A.; Cranmer, S. R.; Giordano, S.;
 Karovska, M.; Martin, R.; Michels, J.; Modigliani, A.;
 Naletto, G.; Panasyuk, A.; Pernechele, C.; Poletto, G.;
 Smith, P. L.; and Strachan, L. "Measurements of H I and O
 VI Velocity Distributions in the Extended Solar Corona
 with UVCS/SOHO and UVCS/Spartan 201." Advances in
 Space Research 20(1) (1997): 3.
- Kohl, J. L.; Noci, G.; Antonucci, E.; Tondello, G.; Huber, M.
 C. E.; Gardner, L. D.; Nicolosi, P.; Strachan, L.; Fineschi,
 S.; Raymond, J. C.; Romoli, M.; Spadaro, D.; Panasyuk, A.;
 Siegmund, O. H. W.; Benna, C.; Ciaravella, A.; Cranmer,
 S. R.; Giordano, S.; Karovska, M.; Martin, R.; Michels, J.;
 Modigliani, A.; Naletto, G.; Pernechele, C.; Poletto, G.;
 and Smith, P. L. "First Results from the SOHO Ultraviolet
 Coronagraph Spectrometer." Solar Physics 175 (1997): 613.
- Koratkar, A.; Evans, I.; Pesto, S.; and Taylor, C. "A Detailed Comparison of Hubble Space Telescope Faint Object Spectrograph and IUE Ultraviolet Spectra of Selected Seyfert Nuclei." Astrophysical Journal 491 (1997): 536.
- Kraft, R. P.; Chappell, J. H.; Kenter, A. T.; Kobayashi, K.; Meehan, G. R.; Murray, S. S.; Zombeck, M. V.; Fraser, G.W.; Pearson, J. F.; Lees, J. E.; Brunton, A. N.; Barbera, M.; Collura, A.; and Serio, S. "Performance and Calibration of the AXAF High-Resolution Camera II: The Spectroscopic Detector." In EUV, X-Ray. and Gamma-Ray Instrumentation for Astronomy VIII, SPIE Proceedings, vol. 3114, eds. O. H. Siegmund and M.A. Gummin, p. 53. Bellingham, Washington: SPIE – The International Society for Optical Engineering, 1997.
- Kraft, S.; Scholze, F.; Thornagel, R.; Ulm, G.; McDermott,
 W. C.; and Kellogg, E. M. "High-Accuracy Calibration of the HXDS HPGe Detector at the PTB Radiometry
 Laboratory at BESSY." In EUV. X-Ray, and Gamma-Ray
 Instrumentation for Astronomy VIII, SPIE Proceedings, vol. 3114, eds. O. H. Siegmund and M. A. Gummin, p. 101.
 Bellingham, Washington: SPIE – The International Society for Optical Engineering, 1997.
- Kraemer, K. E.; Jackson, J. M.; and Lane, A. P. "[OI] 63 Micron Absorption in NGC 6334." Astrophysical Journal 503 (1998) 785.
- Kramer, C.; Alves, J.; Lada, C. J.; Lada, E. A.; Sievers, A.; Ungerechts, H.; and Walmsley, M. "The Millimeter Wavelength Emissivity in IC 5146." Astronomy and Astrophysics 329 (1998): L33.
- Krennrich, F.; Boyle, J.; Buckley, J. H.; Burdett, A. D.; Bussons-Gordo, J.; Catanese, M.; Carter-Lewis, D. A.; Cawley, M. F.; Fegan, D. J.; Finley, J.; Gaidos, J.; Hillas, A.

M.; Lamb, R. C.; Lessard, R.; McEnery, J.; Mohanty, G.; Quinn, J.; Rodgers, A. J.; Rose, H. J.; Samuelson, F.; Sembroski, G.; Srinivasan, R.; Weekes, T. C.; and Zweerink, J. "Derivation of Energy Spectra from Large Zenith Angle Observations." In *Proceedings of Workshop on "Towards a Large Atmospheric Cherenkov Detector-V*," ed. O. De Jager, p. 77. Kruger Park, South Africa: University of Porchefstroom, 1998.

- ———. "Hot AGN Results from the Whipple Observatory." In Proceedings of Workshop on "Towards a Large Atmospheric Cherenkov Detector-V," ed. O. De Jager, p. 32. Kruger Park, South Africa: University of Potchefstroom, 1998.
- Krishnamurthi, A.; Terndrup, D. M.; Pinsonneault, M. H.;
 Sellgren, K.; Stauffer, J. R.; Schild, R.; Backman, D. E.;
 Beisser, K. B.; Dahari, D. B.; Dasgupta, A.; Hagelgans, J. T.; Seeds, M. A.; Anand, R.; Laaksonen, B. D.; Marschall, L. A.; and Ramsayer, T. "New Rotation Periods in the Pleiades: Interpreting Activity Indicators." Astrophysical Journal 493 (1998): 914.
- Kurtz, M. J.; Eichhorn, G.; Accomazzi, A.; Grant, C. S.; and Murray, S. S. "Keeping Bibliographies Using ADS." In Astronomical Data Analysis and Software and Systems VII, Astronomical Society of the Pacific Conference Series, vol. 145, eds. R. Albrecht, R. N. Hook, and H. A. Bushouse, p. 478. San Francisco: Astronomical Society of the Pacific, 1998.
- Lane, A. P. "Submillimeter Transmission at South Pole." In Astrophysics from Antarctica, Astronomical Society of the Pacific Conference Series, vol. 141, eds. G. Novak and R. H. Landsberg, p. 289. San Francisco: Astronomical Society of the Pacific, 1998.
- Lang, M. J.; Buckley, J. H.; Carter-Lewis, D. A.; Catanese, M.; Cawley, M. F.; Colombo, E.; Connaughton, V.; Fegan, D. J.; Finley, J. P.; Gaidos, J. A.; Gillanders, G. H.; Hillas, A. M.; Kertzman, M. P.; Lessard, R. W.; Moriarty, P.; Quinn, J.; Rose, H. J.; Sembroski, G. H.; and Weekes, T. C. "A Search for TeV Emission from AE Aquirii." Astroparticle Physics 9 (1998): 203.
- Latham, D. W.; Mathieu, R. D.; and Milone, A. A. E. "The Spectroscopic Binary Population of M67." In Proceedings of the Third Pacific Rim Conference on Recent Development on Binary Star Research, Astronomical Society of the Pacific Conference Series, vol. 130, ed. K.-C. Leung, p. 113. San Francisco: Astronomical Society of the Pacific, 1997.
- Latham, D. W.; Stefanik, R. P.; Mazeh, T.; Goldberg, D.; Torres, D.; and Carney, B. W. "A Survey for Spectroscopic Binaries in a Large Proper-Motion Sample." In Cool Stars, Stellar Systems, and the Sun: Tenth Cambridge Workshop, Astronomical Society of the Pacific Conference Series, vol. 154, eds. R. A. Donahue and J. A. Bookbinder, p. 2129. San Francisco: Astronomical Society of the Pacific, 1998.
- Latham, D. W.; Stefanik, R. P.; Mazeh, T.; Torres, G.; and Carney, B. W. "Low-Mass Companions Found in a Large Radial-Velocity Survey." In Brown Dwarfs and Extrasolar Planets, Astronomical Society of the Pacific Conference Series, vol. 134, eds. R. Rebolo, E. L. Martin, and M. R. Zapatero

Osorio, p. 178. San Francisco: Astronomical Society of the Pacific, 1998.

Latham, D. W.; Torres, G.; Metcalfe, T. S.; and Mathieu, R. D. "CM Draconis and the Primordial Helium Abundance." In Proceedings of the Third Pacific Rim Conference on Recent Development on Binary Star Research, Astronomical Society of the Pacific Conference Series, vol. 130, ed. K.-C. Leung, p. 147. San Francisco: Astronomical Society of the Pacific, 1997.

Lazarian, A.; Goodman, A. A.; and Myers, P. C. "On the Efficiency of Grain Alignment in Dark Clouds." *Astrophysical Journal* 490 (1997): 273.

Lecar, M., and Franklin, F. "The Solar Nebula, Secular Resonances, Gas Drag, and the Asteroid Belt." *Icarus* 129 (1997): 134.

Leighly, K. M.; Mushotzky, R. F.; Nandra, K.; and Forster, K. "Evidence for Relativistic Outflows in Narrow-Line Seyfert I Galaxies." Astrophysical Journal (Letters) 489 (1997): L25.

Li, X.; Habbal, S. R.; Kohl, J.; and Noci, J. "The Effect of Temperature Anisotropy on Observations of Doppler Dimming and Pumping in the Inner Corona." Astrophysical Journal (Letters) 501 (1998): L133.

Linsky, J. L.; Wood, B. E.; Brown, A.; and Osten, R. A. "Dissecting Capella's Corona: GHRS Spectra of the Fe XXI 1354 and He II 1640 Lines from Each of the Capella Stars." Astrophysical Journal 492 (1998): 767.

Liu, X.-W.; Barlow, J. J.; Dalgarno, A.; Tennyson, J.; Lim, T.; Swinyard, B. M.; Cernicharo, J.; Cox, P.; Baluteau, J.-P.; Péquignot, D.; Nguyen-Q-Rieu; Emery, R. J.; and Clegg, P. E. "An ISO Long Wavelength Spectrometer Detection of CH in NGC 7027 and an HeH" Upper Limit." Monthly Notices of the Royal Astronomical Society 290 (1997): L71.

Lloyd-Hart, M.; Angel, J. R. P.; Groesbeck, T. D.; Martinez, T.; Jacobsen, B. P.; McLeod, B. A.; McCarthy, D. W.; Hooper, E. J.; Hege, E. K.; and Sandler, D. G. "First Astronomical Images Sharpened with Adaptive Optics Using a Sodium Laser Guide Star." Astrophysical Journal 493 (1998): 950.

Lloyd-Hart, M.; Angel, R.; Groesbeck, T.; McGuire, P.; Sandler, D.; McCarthy, D.; Martinez, T.; Jacobsen, B.; Roberts, T.; Hinz, P.; Ge, J.; McLeod, B.; Brusa, G.; Hege, K.; and Hooper, E. "Final Review of Adaptive Optics Results from the Pre-Conversion MMT." In *Adaptive Optics and Applications*, *SPIE Prazedings*, vol. 3126, eds. R. K. Tyson and R. Q. Fugate, p. 44. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1997.

Loeb, A. "Direct Measurement of Cosmological Parameters from the Cosmic Deceleration of Extragalactic Objects." *Astrophysical Journal (Letters)* 499 (1998): LIII.

Loeb, A., and Haiman, Z. "Signatures of Intergalactic Dust from the First Supernovae." Astrophysical Journal (Letters) 490 (1997): L571.

Loeb, A., and Perna, R. "Are HI Supershells the Remnants of Gamma-Ray Bursts?" *Astrophysical Journal (Letters)* 503 (1998): L35.

------. "Microlensing of Gamma-Ray Burst Afterglows." Astrophysical Journal (Letters) 495 (1998): 597.

Loeb, A., and Ulmer, A. "Optical Appearance of the Debris of a Star Disrupted by a Massive Black Hole." Astrophysical Journal 489 (1997): 573.

Lorenzini, E. C.; Cosmo, M. L.; Kaiser, M.; Bangham, M.; Dionne, H.; Vonderwell, D.; and Johnson, L. "Mission Analysis of a Tethered System for LEO to GEO Orbital Transfers." Advances in the Astronautical Sciences 99 (1998): 3.

Luhman, K. L.; Briceño, C.; Rieke, G. H.; and Hartmann, L. "A Young Star Near the Hydrogen-Burning Limit." Astrophysical Journal 493 (1998): 909.

Mackay, D. H.; Priest, E. R.; Gaizauskas, V.; and van Ballegooijen, A. A. "Role of Helicity in the Formation of Intermediate Filaments." *Solar Physics* 180 (1998): 299.

Mackie, G., and Fabbiano, G. "Evolution of Gas and Stars in the Merger Galaxy NGC 1316 (Fornax A)." Astronomical Journal 115 (1998): 514.

Madore, B.; Freedman, W.; Silbermann, N.; Harding, P.;
Huchra, J.; Mould, J.; Graham, J.; Ferrarese, L.; Gibson,
B.; Han, M.; Hoessel, J.; Hughes, S.; Illingworth, G.;
Phelps, R.; Sakai, S.; and Stetson, P. "A Cepheid Distance
to the Fornax Cluster and the Local Expansion Rate of the
Universe." Nature 395 (1998): 47.

Magnier, E. A.; Primini, F. A.; Prins, S.; Van Paradijs, J.; and Lewin, W. H. G. "ROSAT HRI Observations of M31

Supernova Remnants." Astrophysical Journal 490 (1997): 649. Mahdavi, A., and Kenyon, S. J. "The Bright Accretion Rings on Magnetic T Tauri Stars." Astrophysical Journal 497 (1998): 342.

Maldoni, M. M.; Smith, R. G.; Robinson, G.; and Rookyard, V. L. "A Study of the 2.5-25m Spectrum of H₂O Ice." *Monthly*

Notices of the Royal Astronomical Society 298 (1998): 251. Mao, P. H.; Harrison, F. A.; Platonov, Y. Y.; Broadway, D.; Degroot, B.; Christensen, F. E.; Craig, W. W.; and Hailey, C. J. "Development of Grazing Incidence Multilayer Mirrors for Hard X-Ray Focusing Telescopes." In *EUV*, X-Ray, and Gamma-Ray Instrumentation for Astronomy VIII, SPIE Proceedings, vol. 3114, eds. O. H. Siegmund and M. A. Gummin, p. 526. Bellingham, Washington: SPIE – The International Society for Optical Engineering, 1997.

Marcaide, J. M.; Alberdi, A.; Ros, E.; Diamond, P.; Shapiro, I.
I.; Guirado, J. C.; Jones, D. L.; Mantovani, F.; Pérez-Torres,
M. A.; Preston, R. A.; Schilizzi, R. T.; Trigilio, C.; and
Whitney, A. R. "Expansion of SN 1993J: New 6 and 13 cm
Images." Vistas in Astronomy 41 (1997): 185.

Mardones, D.; Myers, P. C.; Tafalla, M.; Wilner, D. J.; Bachiller, R.; and Garay, G. "A Search for Infall Motions Toward Nearby Young Stellar Objects." Astrophysical Journal 489 (1997): 719. ———. "A Statistical Study for Infall Motions in Nearby Young Stellar Objects." In Star Formation Near and Far: Seventh Astrophysics Conference, American Institute of Physics Conference Proceedings, vol. 393, eds. S. S. Holt and L. G. Mundy, p. 113. Woodbury, New York: American Institute of Physics, 1997.

- Marinescu, M., and Dalgarno, A. "Long-Range Diagonal Adiabatic Corrections for the Ground Molecular State of Alkali-Metal Dimers." *Physical Review A* 57 (1998): 1821.
- Markevitch, M. "The L X-T Relation and Temperature Function for Nearby Clusters Revisited." *Astrophysical Journal* 504 (1998): 27.
- Markevitch, M.; Forman, W. R.; Sarazin, C. L.; and Vikhlinin, A. "The Temperature Structure of 30 Nearby Clusters Observed with ASCA: Similarity of Temperature Profiles." *Astrophysical Journal* 503 (1998): 77.
- Markevitch, M., and Vikhlinin, A. "Dark Matter and Baryon Fraction at the Virial Radius in Abell 2256." Astrophysical Journal 491 (1997): 467.
- Marsden, B. G. "How the Asteroid Story Hit." Boston Sunday Globe (March 29) (1998): EI.
- Marsden, D.; Blanco, P. R.; Gruber, D. E.; Heindl, W. A.;
 Pelling, M. R.; Peterson, L. E.; Rothschild, R. E.; Rots, A. H.; Jahoda, K.; and Macomb, D. J. "The X-Ray Spectrum of the Plerionic System PSR B1509 58/MSH 15 -52."
 Astrophysical Journal (Letters) 491 (1997): L39.
- Marsden, B. G., and Green, D. W. E. (editors). IAU Circulars Nos. 6750-6801, 1997.

------. (editors). IAU Circulars Nos. 6802-7022, 1998.

- Marsden, B. G., and Williams G. V. (editors). Minor Planet Circulars Nos. 30713-31044, 1997.
- (editors). Minor Planet Circulars Nos. 31045-32560, 1998.
 "The NEO Confirmation Page." Planetary and Space Sciences 46 (1998): 299.
- Marshall, F. E.; Strohmayer, T.; Garcia, M. R.; McClintock, J. E.; Berlind, P.; Barton, E.; and Callanan, P. "XTE J2012+381." IAU Circular No. 6922 (1998): 2.
- Marshall, H. L.; Dewey, D.; Flanagan, K. A.; Baluta, C.;
 Canizares, C. R.; Davis, D. S.; Davis, J. E.; Fang, T. T.;
 Huenemoerder, D. P.; Kastner, J. H.; Schulz, N. S.; Wise,
 M. W.; Drake, J. J.; Juda, J. Z.; Juda, M.; Brinkman, A. C.;
 Gunsing, C. J.; Kaastra, J. S.; Hartner, G. D.; and Predehl,
 P. "Toward the Calibration of the HETGS Line Response
 Function." In *Grazing Incidence and Multilayer X-Ray Optical*Systems, SPIE Proceedings, vol. 3113, eds. R. B. Hoover and A.
 B. Walker, II, p. 181. Bellingham, Washington: SPIE—
 The International Society for Optical Engineering, 1997.
- Marvin, U. B. "The Shower of Stones at Siena, 1794: History's Most Consequential Meteorite Fall." In Proceedings of the XXth INHIGEO Symposium, Nicoleta Morello, ed. N. Morello, p. 303. Genova: Brigati, 1998.
- Mathur, S.; Wilkes, B.; and Elvis, M. "Discovery of Associated Absorption Lines in an X-Ray Warm Absorber: Hubble Space Telescope Observations of PG 1114+445." Astrophysical Journal (Letters) 503 (1998): L23.

- Mauche, C. W., and Raymond, J. C. 'The Winds of Cataclysmic Variables.' In *Cosmic Winds and the Heliosphere*, eds. J. R. Jokipii, C. P. Sonett, and M. S. Giampapa, p. 111. Tucson: University of Arizona Press, 1997.
- Mazeh, T.; Goldberg, D.; and Latham, D. W. "On the Secondary Mass Distribution of Spectroscopic Binaries." In Brown Dwarfs and Extrasolar Planets, Astronomical Society of the Pacific Conference Series, vol. 134, eds. R. Rebolo, E. L. Martin, and M. R. Zapatero Osorio, p. 188. San Francisco: Astronomical Society of the Pacific, 1998.
- McCarthy, M. C.; Grabow, J. U.; Travers, M. J.; Chen, W.; Gottlieb, C. A.; and Thaddeus, P. "Laboratory Detection of the Carbon Chains HC₁₇N and HC₁₇N." Astrophysical
- Journal (Letters) 494 (1997): L231. McCarthy, M. C.; Travers, M. J.; Chen, W.; Gottlieb, C. A.; and Thaddeus, P. "Laboratory Detection of the Carbon Ring-Chain
- C₉H₂." Astrophysical Journal (Letters) 498 (1998): L89. McCarthy, M. C.; Travers, M. J.; Kovács, A.; Gottlieb, C. A.; and Thaddeus, P. "Eight New Carbon Chain Molecules."
- Astrophysical Journal Supplemental Series 113 (1997): 105. McClintock, J. E. "Probing Strong Gravitational Fields in X-Ray Novae." In Accretion Processes in Astrophysical Systems: Some Like it Hot!, American Institute of Physics Conference Proceedings, vol 431, eds. S. S. Holt and T. R. Kallman, p. 290. Woodbury, New York: American Institute of Physics, 1998.
- McLeod, B. A. "NICRED: Reduction of NICMOS MULTIACCUM Data with IRAF." In 1997 HST Calibration Workshop, eds. S. Casertano, R. Jedrzejewski, C. D. Tony, and M. Stevens, p. 281. Baltimore, Maryland: Space Telescope Science Institute, 1997.
- McLeod, B. A.; Bernstein, G. M.; Rieke, M. J.; and
 Weedman, D. W. "The Gravitational Lens MG0414+0434:
 A Link Between Red Galaxies and Dust." Astronomical Journal 115 (1998): 1377.
- Meehan, G. R.; Murray, S. S.; Zombeck, M. V.; Kraft, R. P.;
 Kobayashi, K.; Chappell, J. H.; Kenter, A. T.; Barbera, M.;
 Collura, A.; and Serio, S. "Calibration of the UV/Ion
 Shields for the AXAF High-Resolution Camera." In EUV,
 X-Ray, and Gamma-Ray Instrumentation for Astronomy VIII,
 SPIE Proceedings, vol. 3114, eds. O. H. Siegmund and M. A.
 Gummin, p. 74. Bellingham, Washington: SPIE The
 International Society for Optical Engineering, 1997.
- Melnick, G. J. "The Submillimeter Wave Astronomy Satellite —Science Objectives and Instrument Description." In Advanced Technology Millimeter Wave, Radio, and Terabertz Telescopes, SPIE Proceedings, vol. 3357, ed. T. G. Phillips, p. 348. Bellingham, Washington: SPIE - The International Society for Optical Engineering, 1998.
- Meyer, A. W.; Smith, R. G.; Charnley, S. B.; and Pendleton, Y. J. "H₂O Ice in the Envelopes of OH/IR Stars." *Astronomical Journal* 115 (1998): 2509.

Millan-Gabet, R.; Schloerb, F. P.; and Traub, W. A. "Recent Results from the IOTA NICMOS3 Fringe Detector." In Astronomical Interferometry, SPIE Proceedings, vol. 3350, ed. R. D. Reasenberg, p. 432. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1998.

Mochejska, B. J.; Kaluzny, J.; Krockenberger, M.; Sasselov, D. D.; and Stanek, K. Z. "Identification and Photometry of Globular Clusters in M31 and M33 Galaxies." Acta Astronomica 48 (1998): 455.

Mohanty, G.; Hillas, A. M.; West, M.; Biller, S.; Carter-Lewis, D. A.; Lamb, R. C.; Zweerink, J.; Fegan, D. J.; and Weekes, T. C. "Measurement of TeV Gamma-Ray Spectra with the Cherenkov Imaging Technique." *Astroparticle Physics* 9 (1998): 15.

Molendi, S.; Matt, G.; Antonelli, L. A.; Fiore, F.; Fusco-Ferniano, R.; Kaastra, J.; Maccarone, C.; and Perola, C. "How Abundant Is Iron in the Core of the Perseus Cluster?" *Astrophysical Journal* 499 (1998): 608.

Molnar, S. M., and Birkinshaw, M. "Search for Intrasupercluster Gas in the Shapley Supercluster." Astrophysical Journal 497 (1998):1.

Montes, D.; Saar, S. H.; Collier-Cameron, A.; and Unruh, Y. C. "A Strong Flare in the K Dwarf IQ Hya." In Cool Stars, Stellar Systems, and the Sun: Tenth Cambridge Workshop, Astronomical Society of the Pacific Conference Series, vol. 154, eds. R. A. Donahue and J. A. Bookbinder, p. 1508. San Francisco: Astronomical Society of the Pacific, 1998.

Morgan, I.; Smith, R. M.; and Phillipps, S. "The Luminosity Function Around Isolated Spiral Galaxies." Monthly Notices of the Royal Astronomical Society 295 (1998): 99.

Mould, J.; Han, M.; Sterson, P.; Gibson, B.; Graham, J.; Huchra, J.; Madore, B.; and Rawson, D. "The Age of the Large Magellanic Cloud Cluster NGC1651." Astrophysical Journal (Letters) 483 (1997): L41.

Murray, N.; Hansen, B.; Holman, M.; and Tremaine, S. "Migrating Planets." *Science* 279 (1998): 69.

Murray, S. S.; Chappell, J. H.; Kenter, A. T.; Kobayashi, K.; Kraft, R. P.; Meehan, G. R.; Zombeck, M. V.; Fraser, G. W.; Pearson, J. F.; Lees, J. E.; Brunton, A. N.; Pearce, S. E.;

Barbera, M.; Collura, A.; and Serio, S. "AXAF High-Resolution Camera (HRC): Calibration and Recalibration at XRCF and Beyond." In EUV, X-Ray, and Gamma-Ray Instrumentation for Astronomy VIII, SPIE Proceedings, vol. 3114, eds. O. H. Siegmund and M. A. Gummin, p. II. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1997.

Muzerolle, J.; Calver, N.; and Hartmann, L. "Magnetospheric Accretion Models for the Hydrogen Emission Lines of T Tauri Stars." Astrophysical Journal 492 (1998): 743.

Muzerolle, J.; Hartmann, L.; and Calver, N. "Emission Line Diagnostics of T Tauri Magnetospheric Accretion. I. Line Profile Observations." *Astronomical Journal* 116 (1998): 455.

Myers, P. C. "Cluster-Forming Molecular Cloud Cores." Astrophysical Journal 496 (1998): 109.

Myers, P. C.; Adams, F. C.; Chen, H.; and Schaff, E. "Evolution of the Bolometric Temperature and Luminosity of Young Stellar Objects." Astrophysical Journal 492 (1998): 703.

Myers, P. C., and Mardones, D. "Young Protostars and Inward Motions in Low-Mass Dense Cores." In Star Formation with the Infrared Space Observatory, Astronomical Society of the Pacific Conference Series, vol. 132, eds. J. Yun and R. Liseau, p. 173. San Francisco: Astronomical Society of the Pacific, 1998.

Naraschewski, M., and Stamper-Kurn, D. M. "Analytical Description of a Trapped Semi-Ideal Bose Gas at Finite Temperature." *Physical Review A (Atomic, Molecular, and Optical Physics)* 58(3) (1998): 2423.

Narayan, R.; Mahadevan, R.; Grindlay, J. E.; Popham, R. G.; and Gammie, C.

"Advection-Dominated Accretion Model of Sagittarius A*: Evidence for a Black Hole at the Galactic Center." Astrophysical Journal 492 (1998): 554.

Narita, T.; Oegelman, H.; and Gouiffes, C. "Minutes Timescale Search for a Pulsar in SNR 1987 A." Astronomy and Astrophysics 326 (1997): 1066.

Neufeld, D. A.; Chen, W.; Melnick, G. J.; de Graauw, T.; Feuchtgruber, H.; Haser, L.; Lutz, D.; and Harwit, M. "Detection of Thermal Water Vapour Emission from W Hydrae." In *Molecules in Astrophysics: Probes and Processes*, *Proceedings of IAU Symposium No. 178*, ed. E. van Dishoeck, p. 385. Dordrecht: Kluwer Academic Publishers, 1997.

Neufeld, D. A.; Melnick, G. J.; and Harwit, M. "ISO Observations of Molecular Hydrogen in HH54: Measurements of a Non-Equilibrium Ortho- to Para-H2 Ratio." Astrophysical Journal (Letters) 506 (1998): L75.

Neuhäuser, R.; Frink, S.; Torres, G.; Sterzik, M. F.; Röser, S.; and Randich, S. "Kinematics of Lithium-Rich Stars South of Taurus." In Cool Stars, Stellar Systems, and the Sun: Tenth Cambridge Workshop, Astronomical Society of the Pacific Conference Series, vol. 154, eds. R. A. Donahue and J. A. Bookbinder, p. 1748. San Francisco: Astronomical Society of the Pacific, 1998.

Neuhäuser, R.; Torres, G.; Frink, S.; Covino, E.; and Alcala, J. M. "P1724 and RXJ0511.2+1031 - Run-Away T Tauri Stars?" In Cool Stars in Clusters and Associations: Magnetic Activity and Age Indicators, Memorie della Societa Astronomica Italiana, vol. 68, eds. G. Micela, R. Pallavicini, and S. Sciortino, p. 1061. Firenze: Societa Astronomica Italiana, 1998.

Neuhaeuser, R.; Wolk, S. J.; Torres, G.; Preibisch, T.; Stout-Batalha, N. M.; Hatzes, A. P.; Frink, S.; Wichmann, R.; Covino, E.; Alcala, J. M.; Brandner, W.; Walter, F. M.; Sterzik, M. F.; and Koehler, R. "Optical and X-Ray Monitoring, Doppler Imaging, and Space Motion of the Young Star Par 1724 in Orion." Astronomy and Astrophysics 334 (1998): 873.

Nicastro, F.; Elvis, M.; and Fiore, F. "X-Ray Color Selected Warm Absorbers."

Astronomische Nachrichten 319 (1998): 30.

Noci, G.; Kohl, J. L.; Antonucci, E.; Tondello, G.; Huber, M. C. E.; Fineschi, S.; Gardner, L. D.; Korendyke, C. M.;

Nicolosi, P.; Romoli, M.; Spadaro, D.; Maccari, L.; Raymond, J. C.; Siegmund, O. H. W.; Benna, C.; Ciaravella, A.; Giordano, S.; Michels, J.; Modigliani, A.; Naletto, G.; Panasyuk, A.; Pernechele, C.; Poletto, G.; Smith, P. L.; and Strachan, L. "The Quiescent Corona and Slow Solar Wind." In *Fifth SOHO Workshop: The Corona and Solar Wind Near Minimum Activity, ESA SP-404*, p. 75. Paris: ESA Publications Division, 1997.

- Nordström, B.; Stefanik, R. P.; Latham, D. W.; and Andersen, J. "Radial Velocities, Rotations, and Duplicity of a Sample of Early F-Type Dwarfs." Astronomy and Astrophysics Supplement 126 (1997): 21.
- Ofman, L.; Romoli, M.; Poletto, G.; Noci, G.; and Kohl, J. L. "Ultraviolet Coronagraph Spectrometer Observations of Density Fluctuations in the Solar Wind." *Astrophysical Journal (Letters)* 491 (1997): LIII.
- Olive, J. F.; Barret, D.; Boirin, L.; Grindlay, J. E.; Swank, J. H.; and Smale, A. P. "RXTE Observation of the X-Ray Burster 1E 1724-3045. I. Timing Study of the Persistent X-Ray Emission with the PCA." Astronomy and Astrophysics 333 (1998): 942.
- O'Neal, D.; Saar, S. M.; and Neff, J. E. "Spectroscopic Evidence for Nonuniform Starspot Properties on II Pegasi." Astrophysical Journal (Letters) 501 (1998): L73.
- Oppenheimer, B. D.; Kenyon, S. J.; and Mattei, J. A. "An Analysis of AAVSO Observations of Z Camelopardalis." *Astronomical Journal* 115 (1998): 1175.
- Orosz, J. A.; Jain, R. K.; Bailyn, C. D.; McClintock, J. E.; and Remillard, R. A. "Orbital Parameters for the Soft X-Ray Transient 4U 1543-47: Evidence for a Black Hole." *Astrophysical Journal* 499 (1998): 375.

Osten, R. A., and Saar, S. H. "Physical Properties of Active Stars and Stellar Systems." *Monthly Notices of the Royal Astronomical Society* 295 (1998): 257.

Owens, A.; Parmar, A. N.; Oosterbroek, T.; Orr, A.;
Antonelli, L. A.; Fiore, F.; Schultz, R.; Tozzi, G. P.;
Maccarone, M. C.; and Piro, L. "Evidence for Dust-Related
X-Ray Emission from Cornet C/1995 OI (Hale-Bopp)."
Astrophysical Journal (Letters) 493 (1998): L47.

Owocki, S. P.; Gayley, K. G.; and Cranmer, S. R. "Effect of Gravity Darkening on Radiatively Driven Mass Loss from Rapidly Rotating Hot-Stars." In Properties of Hot Luminous Stars, Second Boulder-Munich Workshop, Astronomical Society of the Pacific Conference Series, vol. 131, ed. I. D. Howarth, p. 237. San Francisco: Astronomical Society of the Pacific, 1998.

Paczynski, B., and Stanek, K. Z. "Galactocentric Distance With the OGLE and Hipparcos Red Clump Stars." *Astrophysical Journal (Letters)* 494 (1998): L219.

Patnaude, D.; Pease, D.; Donnelly, R. H.; Juda, M.; Jones, C.; Murray, S.; Zombeck, M.; Kraft, R.; Kenter, A.; Meehan, G.; Elsner, R.; and Swartz, D. "Effective Area of the AXAF High Resolution Camera (HRC)." In X-Ray Optics, Instruments and Missions, SPIE Proceedings, vol. 3444, eds. R. B. Hoover and A. B. Walker, II, p. 93. Bellingham, Washington: SPIE - The International Society for Optical Engineering, 1998.

Pelt, J.; Hjorth, J.; Refsdal, S.; Schild, R.; and Stabell, R. "Estimation of Multiple Time Delays in Complex Gravitational Lens Systems." Astronomy and Astrophysics 337 (1998): 681.

Pelt, J.; Schild, R.; Refsdal, S.; and Stabell, R. "Microlensing on Different Timescales in the Lightcurves of QSO 0957+561 A,B." Astronomy and Astrophysics 336 (1998): 829.

- Peres, G.; Ciaravella, A.; Berta, R.; Orlando, S.; Reale, F.; Kohl, J. L.; Noci, G.; Fineschi, S.; Romoli, M.; Brekke, P.; Fludra, A.; Gurman, J. B.; Lemaire, P.; and Schule, U. "SOHO Observations of the North Pole Wind." In *Fifth* SOHO Workshop: The Corona and Solar Wind Near Minimum Activity, ESA SP-404, p. 587. Paris: ESA Publications Division, 1997.
- Perna, R., and Loeb, A. "Identifying the Environment and Redshift of GRB Afterglows from the Time-Dependence of Their Absorption Spectra." *Astrophysical Journal* 501 (1998): 467.
 - . "Microlensing of Quasars by Stars Within Their Damped Ly Absorbers." *Astrophysical Journal* 489 (1997): 489.
- . "X-Ray Absorption by the Hot Intergalactic Medium." *Astrophysical Journal (Letters)* 503 (1998): L135.
- Perna, R.; Loeb, A.; and Bartelmann, M. "Effects of Dust on Gravitational Lensing by Spiral Galaxies." Astrophysical Journal 488 (1997): 550.

Perrin, G.; Coude du Foresto, V.; Ridgway, S. T.; Mariotti, J.-M.; Traub, W. A.; Carleton, N. P.; and Lacasse, M. G. "Extension of the Effective Temperature Scale of Giants to Types Later than M6." Astronomy and Astrophysics 331 (1998): 619.

Peraev, M. I., and Wood, J. A. "The CWPI Model of Nebular Condensation: Effects of Pressure on the Condensation Sequence." *Meteoritics and Planetary Sciences* 33 (1998): A122.

. "Mineral Equilibrium in Fractionated Nebular Systems. II. A New code Embracing 18 Elements." In *Lunar* and Planetary Science XXIX, #1474. Houston, Texas: Lunar and Planetary Institute, 1998.

- Phillips, J. D., and Reasenberg, R. D. "Optical System for an Astrometric Survey from Space." In *Space Telescope and Instruments V, SPIE Proceedings*, vol. 3356, eds. P. Y. Bely and J. B. Breckinridge, p. 832. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1998.
- Pian, E.; Vacanti, G.; Tagliaferri, G.; Ghisellini, G.; Maraschi,
 L.; Treves, A.; Urry, M.; Fiore, F.; Giommi, P.; Palazzi, E.;
 Chiappetti, L.; and Sambruna, R. M. "BeppoSAX
 Observations of Unprecedented Synchrotron Activity in the
 BL Lacertae Object Markarian 501." Astrophysical Journal (Letters) 492 (1998): L17.

Pilla, R., and Loeb, A. "Emission Spectra from Internal Shocks in Gamma-Ray-Burst Sources." Astrophysical Journal (Letters) 494 (1998): L167.

- Pinsoneault, M. H.; Stauffer, J.; Soderblom, D. R.; King, J. R.; and Hanson, R. B. "The Problem of Hipparcos Distances to Open Clusters. I. Constraints from Multicolor Main-Sequence Fitting." Astrophysical Journal 504 (1998): 170.
- Piro, L.; Soffitta, P.; Butler, R. C.; Antonelli, L. A.; Fiore, F.; Capalbi, M.; Tesseri, A.; Torroni, V.; and De Libero, C. "GRB 971227." IAU Circular No. 6797 (1997): 1.

Porro, I. L.; Traub, W. A.; and Carleton, N. P. "Importance of Telescope Alignment for the Performance of a Stellar Interferometer." In Astronomical Interferometry, SPIE Proceedings, vol. 3350, ed. R. D. Reasenberg, p. 414. Bellingham, Washington: SPIE - The International Society for Optical Engineering, 1998.

Posmentier, E. S.; Soon, W. H.; and Baliunas, S. L. "Relative Impacts of Solar Irradiance Variations and Greenhouse Changes on Climate 1880-1993." In *Global Warming: The Continuing Debate*, ed. R. Bate, p. 159. Cambridge, England: European Science and Environment Forum, 1997.

Pravec, P.; Wolf, M.; Sarounova, L.; Mottola, S.; Erickson, A.; Hahn, G.; Harris, A. W.; and Young, J. W. "The Near-Earth Objects Follow-Up Program." *Icarus* 130 (1997): 275.

Predehl, P.; Braeuninger, H. W.; Brinkman, A. C.; Dewey, D.; Drake, J. J.; Flanagan, K. A.; Gunsing, T.; Hartner, G. D.; Juda, J. Z.; Juda, M.; Kaastra, J. S.; Marshall, H. L.; and Swartz, D. A. "X-Ray Calibration of the AXAF Low Energy Transmission Grating Spectrometer: Effective Area." In *Grazing Incidence and Multilayer X-Ray Optical* Systems, SPIE Proceedings, vol. 313, eds. R. B. Hoover and A. B. Walker, II, p. 172. Bellingham, Washington: SPIE— The International Society for Optical Engineering, 1997.

Press, W. H., and Rybicki, G. B. "Desperately Seeking Non-Gaussianity: The Light Curve of 9057+561." In Astronomical Time Series, Proceedings of the Wise Observatory 29th Anniversary Symposium, eds. D. Maoz, A. Sternberg, and E. M. Leibowitz, p. 61. Dordrecht: Kluwer Academic Publishers, 1997. Press, W. H., and Teukolsky, S. A. "Numerical Recipes: Does This Paradigm Have a Future?" *Computers in Physics* 11 (1997): 416.

Proga, D.; Kenyon, S. J.; and Raymond, J. "Illumination in Symbiotic Binary Stars: NLTE Photoionization Models. II. Wind Case." Astrophysical Journal 501 (1998) 339.

Protheroe, R. J.; Weekes, T. C.; Lorenz, E.; Fluery, P.;
Teshima, M.; and Bhat, C. L. "Very High Energy Gamma Rays from Markarian 501." In *Proceedings of the 25th International Cosmic Ray Conference*, vol. 8, eds. M. S.
Potgieter, C. Raubenheimer, and D. J. van der Walt, p. 317. Durban, South Africa: Potchefstroom University Publishers, 1997.

Puchnarewicz, E. M.; Mason, K. O.; and Siemiginowska, A. "The Ultraviolet Spectrum of the Narrow-Line Seyfert I Galaxy RE J1034+396." Monthly Notices of the Royal Astronomical Society 293 (1998): L52.

Rampazzo, R.; Covino, S.; Trinchieri, G.; and Reduzzi, L. "Testing the Physical Reality of Binaries and Compact Groups. Properties of Early-Type Galaxies in Groups with Diffuse X-Ray Emission." Astronomy and Astrophysics 330 (1998): 423.

- Ratner, M. I.; Lebach, D. E.; Shapiro, I. I.; Bartel, N.;
 Bietenholz, M. F.; Ransom, R. R.; and Lestrade, J.-F.
 "Progress in VLBI Stellar Astrometry for the NASA/Stanford Relativity Mission (Gravity Probe B)." In Radio Emission from Galactic and Extragalactic Compact Sources, Proceedings of IAU Colloquium No. 164, Astronomical Society of the Pacific Conference Series, vol. 144, eds. J. A.
 Zensus, G. B. Taylor, and J. M. Wrobel, p. 385. San Francisco: Astronomical Society of the Pacific, 1998.
- Rawson, D.; Mould, J.; Macri, L; Huchra, J.; Kennicutt, R.;
 Freedman, W.; Hill, R.; Phelps, R.; Hughes, S.; Madore,
 B.; Silberman, N.; Sakai, S.; Ferrarese, L.; Ford, H.;
 Illingworth, G.; Kelson, D.; Graham, J.; Hoessel, J.; Han,
 M.; Turner, A.; Harding, P.; Bresolin, F.; Saha, A.; and
 Stetson, P. "The HST Key Project on the Extragalactic
 Distance Scale VIII. The Discovery of Cepheids and a New
 Distance to NGC3621 Using the Hubble Space Telescope."
 Astrophysical Journal 490 (1997): 517.

Raymond, J. C.; Blair, W. P.; and Long, K. S. "Hopkins Ultraviolet Telescope Observations of H₂ Emission from HH2." *Astrophysical Journal* 489 (1997): 314.

Raymond, J. C.; Fineschi, S.; Smith, P. L.; Gardner, L,.;
O'Neal, R.; Ciaravella, A.; Kohl, J. L.; Marsden, B.;
Williams, G. V.; Benna, C.; Giordano, S.; Noci, G.; and
Jewitt, D. "Solar Wind at 6.8 Solar Radii from UVCS
Observation of Comet C/1996Y1." Astrophysical Journal 508 (1998): 410.

Raymond, J. C.; Kohl, J. L.; Noci, G.; Antonucci, E.;
Tondello, G.; Huber, M. C. E.; Gardner, L. D.; Nicolosi, P.;
Fineschi, S.; Romoli, M.; Spadaro, D.; Siegmund, O. H.
W.; Benna, C.; Ciaravella, A.; Cranmer, S.; Giordano, S.;
Karovska, M.; Martin, R.; Michels, J.; Modigliani, A.;
Naletto, G.; Panasyuk, A.; Pernechele, C.; Poletto, G.;

Smith, P. L.; Suleiman, R. M.; and Strachan, L. "Composition of Coronal Streamers from the SOHO

Ultraviolet Coronagraph Spectrometer." Solar Physics 175 (1997): 645.

- Raymond, J.; Suleiman, R.; van Ballegooijen, A.; and Kohl, J. "Absolute Abundances in Streamers from UVCS." In Proceedings of the 31th ESLAB Symposium on Correlated Phenomena at the Sun, in the Heliosphere and in Geospace, ESA SP-415, p. 383. Noordwijk, The Netherlands: ESTEC, 1997.
- Reasenberg, R. D., and Phillips, J. D. "Design of a Spaceborne Astrometric Survey Instrument." In Space Telescope and Instruments V, SPIE Proceedings, vol. 3356, eds. P. Y. Bely and J. B. Breckinridge, p. 622. Bellingham, Washington: SPIE - The International Society for Optical Engineering, 1998.
- Reid, M. J. "Shedding Light on Black Holes." Science 2810 (1998): 1815.

Reid, M. J., and Menten, K. M. "Shocks in the Radio Photospheres of Long Period Variable Stars." Astrophysics and Space Science 251 (1997): 41.

Reid, M. J.; Readhead, A. C. S.; Vermeulen, R.; and Treuhaft, R. "Progress Toward a Trigonometric Parallax of Sgr A*." In *The Central Regions of the Galaxy and Galaxies, Proceedings* of IAU Symposium No. 184, ed. Y. Sofue, p. 222. Dordrecht: Kluwer Academic Publishers, 1998.

Remillard, R.; Morgan, E.; McClintock, J.; and Sobczak, G. "XTE J1550-564."

IAU Circular No. 7019 (1998): 1.

- Riess, A. G.; Davis, M.; Baker, J.; and Kirshner, R. P. "The Velocity Field from Type Ia Supernovae Matches the Gravity Field from Galaxy Surveys." Astrophysical Journal (Letters) 488 (1997): Lt.
- Riess, A. G.; Filippenko, A. V.; Challis, P; Clocchiatti, A.; Diercks, A.; Garnavich, P. M.; Gilliland, R. L.; Hogan, C. J.; Jha, S.; Kirshner, R. P; Leibundgur, B.; Phillips, M.
- M.; Reiss, D.; Schmidt, B. P.; Schommer, R. A.; Smith, R. C.; Spyromilio, J.; Stubbs, C.; Suntzeff, N. B.; and Tonry, J. "Observational Evidence from Supernovae for an Accelerating Universe and a Cosmological Constant." *Astronomical Journal* 116 (1998): 1009.

Riess, A. G.; Filippenko, A. V.; Leonard, D. C.; Schmidt, B.
P.; Suntzeff, N.; Phillips, M. M.; Schommer, R.;
Clocchiatti, A.; Kirshner, R. P.; Garnavich, P.; Challis, P.;
Leibundgut, B.; Spyromilio, J.; and Smith, R. C. "Time
Dilation from Spectral Feature Age Measurements of Type
Ia Supernovae." Astronomical Journal 114 (1997): 722.

Roll, J. B. Jr.; Fabricant, D. G.; and McLeod, B. A. "Targeting and Sequencing Algorithms for the Hectospec's Robotic Optical Fiber Positioner." In *Optical Astronomical Instrumentation, SPIE Proceedings*, vol. 3355, ed. S. D'Odorico, p. 324. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1998.

Romaine, S. E.; Everett, J. E.; Bruni, R. J.; Ivan, A.; and Gorenstein, P. "Characterization and Multilayer Coating of Cylindrical X-Ray Optics for X-Ray Astronomy." In X-Ray Optics, Instruments, and Missions, SPIE Proceedings, vol. 3444, eds. R. B. Hoover and A. B. C. Walker, II, p. 552. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1998.

- Romaine, S. E.; Everett, J. E.; Bruni, R. J.; Ivan, A.;
 Gorenstein, P.; Ghigo, M.; Mazzoleni, F.; Citterio, O.; and Pedulla, J. "Progress in Replication of Substrates for Multilayer Coatings." In X-Ray Optics, Instruments, and Missions, SPIE Proceedings, vol. 3444, eds. R. B. Hoover and A.
 B. C. Walker, II, p. 564. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1998.
- Romaine, S. E.; Hussain, A. M.; Everett, J.; Clark, A. M.; Bruni, R. J.; Gorenstein, P.; Ghigo, M.; Mazzoleni, F.; Citterio, O.; and Pedulla, J. "Application of Multilayer Coatings to Replicated Substrates." In *Grazing Incidence and Multilayer X-Ray Optical Systems, SPIE Proceedings*, vol. 3113, eds. R. B. Hoover and A. B. Walker, II, p. 253. Bellingham, Washington: SPIE - The International Society for Optical Engineering, 1997.
- Romoli, M.; Benna, C.; Cranmer, S. R.; Fineschi, S.; Gardner, L. D.; Strachan, L.; Kohl, J. L.; and Noci, G. "K-Corona Polarized Brightness and Electron Density Measured with the Visible Light Polarimeter of UVCS." In *The Corona and Solar Wind near Minimum Activity*, *Fifth SOHO Workshop*, *ESA SP-404*, p. 633. Paris: ESA Publications Division, 1997.
- Romoli, M.; Biesecker, D.; Benna, C.; Fineschi, S.; Lamy, P. L.; Liebaria, A.; Kohl, J. L.; and Noci, G. "Intercomparison Between UVCS/WLC and LASCO/C2 Measured Polarized Brightness." In *Fiftb SOHO Workshop: The Corona and Solar Wind Near Minimum Activity, ESA SP-404*, p. 637. Paris: ESA Publications Division, 1997.
- Ros, E.; Marcaide, J. M.; Guirado, J. C.; Ratner, M. I.;
 Shapiro, I. I.; Krichbaum, T. P.; Witzel, A.; and Preston, R. A. "High Precision Astrometry with Closure Constraints." In *Radio Emission from Galactic and Extragalactic Compact Sources, Proceedings of IAU Colloquium No. 164*, vol. 144, eds. J. A. Zensus, G. B. Taylor, and J. M. Wrobel, p. 389. San Francisco: Astronomical Society of the Pacific, 1998.
- Rots, A. H.; Jahoda, K.; Macomb, D. J.; Kawai, N.; Saito, Y.; Kaspi, V. M.; Lyne, A. G.; Manchester, R. N.; Backer, D. C.; Somer, A. L.; Marsden, D.; and Rothschild, R. E. "Rossi X-Ray Timing Explorer Absolute Timing Results for the Pulsars B1821-24 and B1509-58." *Astrophysical Journal* 501 (1998): 749.
- Rovero, A. C.; Colombo, E.; Harris, K.; Kertzman, M.; Sahade, J.; Sembroski, G.; and Weekes, T. C. "The Galactic Center at TeV Energies: Observations from a Southern Hemisphere Experiment." In *Proceedings of Workshop on* "Towards a Large Atmospheric Cherenkov Detector-V," ed. O. De Jager, p. 142. Kruger Park, South Africa: University of Potchefstroom, 1998.
- Rudiger, G.; Rekowski, B. V.; Donahue, R. A.; and Baliunas, S. L. "Differential Rotation and Meridional Flow for Fast-Rotating Solar-Type Stars." *Astrophysical Journal* 494 (1998): 691.

Saar, S. H. "Non-Radiative Heating in 'Flat Activity' Stars." In Cool Stars, Stellar Systems, and the Sun: Tenth Cambridge Workshop, Astronomical Society of the Pacific Conference Series, vol. 154, eds. R. A. Donahue and J. A. Bookbinder, p. 211. San Francisco: Astronomical Society of the Pacific, 1998.
———. "PZ Mon—An Active Evolved Star." Information

Bulletin on Variable Stars 4580 (1998): 1.

- Saar, S. H., and Bookbinder, J. A. "Eclipse Mapping the Chromosphere of the M4Ve Binary CM Dra: First Results." In Cool Stars, Stellar Systems, and the Sun: Tenth Cambridge Workshop, Astronomical Society of the Pacific Conference Series, vol. 154, eds. R. A. Donahue and J. A. Bookbinder, p. 2042. San Francisco: Astronomical Society of the Pacific, 1998.
- ———. "The Contribution of Flares to Transition Region Heating in Active G and K Dwarfs." In *Cool Stars, Stellar Systems, and the Sun: Tenth Cambridge Workshop, Astronomical Society of the Pacific Conference Series*, vol. 154, eds. R. A. Donahue and J. A. Bookbinder, p. 1560. San Francisco: Astronomical Society of the Pacific, 1998.
- Saar, S. H.; Butler, R. P.; and Marcy, G. W. "Further Evidence for Activity-Related Radial Velocity Variations in Cool Stars." In Cool Stars, Stellar Systems, and the Sun: Tenth Cambridge Workshop, Astronomical Society of the Pacific Conference Series, vol. 154, eds. R. A. Donahue and J. A. Bookbinder, p. 1895. San Francisco: Astronomical Society of the Pacific, 1998.

-----. "Magnetic Activity-Related Radial Velocity Variations in Cool Stars: First Results from the Lick Extrasolar Planet Survey." Astrophysical Journal (Letters) 498 (1998): L153.

- Saar, S. H.; Huovelin, J.; Osten, R. A.; and Shcherbakov, A. G. "HeI D3 Absorption and Its Relation to Rotation and Activity in G and K Dwarfs." Astronomy and Astrophysics 326 (1997): 741.
- Samuelson, F. W.; Biller, S. D.; Bond, I. H.; Boyle, P. J.;
 Bradbury, S. M.; Breslin, A. C.; Buckley, J. H.; Burdett, A. M.; Bussons Gordo, J.; Carter-Lewis, D. A.; Catanese, M.;
 Cawley, M. F.; Fegan, D. J.; Finley, J. P.; Gaidos, J. A.;
 Hall, T.; Hillas, A. M.; Krennrich, F.; Lamb, R. C.; Lessard,
 R.; Masterson, C.; McEnery, J. E.; Quinn, J.; Rodgers, A. J.;
 Rose, H. J.; Sembroski, G. H.; Srinivasan, R.; Vassiliev, V. V.;
 Weekes, T. C.; and Zweerink, J. "The TeV Spectrum of Markarian 501." Astrophysical Journal (Letters) 501 (1998): L17.
- Sanders, W. T.; Boldt, E. A.; Brickhouse, N. S.; Cox, D. P., Edgar, R. J.; Jahoda, K.; Kallman, T.; Kelley, R. L.; Liedahl, D. A.; McCammon, D.; Mushotzky, R. F.; Paulos, R. J.; Raymond, J. C.; Shelton, R. L.; Smith, R. K.; Snowden, S. L.; Stahle, C. K.; Szymkowiak, A. E.; and White, N. E. "XBSS—The X-Ray Background Spectroscopic Survey." Astronomische Nachrichten 319 (1998): 151.
- Sanders, W. T.; Cox, D. P.; McCammon, D.; Paulos, R. J.; Brickhouse, N. S.; Edgar, R. J.; Raymond, J. C.; Liedahl, D. A.; Boldt, E. A.; Jahoda, K.; Kaliman, T. R.; Kelley, R. L.; Mushotzky, R. F.; Porter, F. S.; Shelton, R. L.; Smith, R. K.; Snowden, S. L.; Stahle, C. K.; Szymkowiak, A. E.; and White, N. E. "XBSS: The X-Ray Background

Spectroscopic Survey." In EUV, X-Ray, and Gamma-Ray Instrumentation for Astronomy VIII, SPIE Proceedings, vol. 3114, eds. O. H. Siegmund and M. A. Gummin, p. 636.

- Bellingham, Washington: SPIE The International Society for Optical Engineering, 1997.
- Sarazin, C. L.; Wise, M. W.; and Markevitch, M. L. "X-Ray Spectral Properties of the Cluster Abell 2029." Astrophysical Journal 498 (1998): 606.
- Sartoretti, P.; Brown, R. A.; and Latham, D. W. "A Search for Substellar Companions Around Nine Weak-Lined T-Tauri Stars with the Planetary Camera 2 of the Hubble Space Telescope." Astronomy and Astrophysics 334 (1998): 592.
- Schachter, J. F.; Fiore, F.; Elvis, M.; Mathur, S.; Siemiginowska, A.; Bechtold, J.; Aldcroft, T. L.; McLeod, K. K.; and Keeton, C. R. "Q1208+1011: Search for the Lensing Galaxy." Astrophysical Journal 503 (1998): 118.
- Schachter, J. F.; Fiore, F.; Elvis, M.; Mathur, S.; Wilson, A. S.; Morse, J. A.; Awaki, H.; and Iwasawa, K. "NGC 7582: The Prototype Narrow-Line X-Ray Galaxy." Astrophysical Journal (Letters) 503 (1998): L123.
- Schild, R. E., and Thomson, D. J. "The Identification of Baryonic Dark Matter from Quasar Q0957+561 A,B Microlensing." In Dark Matter, Proceedings of the 1996 Sheffield Symposium, ed. N. Spooner, p. 229. Singapore: World Scientific Publishing Company, 1997.
- "The Q0956+561 Time Delay, Quasar Structure, and Microlensing." In Wise Observatory 25th Anniversary Symposium, Astronomical Time Series, eds. D. Maoz, A. Sternberg, and E. Liebowitz, p. 73. Dordrecht: Kluwer Academic Publishers, 1997.
- Schlegel, E. M. "Serendipitous Discovery of a Bright Narrow Line X-Ray Galaxy." *New Astronomy* 3 (1998): 427.
- Schlegel, E. M.; Kallman, T.; Mukai, K.; and Ishida, M. "An ASCA Observation of the Eclipsing Cataclysmic Variable XY Ari." In Accretion Processes in Astrophysical Systems: Some Like it Hot!, American Institute of Physics Conference Proceedings, vol. 431, eds. S. Holt and T. Kallman, p. 475. Woodbury, New York: American Institute of Physics, 1998.
- Schlegel, E. M., and Kirshner, R. P. "SN1987C in Mrk 90 = UGC 4438: Evolution of a Type 'IIn' to a Type IIP?" New Astronomy 3(2) (1998): 125.
- Schlegel, E. M.; Petre, R.; and Loewenstein, M. "ROSAT Observations of X-Ray-Faint So Galaxies: NGC 1380." Astronomical Journal 115(2) (1998): 525
- Schulman, E.; French, J. C.; Powell, A. L.; Eichhorn, G.; Kurtz, M. J.; and Murray, S. S. "Trends in Astronomical Publication Between 1975 and 1996." *Publications of the Astronomical Society of the Pacific* 109 (1997): 1278.

Schwartz, D. A. "Operational Capabilities of AXAF for Surveys." Astronomische Nachrichten 319 (1998): 121.

Seta, M.; Hasegawa, T.; Dame, T. M.; Sakamoto, S.; Oka, T.; Handa, T.; Hayashi, M.; Morino, J.-I.; Sorai, K.; and Usuda, K. "Enhanced CO J=2-1/J=1-0 Ratio as a Marker of Supernova Remnant-Molecular Cloud Interactions: The Cases of W 44 and IC 443." Astrophysical Journal 505 (1998): 286.

Shelton, J. C.; Schneider, T.; and Baliunas, S. "Science with the ADOPT System on Mount Wilson." In Adaptive Optics and Applications, SPIE Proceedings, vol. 3126, eds. R. K. Tyson and R. Q. Fugare, p. 321. Bellingham, Washington: SPIE— The International Society for Optical Engineering, 1997.

Silverman, J. D.; Harris, D. E.; and Junor, W. "Multiwavelength Observations of 26W20, a Radio Galaxy Which Displays BL Lacertae Characteristics." Astronomy and Astrophysics 335 (1998): 443.

Simbotin, I.; Marinescu, M.; Sadeghpour, H. R.; and Dalgarno, A. "Resonant Raman Scattering in O₂." Journal of Chemical Physics 207 (1997): 7057.

Simcoe, R.; McLeod, K. K.; Schachter, J.; and Elvis, M. "Obscuration in the Host Galaxies of Soft X-Ray-Selected Seyfert Nuclei." Astrophysical Journal 489 (1997): 615.

Smith, G. H., and Dupree, A. K. "Hubble Space Telescope Observations of Chromospheric Emission from the Population II Red Giant HD 216143." Astronomical Journal 116 (1998): 931.

Smith, R. K., and Dwek, E. "Soft X-Ray Scattering and Halos from Dust." Astrophysical Journal 503 (1998): 831.

Smith, R. M.; Jones, J. B.; Windridge, D.; Gladman, B.; Hall, P.; Graham, D.; Kavelaars, J. J.; Williams, G. V.; Aksnes, K.; and Marsden, B. G. "S/1997 U 2." *IAU Circular No.* 6869 (1998): 1.

Smith, R. W.; Hernandez, G.; Roble, R. G.; Dyson, P. L.; Conde, M.; Crickmore, R.; and Jarvis, M. "Observation and Simulations of Winds and Temperatures in the Antarctic Thermosphere for August 2-10, 1992." *Journal of Geophysical Research* 103(A5) (1998): 9473.

Snowden, S. L.; Egger, R.; Finkbeiner, D. P.; Freyberg, M. J.; and Plucinsky, P. P. "Progress on Establishing the Spatial Distribution of Material Responsible for the 1/4 keV Soft X-Ray Diffuse Background Local and Halo Components." Astrophysical Journal 493 (1998): 715.

Soderblom, D. R.; King, J. R.; Hanson, R. B.; Jones, B. F.; Fischer, D.; Stauffer, J. R.; and Pinsonneault, M. H. "The Problem of Hipparcos Distances to Open Clusters. II. Constraints from Nearby Field Stars." *Astrophysical Journal* 504 (1998): 192.

Soderblom, D. R.; King, J. R.; Siess, L.; Noll, K. S.; Gilmore, D. M.; Henry, T. J.; Nelan, E.; Burrows, C. J.; Brown, R. A.; Perryman, M. A. C.; Benedict, G. F.; McArthur, B. J.; Franz, O. G.; Wasserman, L. H.; Latham, D. W.; Torres, G.; and Stefanik, R. P. "HD 98800: A Unique Stellar System of Post-T Tauri Stars." Astrophysical Journal 498 (1998): 385.

Soffirta, P.; Tomsick, J. A.; Harmon, B. A.; Costa, E.; Ford, E. C.; Tavani, M.; Zhang, S. N.; and Kaaret, P. "Identification of the Periodic Hard X-Ray Transient GRO J1849-03 with the X-Ray Pulsar GS -1843-02 = X1845-024: A New Be/X-Ray Binary." Astrophysical Journal (Letters) 494 (1998): L203.

Spaans, M.; Neufeld, D.; Lepp, S.; Melnick, G. J.; and Stauffer, J. "Search for Interstellar Water in the Translucent Molecular Cloud Toward HD 154368." Astrophysical Journal 503 (1998): 780.

Spahr, T. B.; Hergenrother, C. W.; Larson, S. M.; Hicks, M.; Marsden, B. G.; Williams G. V.; Tholen, D. J.; Whiteley, R. J.; and Osip, D. J. "The Discovery and Physical Characteristics of 1996 JAI." *Icarus* 129 (1997): 415.

Srinivasan, R.; Finley, J. P.; Sembroski, G. H.; Weekes, T. C.; and Wilson, D. "Detection of the Optical Crab Pulsar with an Atmospheric Cherenkov Telescope." In Proceedings of Workshop on "Towards a Large Atmospheric Cherenkov Detector-V," ed. O. De Jager, p. 51. Kruger Park, South Africa: University of Potchefstroom, 1998.

Staguhn, J.; Stutzki, J.; Chamberlin, R. A.; Balm, S. P.; Stark, A. A.; Lane, A. P.; Schieder, J.; and Winnewisser, G. "Observations of [CI] and CO Absorption in Cold, Low Density Cloud Material Towards the Galactic Center Broad Line Emission." Astrophysical Journal 491 (1997): 191.

Stancil, P. C., and Dalgarno, A. "The Radiative Association of H and D." Astrophysical Journal 490 (1997): 76.

Stancil, P. C.; Lepp, S.; and Dalgarno, A. "Molecules and Dust in Supernovae." Astrophysics and Space Science 251 (1997): 375.

Stanek, K. Z., and Garnavich, P. M. "Distance to M31 With the HST and Hipparcos Red Clump Stars." Astrophysical Journal (Letters) 503 (1998): L131.

Stanek, K. Z.; Kaluzny, J.; Krockenberger, M.; Sasselov, D. D.; Tonry, J. L.; and Mateo, M. "Distances to Nearby Galaxies Using Detached Eclipsing Binaries and Cepheids. II. Variables in the Field M31A." Astronomical Journal 115 (1998): 1894.

Stanek, K. Z.; Zaritsky, D.; and Harris, J. "A 'Short' Distance to the Large Magellanic Cloud with the Hipparcos/Calibrated Red Clump Stars." Astrophysical Journal (Letters) 500 (1998): L141.

Stark, A. A. "Potential Measurement of the Luminosity Function of 158 Micron [C II] at High Redshifts." Astrophysical Journal 481 (1997): 587.

Stark, A. A.; Chamberlin, R. A.; Cheng, J.; Ingalls, J.; and Wright, G. "Optical and Mechanical Design of the Antarctic Submillimeter Telescope and Remote Observatory." *Review of Scientific Instruments* 68 (1997): 2200.

Stauffer, J. R.; Schild, R.; Barrado Y Navascues, D.; Backman, D. E.; Angelova, A. M.; Kirkpatrick, J. D.; Hambly, N.; and Vanzi, L. "Results of a Deep Imaging Survey of One Square Degree of the Pleiades for Low-Luminosity Cluster Members." Astrophysical Journal 504 (1998): 805.

Stauffer, J. R.; Schultz, G.; Kirkpatrick, J. D. "Keck Spectra of Pleiades Brown Dwarf Candidates and a Precise Determination of the Lithium Depletion Edge in the Pleiades." Astrophysical Journal 499 (1998): 199.

202

Strachan, L.; Raymond, J. C.; Panasyuk, A. V.; Fineschi, S.; Gardner, L. D.; Antonucci, E.; Giordano, S.; Romoli, S.; Benna, C.; Noci, G.; Kohl, J. L.; and Michels, J. "Spectroscopic Observations of the Extended Corona During the SOHO Whole Sun Month." In *Fifth SOHO Workshop: The Corona and Solar Wind Near Minimum Activity, ESA SP-404*, p. 691. Paris: ESA Publications Division, 1997.

- Swartz, D. A.; Elsner, R. F.; Kolodziejczak, J. J.; O'Dell, S. L.; Tennant, A. F.; Sulkanen, M. E.; Weisskopf, M. C.; and Edgar, R. J. "Use of Monochromators During AXAF Calibration." In X-Ray Optics, Instruments, and Missions, SPIE Proceedings, vol. 3444, eds. R. B. Hoover and A. B. C. Walker, II, p. 189. Bellingham, Washington: SPIE - The International Society for Optical Engineering, 1998.
- Tafalla, M.; Mardones, D.; Myers, P. C.; Caselli, P.; Bachiller, R.; and Benson, P. J. "L1544: A Starless Dense Core with Extended Inward Motions." Astrophysical Journal 504 (1998): 900.
- Tafalla, M., and Myers, P. C. "Velocity Shifts in L1228: The Disruption of a Core by an Outflow." Astrophysical Journal 491 (1997): 653.
- Tananbaum, H. "Workshop Summary and Future HTXS Plans." In Proceedings of the High Throughput X-Ray Spectroscopy Workshop, eds. H. Tananbaum, N. White, and P. Sullivan, p. 336. Cambridge, Massachusetts: Harvard-Smithsonian Center for Astrophysics, 1997.
- Terry, P. W.; Fernandez, E.; and Ware, A. S. "A Drift-Alfven Model for Interstellar Turbulence." Astrophysical Journal 504 (1998): 821.
- Thaddeus, P.; Davis, M.; Grindlay, J. E.; Hauser, M.; Kron, R. G.; McKee, C. F.; Rieke, M. J.; and Wheeler, J. C. "A New Science Strategy for Space Astronomy and Astrophysics." *Report of the Task Group on Space Astronomy and Astrophysics.* Washington, D.C.: National Academy of Sciences-National Research Council, 1997.
- Thaddeus, P.; McCarthy, M. C.; Travers, M. J.; Gottlieb, C. A.; and Chen, W. "New Carbon Chains in the Laboratory and in Interstellar Space." *Journal of the Chemical Society: Faraday Discussions* 109 (1998): 121.
- Thomas, W.; Hegels, E.; Slijkhuis, S.; Spurr, R.; and Chance, K. "Detection of Biomass Burning Combustion Products in Southeast Asia from Backscatter Data Taken by the GOME Spectrometer." *Geophysical Research Letters* 25 (1998): 1317.
- Tieftrunk, A. R.; Megeath, S. T.; Wilson, T. L.; and Rayner, J. "A Survey for Dense Cores and Young Stellar Clusters in the W3 Giant Molecular Cloud." Astronomy and Astrophysics 336 (1998): 991.

Tomsick, J.; Costa, E.; Dwyer, J.; Elsner, R. F.; Ford, E.;
Kaaret, P. E.; Novick, R.; Santangelo, A. E.; Silver, E.;
Soffitta, P.; Weisskopf, M. C.; and Ziock, K.-P.
"Calibration of the Stellar X-Ray Polarimeter." In EUV,
X-Ray, and Gamma-Ray Instrumentation for Astronomy VIII,
SPIE Proceedings, vol. 3114, eds. O. H. Siegmund and M. A.
Gummin, p. 373. Bellingham, Washington: SPIE - The
International Society for Optical Engineering, 1997.

- Tomsick, J. A.; Lapshov, I.; and Kaaret, P. "An X-Ray Dip in the X-Ray Transient 4U 1630-47." Astrophysical Journal 494 (1998): 747.
- Torii, K.; Tsunemi, H.; and Slane, P. "X-Ray Study of Crab-Like and Composite SNRs." In *The Hot Universe*, *Proceedings of IAU Symposium No. 188*, eds. K. Koyama, S. Kitamoto, and M. Itho, p. 258. Dordrecht: Kluwer Academic Publishers, 1998.
- Torres, G.; Neuhäuser, R., and Wichmann, R. "BD+05\$706: A New Member of the Class of 'Cool Algols'." Astronomical Journal 115 (1998): 2028.
- "The Cool Algol BD+05\$706." In Cool Stars, Stellar Systems, and the Sun: Tenth Cambridge Workshop, Astronomical Society of the Pacific Conference Series, vol. 154, eds. R. A. Donahue and J. A. Bookbinder, p. 1644. San Francisco: Astronomical Society of the Pacific, 1998.
- Torres, G.; Stefanik, R. P.; Andersen, J.; Nordström, B.; Latham, D. W.; and Clausen, J. V. "The Absolute Dimensions of Eclipsing Binaries. XXII. The Unevolved F-Type Systems HS Hydrae." Astronomical Journal 114 (1998): 2764.
- Traub, W. A. "Atmospheric Fourier Transform Spectroscopy." In Fourier Transform Spectroscopy, American Institute of Physics Conference Proceedings, vol. 430, ed. J. A. de Haseth, p. 60. Woodbury, New York: American Institute of Physics, 1998.

- Traub, W. A.; Carleton, N. P.; and Angel, J. R. P. "On the Detection of Exo-Zodiacal Light by Nulling Interferometry With the Magellan Telescopes." In Science with the VLTI Interferometer, ed. F. Paresce, p. 80. Berlin: Springer-Verlag, 1997.
- Trinchieri, G.; Noris, L.; and Di Serego Alighieri, S. "A Surprising Correlation between X-Ray and H Morphologies in Early-Type Galaxies." Astronomy and Astrophysics 326 (1997): 565.
- Trotter, A. S.; Greenhill, L. J.; Moran, J. M.; Reid, M. J.; Irwin, J. A.; and Lo, K.-Y. "Water Maser Emission and the Parsec-Scale Jet in NGC 3079." *Astrophysical Journal* 495 (1998): 740.
- Tucker, R. D.; Bradley, D. C.; Ver Straeten, C. A.; Harris, A. G.; Ebert, J. R.; and McCutcheon, S. R. "New U Pb Zircon Ages and the Duration and Division of Devonian Time." *Earth and Planetary Science Letters* 158 (1998): 175.
- Tucker, W.; Blanco, P.; Rappoport, S.; David, L.; Fabricant, D.; Falco, E. E.; Forman, W.; Dressler, A.; and Ramella, M. "IE 0657-56: A Contender for the Hottest Known Cluster of Galaxies." Astrophysical Journal (Letters) 496 (1998): L5.

- Turner, A.; Ferrarese, L.; Saha, A.; Bresolin, F.; Kennicutt, R.;
 Stetson, P.; Mould, J.; Freedman, W.; Gibson, B.; Graham,
 J.; Ford, H.; Han, M.; Harding, P.; Hoessel, J.; Huchra, J.;
 Hughes, S.; Illingworth, G.; Macri, L.; Madore, B.; Phelps, R.;
 Rawson, D.; Sakai, S.; and Silbermann, N. "The HST Key
 Project on the Extragalactic Distance Scale XI. The Cepheids
 in NGC4414." Astrophysical Journal 505 (1998): 207.
- Udalski, A.; Szymanski, M.; Kaluzny, J.; Kubiak, M.; Mateo, M.; Krzeminski, W.; and Stanek, K. Z. "The Optical Gravitational Lensing Experiment: Journal of the 1995 Observing Season." *Acta Astronomica* 47 (1997): 169.
- Udry, S.; Mayor, M.; Latham, D. W.; Stefanik, R. P.; Torres, G.; Mazeh, T.; Goldberg, D.; Andersen, J.; and Nordström, B. "A Survey for Spectroscopic Binaries in a Sample of G Dwarfs. In Cool Stars, Stellar Systems, and the Sun: Tenth Cambridge Workshop, Astronomical Society of the Pacific Conference Series, vol. 154, eds. R. A. Donahue and J. A. Bookbinder, p. 2148. San Francisco: Astronomical Society of the Pacific, 1998.
- van Ballegooijen, A. A. "Understanding the Solar Cycle, in Synoptic Solar Physics." In 18th NSO Sacramento Peak Summer Workshop, Astronomical Society of the Pacific Conference Series, vol. 140, eds. K. S. Balasubramaniam, J. W. Harvey, and D. M. Rabin, p. 17. San Francisco: Astronomical Society of the Pacific, 1998.
- van Ballegooijen, A. A.; Cartledge, N. P.; and Priest, E. R. "Magnetic Flux Transport and the Formation of Filament Channels on the Sun." Astrophysical Journal 501 (1998): 866; also in New Perspectives on Solar Prominences, Astronomical Society of the Pacific Conference Series, Proceedings of IAU Colloquium No. 167, vol. 150, eds. D. Webb, D. Rust, and B. Schmieder, p. 265. San Francisco: Astronomical Society of the Pacific, 1998.
- Vessot, R. F. C., and Mattison, E. M. "High Accuracy Time and Frequency from Space." In *Proceedings of 1998 IEEE International Frequency Control Symposium*, p. 336. New Jersey: Institute of Electrical and Electronics Engineers, 1998.
- Vikhlinin, A.; McNamara, B. R.; Forman, W.; Jones, C.; Quintana, H.; and Hornstrup, A. "Evolution of Cluster X-Ray Luminosities and Radii: Results from the 160 Square Degree ROSAT Survey." Astrophysical Journal (Letters) 498 (1998): L21.
- . "A Catalog of 200 Galaxy Clusters Serendipitously Detected in the ROSAT PSPC Pointed Observations." *Astrophysical Journal* 502 (1998): 558.
- Vinko, J.; Evans, N. R.; Kiss, L. L.; and Szabados, L. "Spectroscopic Survey of Field Type II Cepheids." Monthly Notices of the Royal Astronomical Society 296 (1998): 824.
- Vrtilek, S. D.; Boroson, B.; Cheng, F. H.; McCray, R.; and Nagase, F. "Simultaneous Hubble Space Telescope and ASCA Observations of LMC X-4: X-Ray Ionization Effects on a Stellar Wind." Astrophysical Journal 490 (1997): 377.
- Wahlgren, G. M., and Evans, N. R. "A HgMn Companion to the Cepheid SU Cyg."
- Astronomy and Astrophysics 332 (1998): L33.

- Wakker, B.; Murphy, E. M.; van Woerden, H.; and Dame, T. M. "A Sensitive Search for Molecular Gas in High Velocity Clouds." Astrophysical Journal 488 (1997): 216.
- Walter, F. M.; Vrba, F. J.; Wolk, S. J.; Mathieu, R. D.; and Neuhauser, R. "X-Ray Sources in Regions of Star Formation. VI. The R CRA Association as Viewed by Einstein." Astronomical Journal 114 (1997): 1544.
- Wargelin, B. J.; Beiersdorfer, P.; Liedahl, D. A.; Kahn, S. M.; and Von Goeler, S. "Observation and Modeling of High-n Iron L-Shell Lines from Intermediate Ion Stages." *Astrophysical Journal* 496 (1998): 1031.
- Warren, H. P.; Mariska, J. T.; and Lean, J. "A New Reference Spectrum for the EUV Irradiance of the Quiet Sun, I, Emission Measure Formulation." *Journal of Geophysical Research* 103(A6) (1998): 112,077.
- ———. "A New Reference Spectrum for the EUV Irradiance of the Quiet Sun, 2, Comparisons with Observations and Previous Models." *Journal of Geophysical Research* 103(A6) (1998): 112,091.
- Warren, H. P.; Mariska, J. T.; and Wilhelm, K. "Observations of Doppler Shifts in a Solar Polar Coronal Hole." *Astrophysical Journal (Letters)* 490 (1997): L187.
- Weekes, T. C. "Future Perspectives: The Window of Opportunity." In Proceedings of Workshop on "Towards a Large Atmospheric Cherenkov Detector-V," ed. O. De Jager, p. 452. Kruger Park, South Africa: University of Potchefstroom, 1998.

- Weekes, T. C.; Aharonian, F.; Fegan, D. J.; and Kifune, T. "VHE and UHE Gamma-Ray Astronomy in the EGRET Era." In Proceedings of 4th Compton Symposium, American Institute of Physics Conference Proceedings, vol. 410, eds. C. Dermer, M. Strickman, and J. Kurfess, p. 361. Woodbury, New York: American Institute of Physics, 1997.
- Weekes, T. C.; Akerlof, C.; Biller, S.; Breslin, A. C.; Catanese, M.; Carter-Lewis, D. A.; Cawley, M. F.; Dingus, B.; Fazio, G. G.; Fegan, D. J.; Finley, J.; Fishman, G.; Gaidos, J.; Gillanders, G. H.; Gorham, P.; Grindlay, J. E.; Hillas, A. M.; Huchra, J.; Kaaret, P.; Kertzman, M.; Kieda, D.; Krennrich, F.; Lamb, R. C.; Lang, M. J.; Marscher, A. P.; Matz, S.; McKay, T.; Muller, D.; Ong, R.; Purcell, W.; Rose, H. J.; Sembroski, G.; Seward, F. D.; Slane, P.; Swordy, S.; Tumer, T.; Ulmer, M.; Urban, M.; and Wilkes, B. J. "VERITAS: The Very Energetic Radiation Imaging Telescope Array System." In *Proceedings of Workshop on* "Towards a Large Atmospheric Cherenkov Detector-V," ed. O. De Jager, p. 433. Kruger Park, South Africa: University of Potchefstroom, 1998.

Weekes, T.C.; Bond, I. H.; Boyle, P. J.; Bradbury, S. M.;
Breslin, A. C.; Buckley, J. H.; Burdett, A. M.; Bussons
Gordo, J.; Carter-Lewis, D. A.; Catanese, M.; Cawley, M. F.;
Fegan, D. J.; Finley, J. P.; Gaidos, J. A.; Hall, T.; Hillas, A. M.;
Krennrich, F.; Lamb, R. C.; Lessard, R.; Masterson, C.;
McEnery, J. E.; Mohanty, G.; Moriarty, P.; Quinn, J.;
Rodgers, A. J.; Rose, H. J.; Samuelson, F. W.; Sembroski,
G. H.; Srinivasan, R.; and Zweerink, J. "Report from the
Whipple Gamma-Ray Collaboration." In Proceedings of
Workshop on "Towards a Large Atmospheric Cherenkov
Datector-V," ed. O. De Jager, p. 202. Kruger Park, South
Africa: University of Potchefstroom, 1998.

Wernicke, B. P.; Davis, J. L.; Bennett, R. A.; Elósegui, P.; Abolins, M. J.; Brady, R. A.; House, M. A.; Niemi, N. A.; and Snow, J. K. "Anomalous Tectonic Strain Accumulation in the Yucca Mountain Area, Nevada." *Science* 279 (1998): 2096.

White, D. A.; Jones, C.; and Forman, W. "An Investigation of Cooling Flows and General Cluster Properties from an X-Ray Image Deprojection Analysis of 207 Clusters of Galaxies." Monthly Notices of the Royal Astronomical Society 292(2) (1997): 419.

White, N.; Tananbaum, H.; and Kahn, S. "The High Throughput X-Ray Spectroscopy (HTXS) Mission." In Next Generation of X-Ray Observatories: Workshop Proceedings, Leicester X-Ray Astronomy Group Special Report XRA97/02, eds. M. Turner and M. Watson, p. 173. Leicester, England: University of Leicester, 1997.

Wilkes, B. J. "ISO Observations of Quasars and Quasar Hosts" (Invited Presentation). In *Quasar Hosts, ESO-IAC* Conference Proceedings, ESO Astrophysics Symposia, eds. D. Clements and I. Perez-Fournon, p. 136. Berlin: Springer-Verlag, 1997.

Williams, J. P.; Bergin, E. A.; Caselli, P.; Myers, P. C.; and Plume, R. "The Ionization Fraction in Dense Molecular Gas I: Low Mass Cores." *Astrophysical Journal* 503 (1998): 689.

Williams, J. P., and Blitz, L. "A Multi-Transition CO and CS(2-I) Comparison of a Star Forming and Non-Star Forming GMC." Astrophysical Journal 494 (1998): 657.

Wilner, D. J. "Imaging HL Tau: The VLA Experience." In Millimeter and Submillimeter Astronomy at 10 Milli-Arcseconds Resolution, Nobeyama Radio Observatory Report No. 430, eds.
M. Ishiguro and R. Kawabe, p. 17. Nobeyama, Japan: National Radio Observatory, 1997.

Wilner, D. J., and Moran, J. M. "The Submillimeter Array Project." In The Physics and Chemistry of the Interstellar Medium, Proceedings of 3rd Cologne-Zermatt Symposium, ed. V. Ossenkopf, p. 68. New York: Springer-Verlag, 1998.

Wilner, D. J.; Myers, P. C.; and Mardones, D. "Interferometric Imaging of Dense Gas Tracers in the Protostellar Collapse Candidate L1527." In Star Formation Near and Far, American Institute of Physics Conference Proceedings, vol. 393, eds. S. S. Holt and L. G. Mundy, p. 109. Woodbury, New York: American Institute of Physics, 1997.

Wojdowski, P.; Clark, G. W.; Levine, A. M.; Woo, J. W.; and Zhang, S. N. "Quasi-Periodic Occultation by a Precessing Accretion Disk and Other Variabilities of SMC X-1." Astrophysical Journal 502 (1998): 253.

Wolniewicz, L.; Simbotin, I.; and Dalgarno, A. "Quadrupole Transition Probabilities for the Excited Rovibrational States of H2." Astrophysical Journal Supplement Series 115 (1998): 293.

Wood, B. E.; Karovska, M.; Cook, J. W.; Brueckner, G. E.; Howard, R. A.; Korendyke, C. M.; and Socker, D. G.
"Search for Brightness Variations in Fe XIV Coronagraph Observations of the Quiescent Solar Corona." Astrophysical Journal 505 (1998): 432.

Wood, B. E., and Linsky, J. L. "The Local ISM and Its Interaction with the Winds of Nearby Late-Type Stars." *Astrophysical Journal* 492 (1998): 788.

Wood, J. A. "Constraints Placed by Aluminum-26 on Early Solar System History. *Meteoritics and Planetary Sciences* 33 (1998): A168.

. "The HED Parent Body: Thermal and Sr Isotope Evolution." In *Lunar and Planetary Science XXIX*, #1385. Houston, Texas: Lunar and Planetary Institute, 1998.

"Meteoritic Evidence for the Infall of Large Interstellar Dust Aggregates During Formation of the Solar System." Astrophysical Journal (Letters) 503 (1998): LIOI.

- Wood, K.; Kenyon, S. J.; Whitney, B. A.; and Turnbull, M. "Optical and Near-IR Imaging of the Circumstellar Environment of Classical T Tauri Stars." Astrophysical Journal 497 (1998): 404.
- Yamasaki, N. Y.; Miyazaki, H.; Ohashi, T.; and Wilkes, B. J. "X-Ray Study of the Distant QSO PKS 0237-233 with ASCA and ROSAT." Publication of the Astronomical Society of Japan 50 (1998): 19.
- Yan, M., and Dalgarno, A. "H³⁺ Emission in the Ejecta of SN 1987a." Astrophysical Journal 500 (1998): 1049.

Yan, M.; Sadeghpour, H. R.; and Dalgarno, A. "Photoionization Cross Sections of He and H₂." Astrophysical Journal 496 (1998): 1044.

Yan, Z.-C., and Babb, J. F. "Long-Range Interactions of Metastable Helium Atoms." *Physical Review A* 58 (1998): 1247.

- Yoshino, K.; Esmond, J. R.; Parkinson, W. H.; Thorne, A. P.; Murray, J. E.; Learner, R. C. M.; and Cox, G. "The Application of a VUV Fourier Transform Spectrometer and Synchrotron Radiation Source to Measurements of : I. The (9,0) Band of NO." Journal of Chemical Physics 109 (1998): 1751.
- You, L.; Walsworth, R.; and Hoston, W. "Higher Energy Collective Excitations in Trapped Bose Condensates." Optics Express 1 (1997): 293.
- Yu, W.; Zhang, S. N.; Harmon, B. A.; Paciesas, W. S.; Robinson, C. R.; Grindlay, J. E.; Bloser, P.; Barret, D.;

Ford, E. C.; Tavani, M.; and Kaaret, P. "kHz Quasi-Periodic Oscillation in Island State of 4U 1608-52 as Observed with RXTE/PCA." Astrophysical Journal (Letters) 490 (1997): L153.

- Zhang, J.; Cui, W.; Juda, M.; McCammon, D.; Kelley, R. L.; Moseley, S. H.; Stahle, C. K.; and Szymkowiak, A. E.
 "Non-Ohmic Effects in Hopping Conduction in Doped Silicon and Germanium 0.05-1 Kelvin." *Physics Review B* 57 (1998): 4472.
- Zhang, Q., and Ho, P. T. P. "Dynamical Collapse in W51 Massive Cores: NH₃ Observations." *Astrophysical Journal* 488 (1997): 241.
- Zhang, Q.; Ho, P. T. P.; and Ohashi, M. "Dynamical Collapse in W51 Massive Cores: CS(3-2) and CH₃CN Observations." *Astrophysical Journal* 494 (1998): 636.
- Zhang, Q.; Hunter, T. R.; and Sridharan, T. K. "A Rotating Disk Around a High-Mass Young Star." Astrophysical Journal (Letters) 505 (1998): LI5I.
- Zhang, Q.; Wootten, A.; and Ho, P. T. P. "Isotopic CO Images Near Young Triple Star GSS30." Astrophysical Journal 475 (1997): 713.
- Zhao, J.-H.; Anantharamiah, K. R.; Goss, W. M.; and Viallefond, F. "High Density, Compact HII Regions in the Starburst Galaxies NGC 3628 and IC 694: High Resolution Observations of Radio Recombination Line at H92." Astrophysical Journal 482 (1997): 186.
- Zhao, J.-H., and Goss, W. M. "Radio Continuum Structure of IRS 13 and Proper Motions of Compact HII Components at the Galactic Center." Astrophysical Journal (Letters) 499 (1998): L163.
- Zhao, P.; Austin, R. A.; Edgar, R. J.; Elsner, R. F.; Gaerz, T. J.; Graessle, D. E.; Jerius, D.; Kolodziejczak, J. J.; McDermott, W. C.; O'Dell, S. L.; Sulkanen, M. E.; Schwartz, D. A.; Swartz, D. A.; Tennant, A. F.; Van Speybroeck, L. P.; Wargelin, B. J.; Weisskopf, M. C.; and Zirnstein, C. G. "AXAF-Mirror Effective Area Calibration Using the C-Continuum Source and Solid State Detectors." In X-Ray Optics, Instruments, and Missions, SPIE Proceedings, vol. 3444, eds. R. B. Hoover and A. B. C. Walker, II, p. 234. Bellingham, Washington: SPIE—The International Society for Optical Engineering, 1998.
- Zombeck, M. V. "From Spreadsheets to Scratch Pads." Sky and Telescope 94(4) (1997): 60.
- Zweerink, J.; Akerlof, C.; Biller, S.; Boyle, P.; Buckley, J. H.;
 Burdett, A. D.; Bussons Gordo, J.; Carter-Lewis, D. A.;
 Catanese, M.; Cawley, M. F.; Fegan, D. J.; Finley, J.;
 Gaidos, J.; Hillas, A. M.; Krennrich, F.; Lamb, R. C.;
 Lessard, R.; McEnery, J.; Mohanty, G.; Quinn, J.; Rodgers,
 A. J.; Rose, H. J.; Samuelson, F. W.; Schubnell, M. S.;
 Sembroski, G.; Srinivasan, R.; Weekes, T. C.; and Wilson,
 C. "The TeV Gamma-Ray Spectrum of Markarian 421
 During an Intense Flare." Astrophysical Journal (Letters) 490
 (1997): L141.

Smithsonian Environmental Research Center

- Brinson, M.M., R.D. Smith, D.F. Whigham, L.C. Lee, R.D.
 Rheinhardt, and W.L. Nutter. 1998. Progress in development of the hydrogeomorphic approach for assessing the functioning of wetlands. Pp. 383-406 in A.J. McComb and J.A. Davis, eds. Wetland for the future. Gleneagles Publishing, Adelaide, Australia.
- Brinson, M.M., D.F. Whigham, L.C. Lee, R.D. Rhieinhardt, W.B. Ainslie, G.G. Hollands, W.L. Nutter, and R.D. Smith. 1998. More clarification regarding the HGM approach. SWS Bulletin 15:7–10.
- Carpenter, S.R., N.F. Caraco, D.L. Correll, Ra.W. Howarth, A.N. Sharpley, and V.H. Smith. 1998. Nonpoint pollution of surface waters with phosphorus and nitrogen. Issues in Ecology 3: 1–12.
- Correll, D.L. 1998. The role of phosphorus in the eutrophication of receiving waters: A review.J. Envion. Qual. 27: 261–266.
- ------. 1998. Eutrophication: Research needs for coastal pollution in urban areas. In E. Christensen, ed., Research needs for coastal pollution in urban areas. University of Wisconsin-Milwaukee, Milwaukee, WI.
- . 1998. Phosphorus: A rate limiting nutrient in surface waters. Poultry Science 78:674–682.
- Drake, B.G., J. Jacob, and M.A. Gonzalez-Meler. 1998.
 Photosynthesis, respiration and global climate change. Pp. 273–282, Ch. 21, in A.S. Rghavendra, ed., Photosynthesis: a comprehensive treatise. Cambridge University Press.
- Hill, K. 1998. Daily settlement patterns of the blue crab, Callinectes sapidus, and other brachyuran crabs into the Indian River Lagoon, Florida.M.Sc. Thesis, Florida Institute of Technology, 116 pp.
- Hines, A.H., F. Alvarez, and S.A. Reed. 1998. Introduced and native populations of a marine parasitic castrator: variation in prevalence of the rhizocephalan Loxothylacus panopaei in xanthid crabs. Bulletin of Marine Science 61: 197–214.
- Hines, A.H., G.M. Ruiz, J. Chapman, G.I. Hansen, J.T. Carlton, N. Foster, and H.M. Feder. 1998. Biological invasions of cold-water ecosystems: Ballast mediated introductions in Port Valdez/Prince William Sound, Alaska. 1998 Progress Report, Regional Citizens' Advisory Council of Prince William Sound. 37p. + 20 tables, 21 figs.
- Jivoff, P.R. and A.H. Hines. 1998. Female behavior, sexual competition and precopulatory mate guarding in the blue crab, Callinectes sapidus. Animal Behavior 55:589–603.
- Jordan, T.E., D.E. Weller, and D.L. Correll. 1998. Denitrification in surface soils of a riparian forest: Effects of water, nitrate, and sucrose additions. Soil Biology & Biochemistry 30: 813–843.

Kayashi, K., S. Yoshida, H. Kato, F.H. Utech, D.F. Whigham and S. Kawano. 1998. Molecular systematics of the genus Uvularia and selected Liliales based upon matK and rbcL gene sequence data. Plant Specie Biology 13: 129–146.

Kitamura, K., J. O'Neill, D.F. Whigham and S. Kawano. 1998. Demographic genetic analyses of the American Beech (Fagus grandifolia Ehrh.). Genetic variations of seed populations in Maryland. Plant Species Biology 13: 147–154.

Kudoh, H. and D.F. Whigham. 1998. The effect of petal-size manipulation on pollinator/seed-predator mediated female reproductive success of Hibiscus moscheuros. Oecologia 117: 70-79.

Lovelock, C.E., K. Winter, R. Mersits, and M. Popp. 1998. Responses of communities of tropical tree species to elevated CO₂ in a forest clearing. Oecologia 116: 207–218.

Lovelock, C.E., T. Kursar, J. Skillman and K. Winter. 1998. Susceptibility to photoinhibition in leaves of tropical forest species with different leaf lifetimes. Functional Ecology.

Neale, P.J. 1998. Spectral weighting functions for quantifying the effects of ultraviolet radiation in marine ecosystems. In de Mora, S.J., Demers, S. and Vernet, M., eds., The effects of UV radiation on marine ecosystems Cambridge Univ. Press, Cambridge.

. 1998. Application of spectral weighting functions in assessing the effects of environmental UV radiation. In Bauer, D.R. and Martin, J., eds., A Systems Approach to Service Life Prediction of Organic Coatings, American Chemical Society, Washington.

Neale, P.J., Banaszak, A.R. and Jarriel, C.R. 1998. Ultraviolet sunscreens in dinoflagellates: Mycosporine-like amino acids protect against inhibition of photosynthesis.J. Phycology 34:928–938.

Neale, P.J., Cullen, J.J. and Davis, R.F. 1998. Inhibition of marine photosynthesis by ultraviolet radiation: Variable sensitivity of phytoplankton in the Weddell-Scotia Sea during the austral spring. Limnol. Oceanogr., 43, 433–448.

Neale, P.J., Davis, R.A. and Cullen, J.J. 1998. Interactive effects of ozone depletion and vertical mixing on photosynthesis of Antarctic phytoplankton. Nature, 392, 585–589.

Rasmussen, H.N. and D.F. Whigham. 1998. The underground phase: A special challenge in studies of terrestrial orchid populations. Botanical Journal of the Linnean Society 126: 49–64.

-----. 1998. Importance of woody debris in seed germination of Tipularia discolor (Orchidaceae). American Journal of Botany 85(6): 829–834.

Ruiz, G.M., A.H. Hines, A.W. Miller, L. Takata and L.M. Takata. 1998. National Ballast Water Clearinghouse: function, design and impletmentation. Report I, U.S. Coast Guiard, Washington, D.C., 24 pp.

Weller, D.E., T.E. Jordan and D.L. Correll. 1998. Heuristic models for material discharge from landscapes with riparian buffers. Ecological Applications 8:1156–1169.

Whigham, D.F. 1998. Book Review. The ecology and evolution of clonal plants. Plant Ecology 138:239–242. Whigham, D.F. and J.F. Lynch. 1998. Responses of plants and birds to hurricane distrubance in a dry tropical forest in Quintana Roo, Mexico. Pp. 165–186 in F. Dallmeir and J.A. Comeskey, eds., Forest biodiversity in North, Central and South America, and the Caribbean: Research and Monitoring. Man and the Biosphere Series. Vol. 21. Parthenon Publishing Group, NY.

Whigham, D.F., J.F. Lynch and M.B. Dickinson. 1998. Dynamics and ecology of natural and managed forests in Quintana Roo, Mexico. Pp. 267–282 in R.B. Primack, D. Bray, H. Galletti and I Ponciano, eds., Conservation and Community Development in the Mayan forest of Belize, Guatemala and Mexico. Island Press.

Winter, K. and Lovelock, C.E. 1998. Growth responses of seedlings of early and late successional tropical forest trees to elevated atmospheric CO₂. Flora

Smithsonian Tropical Research Institute

Adler, Gregory H. "Impacts of resource abundance on populations of a tropical forest rodent." *Ecology Washington* DC 79(1): 242–254 (1998).

Adler, Gregory H., Arboledo, John Jairo, and Travi, Bruno L. "Population dynamics of *Didelphis marsupialis* in Northern Colombia." Studies on Neotropical Fauna and Environment 32(1): 7-11 (1997).

Adler, Gregory H., Endries, M., and Piotter, S. "Spacing patterns within populations of a tropical forest rodent, *Proechimys semispinosus*, on Five Panamanian Islands." *Journal* of Zoology 241: 43-53 (1997).

Aide, T. Mitchell, and Angulo, Sandoval Pilar. "The effect of dry season irrigation on leaf phenology and the implications for herbivory in a tropical understory community." *Caribbean Journal of Science* 33(3–4): 142–149 (1997).

Alvarez, Marcos A. "Moluscos (Gastropoda y Pelecypoda) de aguas someras, Reserva Biológica de Cayos Cochinos, Honduras shallow water molluscs (Gastropoda and Pelecypoda) from Cayos Cochinos Biological Reserve, Honduras (SPA)." In Marine-Terrestrial Flora and Fauna of Cayos Cochinos Archipelago, Honduras: 103–107, edited by Guzmán, Héctor, Vol. 46: Revista de Biología Tropical (1998).

Anderson, Robert S. "New species and new records of Smicraulax Pierce 1908 and Cionomimus Marshall 1939 from Central America (Curculionidae Curculioninae Anthonomini)." *Tropical Zoology* 10(2): 255–270 (1997).

Arjona, Rosmery, and Contini, Digna. Variaciones estacionales del zooplancton en la Bahía de Chame. Tesis de Licenciatura, Panamá: Universidad de Panamá (1998).

Backwell, Patricia R.Y., Jennions, Michael D., Passmore, N.I., and Christy, John H. "Synchronized courtship in fiddler crabs." *Nature* 391: 31 (1998). Barahona, Gracia M., and Guzmán, Héctor M.

- "Socio-ecological survey of resident populations in Cayos Cochinos Biological Reserve, Honduras (SPA). Encuesta Socio-ecológica de las poblaciones residentes de la Reserva Biológica Cayos Cochinos, Honduras." In Marine-Terrestrial Flora and Fauna of Cayos Cochinos Archipelago, Honduras: 39–55, edited by Guzmán, Héctor, Vol. 46 (Suppl. 4): Revista de Biología Tropical (1998).
- Barnes, Pennelope A.G., and Weigt, Lee A. "Species boundaries within Lucinidae (Bivalvia): Application of morphometric and molecular analyses" [abstract]. *Abstracts, World Congress of Malacology, Washington, D.C.* 26: 26.
 Washington, D.C (1998).
- Bernal Alvarado, José. Caracterización de la comunidad de macroinvertebrados bentónicos del mesolitoral arenoso en dos áreas de la Bahía de Panamá. Tesis de Licenciatura, Panamá: Universidad de Panamá (1998).
- Boscolo, Marco, and Buongiorno, Joseph. "Managing a tropical rainforest for timber, carbon storage and tree diversity." Commonwealth Forestry Review 76(4): 246–253 (1997).
- Boscolo, Marco, Buongiorno, Joseph, and Panayotou, Theodore. "Simulating options for carbon sequestration through improved management of a lowland tropical rainforest." *Environment and Development Economics* 2: 241–263 (1997).
- Brenes R., Carlos, Gallegos, A., and Coen, E. "Variación anual de la temperatura superficial en el Golfo de Honduras." In Marine-Terrestrial Flora and Fauna of Cayos Cochinos Archipelago, Honduras: 187–197, edited by Guzmán, Héctor, Vol. 46 (Suppl 4): Revista de Biología Tropical (1998).
- Brodie, Renae J. "Movements of the terrestrial hermit crab, Coenobita clypeatus (Crustacea: Coenobitidae)." In Marine-Terrestrial Flora and Fauna of Cayos Cochinos Archipelago, Honduras: 181–185, edited by Guzmán, Héctor, Vol. 46 (Suppl 4): Revista de Biología Tropical (1998).
- Browne, Malcolm W. Flirting male crabs found to wave claws in unison. In *The New York Times:* January 6, C4 (1998).
- Butler, Barbara, Freer, Valerie M., Jones, Phyllis R., Sabin, Walton B., and Windsor, Donald A. "A bibliography of New York State ornithology for 1996." *Kingbird* 47(4): 273–281 (1997).
- Butler, Robert W., Morrison, R.I. Guy, Delgado, Francisco S., Ross, R. Kenyon, and Smith, G.E. John. "Habitat associations of coastal birds in Panama." *Colonial Waterbirds* 20(3): 518–524 (1997).
- Cannatella, David C., Hillis, David M., Chippindale, Paul T., Weigt, Lee, Rand, A. Stanley, and Ryan, Michael, J.
 "Phylogeny of frogs of the *Physalaemus pustulosus* species group, with an examination of data incongruence." Systematic Biology. June 47(2): 311–335 (1998).
- Chai, Peng, Chang, Andrew C., and Dudley, Robert. "Flight thermogenesis and energy conservation in hovering hummingbirds." *The Journal of Experimental Biology* 201: 963–968 (1998).

- Choe, Jae Chun. "Diversity of subcortical arthropod communities in tropical and temperate forests." *Korean Journal of Biological Sciences* 1(4): 577–581 (1997).
- ———. "A new tent roost of Thomas' fruit-eating bat, Artibeus watsoni (Chiroptera: Phyllostomidae), in Panama." Korean Journal of Biological Sciences 1(2): 313–316 (1997).
- Christy, John, H., Goshima, Seiji, Backwell, Patricia, R.Y., and Kreuter, Thomas, J. "Nemertean predation on the tropical fiddler crab *Uca musica.*" *Hydrobiologia* 365: 233–239 (1997).
- Christy, John H., and Morgan, Steven G. "Estuarine immigration by crab postlarvae: mechanisms, reliability and adaptive significance." *Marine Ecology—Progress Series* 174: 51–65 (1998).
- Colinvaux, Paul A. "A new vicariance model for Amazonian endemics." *Global Ecology and Biogeography Letters* 7(2): 95–96 (1998).
- Condit, Richard. "Ecological implications of changes in drought patterns: Shifts in forest composition in Panama." *Climatic Change* 39(2-3): 413-427 (1998).
- . Tropical forest census plots: methods and results from Barro Colorado Island, Panama and a comparison with other plots. Georgetown, Texas: Springer-Verlag (1998).
- Cooke, Richard G. "The Felidae in Pre-columbian Panama." In *Icons of power: feline symbolism in the Americas*, edited by Saunders, Nicholas J. Routledge (1997).
- Cooke, Richard G., Sánchez Herrera, Luis Alberto, Isaza Aizpurúa, Ilean Isel, and Pérez Yancky, Aguilardo. "Rasgos mortuorios y artefactos inusitados de Cerro Juan Díaz, una aldea precolombina del 'Gran Coclé' (Panamá Central)." La Antigua 1998(53): 127–196 (1998).
- Cooke, Richard G., and Sánchez, L. Alberto. "Coetaneidad de metalurgia, artesanías de concha y cerámica pintada en Cerro Juan Díaz, Gran Coclé, Panamá." Boletín Museo del Oro 42(Enero-Junio): 57–85 (1997).
- Cortes, Jorge, and Guzmán, Hector M. "Organisms of Costa Rican coral reefs: description, geographic distribution and natural history of Pacific zooxantellate corals (Anthozoa: Scleractinia)." *Revista de Biologia Tropical* 46(1): 55–92 (1998).
- Crayn, Darren M., Smith, J. Andrew C., Winter, Klaus, and Terry, Randall G. "The origins of crassulacean acid metabolism in Bromeliaceae: a molecular systematic approach." Abstracts, Monocots II, 2nd International Conference on the Comparative Biology of the Monocotyledons, 27 Sept-2 Oct: 65. Sydney (1998).
- Dalling, James W., Harms, Kyle E., and Aizprua, Rafael. "Seed damage tolerance and seedling resprouting ability of *Prioria copaifera* in Panama." *Journal of Tropical Ecology* 13(4): 481–490 (1997).
- Dalling, James W., Swaine, M.D., and Garwood, Nancy C. "Dispersal patterns and seed bank dynamics of pioneer trees in moist tropical forest." *Ecology* 79(2): 564–578 (1998).
- DeGusta, David, and Milton, Katharine. "Skeletal patrologies in a population of *Allouatta palliata*: behavioral, ecological,

and evolutionary implications." International Journal of Primatology 19(3): 615–650 (1998).

- Dudley, Robert. "Atmospheric oxygen, giant Paleozoic insects and the evolution of aereal locomotor performance." The Journal of Experimental Biology 201: 1043–1050 (1998).
- Duke, Norman C. "Reforestación de manglares en Panamá." In *Ecosistemas del Manglar:* 231–258, edited by Field, C.D. Managua: Editora del Arte (1997).
- Eberhard, William G. "Grave-robbing by male Eulaema seabrai bees (Hymenoptera: Apidae)." Journal of the Kansas Entomological Society 70(1): 66 (1997).
- . "Sexual selection by cryptic female choice in insects and arachnids." In *The evolution of mating systems in insects* and arachnids: 32-57, edited by Choe, Jae and Crespi, Bernard J. Cambridge, New York and Melbourne: Cambridge University Press (1997).
- Eberhard, William G., and Huber, Bernhard A. "Courtship, copulation, and sperm transfer in *Leucauge mariana* (Araneae, Tetragnathidae) with implications for higher classification." *Journal of Arachnology* 26(3): 342–368 (1998).
- Eberhard, William G., Huber, Bernhard A., Rodriguez, S. Rafael Lucas, Briceno, R. Daniel, Salas, Isabel, and Rodriguez, Virerbo. "One size fits all? Relationships between the size and degree of variation in genitalia and other body parts in twenty species of insects and spiders." *Evolution* 52(2): 415–431 (1998).
- Emlen, Douglas J. "Alternative reproductive tactics and male-dimorphism in the horned beetle Onthophagus acuminatus (Coleoptera: Scarabaeidae)." Behavioral Ecology and Sociobiology 4I: 335-34I (1997).

Emlen, Stephen T., Wrege, Peter H., and Webster, Michael S. "Cuckoldry as a cost of polyandry in the sex-role-reversed wattled jacana, Jacana jacana." Proceedings of the Royal Society of London Series B Biological Sciences 265(1413): 2359–2364 (1998).

Engelbrecht, Bettina. "Two neotropical rainforests with different rainfall regimes: A comparison of microclimatic conditions and the diversity, abundance and distribution of congeneric understory shrubs" [abstract]. Kurzbeiträge zur Tropenökologie: Abstracts of the Final DFG Symposium 12: 89 (1998).

Engelbrecht, Bettina, and Hertz, H. "Evaluation of different methods to estimate understory light conditions in tropical forests. [Abstract]." *Kurzbeiträge zur Tropenökologie: Abstracts* of the Final DFG Symposium 12: 88 (1998).

Ewers, Frank W., Carlton, Matthew R., Fisher, Jack B., Kolb, Kimberly J., and Tyree, Melvin T. "Vessel diameters in roots versus stems of tropical lianas and other growth forms." *IAWA Journal* 18(3): 261–279 (1997).

Farji-Brener, G., and Sierra, Claudia. "The role of trunk trails in the scouring activity of the leaf-cutting ant Atta cephalotes." Ecocrete 5(2): 271–274 (1998). Fincke, Ola M. "Conflict resolution in the Odonata: implications for understanding female mating patterns and female choice." *Biological Journal of the Linnean Society* 60(2): 201–220 (1997).

Fleischer, Robert C., Tarr, Cheryl L., Morton, Eugene S., Sangmeister, Alexandra, and Derrickson, Kim C. "Mating system of the dusky antbird, a tropical Passerine, as assessed by DNA fingerprints." *Condor* 99(2): 512–514 (1997).

- Fortunato, Helena. "Calibrating phylogenies with the fossil record." 63rd AMU Meeting, *Program with Abstracts:* 28 (1997).
- ———. "Desarrollo larval en el grupo Strombina: calibración de la variación morfológica del protoconcho y su utilización para inferir el tipo de desarrollo en especies fósiles." III Congreso Latinoamericano de Malacología (III CLAMA) Abstracts: 110. (1997).
- . "Reconciling observed patterns of temporal occurrence with cladistic hypotheses of phylogenetic relationship." *American Malacological Bulletin* 14(2): 191–200 (1998).
- Fortunato, Helena, and Jackson, Jeremy B.C. "Contrasting modes of larval development across the Isthmus of Panama." Abstracts, World Congress of Malacology, Washington, D.C., Washington, D.C. (1998).
- Fortunato, Helena, Penchaszadeth, Pablo E., and Moloslavich, Patricia. "Observations on the Reproduction of Bifurcium bicanaliferum (Sowerby, 1832) (Gastropoda: Columbellidae: *Strombina*-group) from the Pacific Coast of Panama." *The Veliger* 41(2): 208–211 (1998).
- Garcés B., Humberto A., and Dominici Arosemena, Arturo. "Variaciones estacionales y espaciales en dos poblaciones de isópodos del mesolitoral arenoso de la Bahía de Panamá." La Antigua 1998(53): 65–103 (1998).
- Gilbert, Gregory S., Talaro, Nicole, Howell, Christine A., and Symstad, Amy. "Multiple-scale spatial distribution of the fungal epiphyll *Scolecopeltidium* on *Trichila* spp. in two lowland moist tropical forests." *Canadian Journal of Botany* 75(12): 2158–2164 (1997).
- Gómez Raboteaux, Nadilia Nadina. Variación foliar de Zamia fairchildiana L.D. Gómez (Zamiaceae) en el sendero natural el Cantar del Parque Nacional Chagres. Tesis de Licenciatura, Panama: Universidad de Panamá (1997).

Gompper, Matthew E. "Population ecology of the white-nosed coati (*Nasua narica*) on Barro Colorado Island, Panama." *Journal of Zoology* 241(3): 441–455 (1997).

- Gompper, Matthew E., Gittleman, J.L., and Wayne, R.X. "Genetic relatedness, coalitions and social behavior of white-nosed coatis Nasua narica." Animal Behavior 53: 781–797 (1997).
- Goos, R.D. "Fungi of Barro Colorado Island, adjacent Panama, and the Cali region of Colornbia." *Mycotaxon* 64: 375–383 (1997).
- Gray, Lucie A., and Rand, A. Stanley. "A daybreak chorus in the frog, *Agalychnis callidryas.*" *Journal of Herpetology* 3I(3): 440–441 (1997).

Guariguata, Manuel R. "Response of forest tree saplings to experimental mechanical damage in lowland Panama." Forest Ecology and Management 102(2-3): 103-111 (1998).

Guzmán, Héctor M. "Diversity of stony, soft, and black corals (Anthozoa: Scleractinia, Gorgonacea, Antipatharia; Hydrozoa: Milleporina) at Cayos Cochinos, Bay Islands, Honduras." In Marine-Terrestrial Flora and Fauna of Cayos Cochinos Archipelago, Honduras: 75–80, edited by Guzmán, Héctor, Vol. 46 (Suppl 4): Revista de Biología Tropical (1998).

Guzmán, Héctor M., and Guevara, Carlos A. "Bocas del Toro, Panama Coral Reefs: I. Distribution, structure and conservation state of continental reefs in Laguna de Chiriquí and Bahía Almirante." *Revista de Biología Tropical* 46(3): 601–623 (1998).

Guzman, Hector M., and Tudhope, Alexander W. "Seasonal variation in skeletal extension rate and stable isotopic (13C/12C and 18O/16O) composition in response to several environmental variables in the Caribbean reef coral Suderastrea siderea." Marine Ecology Progress Series 166: 109–118 (1998).

- Hamrick, James L. "Gene flow in tropical forests." *Inside CTFS* 1997(Summer): 6 (1997).
- Harms, Kyle, Dalling, James W., and Aizprua, Rafael. "Regeneration from cotyledons in *Gustavia superba* (Lecythidaceae)." *Biotropica* 29(2): 232-236 (1997).

Hastings, Philip A., and Robertson, D. Ross.
"Acanthemblemaria atrata and Acanthemblemaria mangognatha, new species of Eastern Pacific barnacle blennies (chaenopsidae) from Isla del Coco, Costa Rica and Islas Revillagigedos, Mexico, and their relationships with other barnacle blennies." Revue Francaise Aquariologie 25(3-4): 107-118 (1998).

Hau, M., Wilkelski, Martin, and Wingfield, J.C. "A neotropical forest bird can measure the slight changes in tropical photoperiod." *Proceedings of the Royal Society of London B* 265(1391): 89–95 (1998).

Hay, Mark. "Synchronous spawning: when timing is everything." *Science* 275: 1080–1081 (1997).

- Heckadon-Moreno, Stanley. "El naturista polaco Josef Von Warscewicz en Panamá, 1848 y 1851. "Epocas" Segunda Era Julio: 4–5 (1997).

Hillis, L.W., Engman, J.A., and Kooistra, W.H.C.F. "Morphological and molecular phylogenies of *Halimeda* (Chlorophyta, Bryopsidales) identify three evolutionary lineages." *Journal of Phycology* 34: 669–681 (1998).

Huber, Bernard A., and Eberhard, William G. "Courtship, copulation, and genital mechanics in *Physocyclus globosus* (Araneae, Pholcidae)." *Canadian Journal of Zoology* 75(6): 905–918 (1997). Ibáñez D., Roberto, and Jaramillo, César A. "Geographic distribution: Hyalinobatrachium chirripoi." SSARP Herpetological Review 28(1): 48 (1997).

Ibáñez D., Roberto, Jaramillo, César A., and Fuenmayor, Q. "Geographic distribution: Dendrobates granuliferus." SSARP Herpetological Review 28: 207 (1997).

Jácome, Gabriel. "Lista de Decapoda (Anomura, Chachyura) para la Reserva Biológica Cayos Cochinos, Honduras." In Marine-Terrestrial Flora and Fauna of Cayos Cochinos Archipelago, Honduras: 89–93, edited by Guzmán, Héctor, Vol. 46 (Suppl 4): Revista de Biología Tropical (1998).

Jennions, Michael D. "Reply from M.D. Jennions." Trends in Ecology and Evolution 12: 195 (1997).

Kennard, D.K. "Biomechanical properties of tree saplings and free-standing lianas as indicators of susceptibility to logging damage." Forest Ecology and Management 102(2-3): 179-191 (1998).

Kime, N.M., Rand, A. Stanley, and Ryan, M.J. "Consistency of female choice in the Tungara frog: a permissive preference for complex characters." *Animal Behaviour* 55: 641–643 (1998).

King, David A. "Influence of leaf size on tree architecture: first branch height and crown dimensions in tropical tain forest trees." *Trees* 12(438–445): (1998).

. "Relationship between crown architecture and branch orientation in rain forest trees." *Annals of Botany* 82: I-7 (1998).

Kitajima, Kaoru, Mulkey, Stephen S., and Wright, S. Joseph. "Decline of photosynthetic capacity with leaf age in relation to leaf longevities for five tropical canopy tree species." American Journal of Botany 84(5): 702-708 (1997).

"Seasonal leaf phenotypes in the canopy of a tropical dry forest: Photosynthetic characteristics and associated traits." *Oecologia Berlin* 109(4): 490–498 (1997).

Knapp, Sandra. "Two new species of Diospyros (Ebenaceae) from Mesoamerica." Novon 7(3): 256–260 (1997).

Knowlton, Nancy, Maté, Juan L., Guzmán, Héctor, Rowan, Rob, and Jara, Javier. "Direct evidence for reproductive isolation among the three species of the *Montastraea annularis* complex in Central America (Panama and Honduras)." *Marine Biology* 127(4): 705–711 (1997).

Knowlton, Nancy, and Weigt, Lee A. "Species of marine invertebrates: a comparison of the biological and phylogenetic species concepts." In Species: the units of biodiversity: 199–219, edited by Claridge, M.F., Dawah, H.A., and Wilson, M.R. V. Special Volume Series 54. United Kingdom: Chapman and Hall (1997).

Kochummen, K.M. Tree flora of Pasob Forest. Volume 44. Kepong, Kuala Lumpur: Forest Research Institute Malaysia (1997).

Kolman, Connie J., and Bermingham, Eldredge. "Mitochondrial and nuclear DNA diversity in the Choco and Chibcha Amerinds of Panama." *Genetics* 147(3): 1289–1302 (1997).

Krause, G. Heinrich, Garden, Hermann, Schmude, Claudia, Doroleva, Olga Y., and Winter, Klaus. "Photoinhibition of photosystem II in leaves of tropical plants: effects of natural UV-B and UV-A light." Satellite meeting of the X1th international congress on photosynthesis, Aug 14/17, 1998, Biological Research Station. Szeged, Hungary, Vol. Volum. HAS, OTKA, OMFB (1998).

Lessios, Haris A., Kessing, Bailey D., and Robertson, D. Ross. "Massive gene flow across the world's most potent marine biogeographic barrier." *Proceedings of the Royal Society of London Series B Biological Sciences. April.* 265(1396): 583-588 (1998).

Linares, Olga F. "Agrarian systems." In *Encyclopedia of Africa*: south of the Sahara: 17–22, edited by Middleton, John, Vol.1. New York: Simon and Schuster Macmillan (1997).

Lovejoy, Nathan R., Bermingham, Eldredge, and Martin, Andrew P. "Marine incursion into South America." *Nature* 396 (December 3): 421–422 (1998).

Lovelock, Catherine E., Kursar, Thomas A., Skillman, J.B., and Winter, Klaus. "Photoinhibition in tropical forest understory species with short- and long-lived leaves." *Functional Ecology* 12: 533–560 (1998).

Lovelock, C.E., Kyllo, D., Popp, M., Isopp, H., Virgo, A., and Winter, K. "Symbiotic vesicular-arbuscular mycorrhizae influence maximum rates of photosynthesis in tropical tree seedlings grown under elevated CO₂." Australian Journal of Plant Physiology 24(2): 185–194 (1997).

Lovelock, Catherine E., Winter, Klaus, Mersits, Roman, and Popp, Marianne. "Responses of communities of tropical tree species to elevated CO₂ in a forest clearing." *Oecologia* (*Berlin*) 116(1–2): 207–218 (1998).

Martin, Andrew P. "Systematics and evolution of Lower Central American cichlids inferred from analysis of cytochrome B gene sequences." *Molecular Phylogenetics and Evolution* 9(2): 192–203 (1998).

Martin, Andrew, P., and Bermingham, Eldredge. "Systematics and evolution of lower Central American cichlids inferred from analysis of cytochrome b gene sequences." *Molecular Phylogenetics and Evolution. April* 9(2): 192–203 (1998).

McClelland, Blinda E., Wilczynski, Walter, and Rand, A. Stanley. "Sexual dimorphism and species differences in the neurophysiology and morphology of the acoustic communication system of two neotropical hylids." *Journal* of Comparative Physiology A Sensory Neural and Behavioral Physiology 180(5): 451–462 (1997).

Milton, Katharine. "Physiological ecology of howlers (Alouatta): energetic and digestive considerations and comparison with the Colobinae." International Journal of Primatology 19(3): 513-548 (1998).

Moynihan, Martin H. "Self Awareness, with specific references to coleoid cephalopods." In Anthropomorphism, anecdotes, and animals: 213–219, edited by Mitchell, R.W., Thompson, N.S., and Miles, H.L. New York: State University of New York Press (1997).

Mueller, Ulrich G., Rehner, Stephen A., and Schultz, Ted R. "The evolution of agriculture in ants." *Science* 281(5385): 2034–2038 (1998).

Mueller, Ulrich G., and Wcislo, William T. "Nesting biology of the fungus-growing ant *Cyphomyrmex longiscapus* Weber (Attini, Formicidae)." *Insectes Sociaux* 45(2): 181–189 (1998).

Mueller-Landau, Helene. "Tropical forest remnants: ecology, management and conservation of fragmented communities, by W.F. Laurance and R.O. Bierregaard, Jr., eds., 1997 (book review)." *Ecoscience* 5(2): 280–281 (1998).

Murakami, Takahiro, and Higashi, Seigo. "Social organization in two primitive attine ants, *Cyphomyrmex rimosus* and *Myrmicocrypta ednaella*, with reference to their fungus substrates and food sources." *Journal of Ethology* 15(1): 17–25 (1997).

- Nakamura, Norio, Kojima, Shiho, Lim, Yasmina Aura, Meselhy, Meselhy R., Hattori, Masao, Gupta, Mahabir P., and Correa, Mireya. "Dammarane-type triterpenes from *Cordia spinescens.*" *Phytochemistry Oxford* 46(6): 1139–1141 (1997).
- Nason, John. "Dispersal patterns and reproductive biology of strangler figs in Panama." *Inside CTFS* Summer: 7, 14 (1997).

Nieh, James C. "The role of a scent beacon in the communication of food location by the stingless bee, *Melipona panamica.*" *Behavioral Ecology and Sociobiology* 43: 47–58 (1998).

Nieh, James C., and Roubik, David W. "Potential mechanisms for the communication of height and distance by a stingless bee, *Melipona panamica*." *Behavioral Ecology* and Sociobiology 43: 387–399 (1998).

Ogden, Nancy B. "Checklist of marine benthic algae in the Cayos Cochinos Archipelago, Honduras." In *Marine-Terrestrial Flora and Fauna of Cayos Cochinos Archipelago, Honduras:* 81–87, edited by Guzmán, Héctor, Vol. 46 (Suppl 4): Revista de Biología Tropical (1998).

O'Keefe, Sean T., and Agosti, Donat. "A new species of Probolomyrnex (Hymenoptera: Formicidae) from Guanacaste, Costa Rica." Journal of the New York Entomological Society 105(3-4): 190–192 (1997).

Pandolfi, John M., and Robertson, D. Ross. "Roles for worms in reef-building." *Coral Reefs* 17: 120 (1998).

Piperno, Dolores R. "Phytoliths and microscopic charcoal from leg 155: a vegetational and fire history of the Amazon

211

basin during the last 75 K.Y." Proceedings of the Ocean Drilling Program, Scientific Results: 411–418. (1997).

- Rand, A. Stanley, Bridarolli, Maria Elena, Dries, Laurie, and Ryan, Michael J. "Light levels influence female choice in Tungara frogs: predation risk assessment?" *Copeia* 1997(2): 447–450 (1997).
- Roberts, Tyson R. "Serpenticobitis, a new genus of cobitid fishes from the Mekong Basin, with two new species." *Natural History Bulletin of the Siam Society* 45(1): 107–115 (1997).

- "Review of the tropical Asian cyprinid fish genus *Poropuntius*, with descriptions of new species and trophic morphs." *Natural History Bulletin of the Siam Society* 46(1): 105–135 (1998).
- Robertson, D. Ross. "Do coral reef fish faunas have a distinctive taxonomic structure?" Coral Reefs, June 17(2): 179–186 (1998).
- . "The incomparable Caribbean." In *Reef Fisb '95:* recruitment and population dynamics of coral reef fishes, 103–106, edited by Jones, P.J. and Doherty, B.D. Townsville, Australia: Mapstone and L. Howert. CRC Reef Research Center (1998).
- Roubik, David W. "Inoue-san." Researchers in Population Ecology 39(2): 262–264 (1998).
- Roulston, T'ai H. "Hourly capture of two species of *Megalopta* (Hymenoptera: Apoidea; Halictidae) at black lights in Panama with notes on nocturnal foraging by bees." *Journal* of the Kansas Entomological Society 70(3): 189–196 (1998).
- Ryan, Michael J., Rand, A. Stanley, and Weigt, Lee A. "Allozyme and advertisement call variation in the Tungara frog, *Physalaemus pustulosus.*" *Evolution* 50(6), 2435–2453 (1997).
- Salazar-Allen, Noris. "Una aproximación a la flora de musgos del Cerro Hoya, Panamá." *Briolatina* 44: 7 (1998).
- ------. "Métodos sencillos para crecimiento de briófitos con fines de docencia." *Briolatina* 40: 5–7 (1997).
- ------. "Editorial." Briolatina 43: 1 (1998).
- Salazar-Allen, Noris, Arrocha, Clotilde, and Morales, María Isabel, eds. "Briolatina." *Briolatina* 41: (1997).
- Sánchez, Elizabeth M. Catálogo colectivo de publicaciones seriadas sobre zoología en dos bibliotecas y en dos centros de documentación de la Ciudad de Panamá: 1862–1995. Tesis de Licenciatura, Panama: Universidad de Panamá (1997).

- Santos-Granero, Fernando. "Writing history into the landscape: space, myth, and ritual in contemporary Amazonia." American Enthomologist 25(2): 128–148 (1998).
- Sautu, Adriana. "Nursery studies in Panama: Conservation through reforestation." Inside CTFS Summer: 13 (1997).
- Seamon, Joshua, and Adler, Gregory. "Factors affecting immigration of adults: experimental and theoretical observations with rodents." Acta Oecologica 18(6): 637–655 (1997).
- Seutin, Gilles, and Bermingham, Eldredge. "Rhodinocichla rosea is an emberizid (Aves; Passeriformes) based on mitochondrial DNA analyses." Molecular Phylogenetics and Evolution 8(2): 260–274 (1997).
- Smith, Neal Griffith. "In memoriam: Martin Humphrey Moynihan, 1928–1996." The Auk 115(3): 755–758 (1998).
- Stork, N.E., Wright, S. Joseph, and Mulkey, Stephen S. "Craining for a better view: the canopy crane network." *Trends in Ecology and Evolution* 12: 418–420 (1997).
- Telford, S.R., and Jennions, M.D. "Establishing cryptic female choice in animals." *Trends in Ecology and Evolution* 13: 216–218 (1998).
- Tewfik, Alexander, Guzmán, Héctor M., and Jácome, Gabriel. "Distribution and abundance of the spiny lobster populations (*Panulirus argus* and *P. guttatus*) in Cayos Cochinos, Honduras." In Marine-Terrestrial Flora and Fauna of Cayos Cochinos Archipelago, Honduras: 125–136, edited by Guzmán, Héctor, Vol. 46 (Suppl 4): Revista de Biología Tropical (1998).
- Thiele, Alexandra, Winter, Klaus, and Krause, G. Heinrich. "Low inactivation of DI protein of photosystem II in young canopy leaves of *Anacardium excelsum* under high-light stress." *Journal of Plant Physiology* 151(3): 286–292 (1997).
- Thies, Wibke, Kalko, Elisabeth K.V., and Schnitzler, Hans-Ulrich. "The roles of echolocation and olfaction in two neotropical fruit-eating bats, *Carollia perspicillata* and *C. castanea*, feeding on piper." *Behavioral Ecology and Sociobiology* 42: 397–409 (1998).
- Tomblin, David C., and Adler, Gregory H. "Differences in habitat use between two morphologically similar tropical forest rodents." *Journal of Mammalogy* 79(3): 953–961 (1998).
- Travers, Steven E., Gilbert, Gregory S., and Perry, Ethan F. "The effect of rust infection on reproduction in a tropical tree (*Faramea occidentalis*)." *Biotropica* 30(3): 438–443 (1998).
- Velásquez Runk, Julie. "Productivity and sustainability of a vegetable ivory palm (*Phytelephas aequatorialis*, Arecaceae) under three management regimes in northwestern Ecuador." *Economic Botary* 52(2): 168–182 (1998).
- Velayos, Mauricio, Correa, Mireya, Galdames, Carmen, and Castroviejo, Santiago Araúz. "Primera aproximación al catálogo de las plantas vasculares de la Isla de Coiba (Panamá)." In Flora y Fauna del Parque Nacional de Coiba (Panamá), edited by Castroviejo, Santiago. Madrid: Real Jardín Botánico (1997).
- Vencl, Fredric V., and Aiello, Annette. "A new species of leaf-mining *Oulema* from Panama (Coleoptera:

Chrysomelidae; Criocerinae)." Journal of the New York Entomological Society 105(1-2): 40-44 (1997).

Ventocilla, Jorge. "Cacería en huertas entre los indígenas Kunas del Caribe de Panamá." In Manejo de fauna silvestre en la Amazonía: 111–117, edited by Fang, Tula G., Bodmer, Richard E., Aquino, Rolando, and Valqui, Michael H. La Paz, Bolivia: OFAVIM (1997).

Villalaz, Janzel R., and Gómez, Juan A. History, present condition, and future of the molluscan fisheries of Panama: 33–40, edited by NOAA Technical Report NMFS, 128 (1997).

Weislo, William T. "Are behavioral classifications blinders to studying natural variation?" In *The evolution of social behavior in insets and arachnids:* 8–13, edited by J.C. Choe and B.J. Crespi. Cambridge: Cambridge University Press (1997).

"Behavioral environments of sweat bees (Halictinae) in relation to variability." In *The evolution of social behavior in insects and arachnids:* 316–332, edited by J.C. Choe and B.J. Crespi. Cambridge: Cambridge University Press (1997).

Wcislo, William T., and Danforth, Bryan N. "Secondarily solitary: the evolutionary loss of social behavior." *Trends in Ecology and Evolution* 12(12): 468–474 (1997).

West, S.A., and Allen, Herre E. "Stabilizing selection and varience in fig wasp sex ratios." *Evolution* 52(2): 475-485 (1998).

West, S.A., Herre, E.A., Compton, S.G., Godfray, H.C.J., and Cook, J.M. "A comparative study of virginity in fig wasps." *Animal Behaviour* 54: 437–450 (1997).

Williams, S.T., and Benzie, J.A.H. "Indo-West Pacific patterns of genetic differentiation in the high-dispersal starfish *Linckia Laevigata*." *Molecular Ecology* 6(6): 559–573 (1997).

Wilson, David T., and McCormick, Mark I. "Spatial and temporal validation of settlement-marks in the oroliths of tropical reef fishes." *Marine Ecology Progress Series* 153(1-3): 259-271 (1997).

Winter, Klaus, Richter, Andreas, Engelbrecht, Bettina, Posada, Juan, Virgo, Aurelio, and Popp, Marianne. "Effect of elevated CO₂ on growth and crassulacean-acid-metabolism activity of *Kalanchoe pinnata* under tropical conditions." *Planta Heidelberg* 201(4): 389–396 (1997).

Winter, Klaus, and Virgo, Aurelio. "Elevated CO₂ enhances growth in the rain forest understory plant, *Piper cordulatum*, at extremely low light intensities." *Flora Jena*. July 193(3): 323–326 (1998).

Wolda, Henk, O'Brien, Charles W., and Stockwell, Henry P. "Weevil diversity and seasonality in tropical Panama as deduced from light-trap catches (Coleoptera: Curculionoidea)." Smithsonian Contributions to Zoology 590: I-79 (1998).

Wuerth, Mirjam K.R., Winter, Klaus, and Koerner, Christian. "Leaf carbohydrate responses to CO₂ enrichment at the top of a tropical forest." *Oecologia Berlin. Aug.* 116(1-2): 18-25 (1998).

Wulff, Janie L. "Parrotfish predation on cryptic sponges of Caribbean coral reefs." *Marine Biology Berlin* 129(1): 41–52 (1997).

Zeh, David W., Zeh, Jeanne A., and Bermingham, Eldredge. "Polyandrous, sperm-storing females: Carriers of male genotypes through episodes of adverse selection." *Proceedings of the Royal Society of London Series B Biological Sciences* 264(1378): 119–125 (1997).

Zeh, Jeanne A., Newcomer, Scott D., and Zeh, David W. "Polyandrous females discriminate against previous mates." Proceedings of the National Academy of Sciences of the United States of America 95(23): 13732–13736 (1998).

Zeh, Jeanne A., and Zeh, David W. "The evolution of polyandry II: Post-copulatory defenses against genetic incompatibility." Proceedings of the Royal Society of London Series B Biological Sciences 264(1378): 69-75 (1997).

Zhao, Zhijun, Pearsall, Deborah M., Benfer, Robert A., Jr., and Piperno, Dolores R. "Distinguishing rice (Oryza sativa Poaceae) from wild Oryza species through phytolith analysis, II: Finalized method." Economic Botany 52(2): 134–145 (1998).

Zotz, Gerhard. "Demography of the epiphytic orchid, Dimerandra emarginata." Journal of Tropical Ecology 14: 725–741 (1998).

Zotz, Gerhard, Budel, S., Meyer, A., Zellner, H., and Lange, O.L. "In situ studies of water relations and CO₂ exchange of the tropical macrolichen, Sticta tomentosa." New Phytologist 139: 525-535 (1998).

Zotz, Gerhard, and Ziegler, H. "The occurrence of crassulacean acid metabolism among vascular epiphytes from Central Panama." *New Phytologist* 137(2): 223–229 (1997).

Center for Museum Studies

Cooper, Karen Coody, ed. *Tribal Museum Directory*. Center for Museum Studies, Smithsonian Institution, 1998.

Office of Exhibits Central

Altman, Diana Cohen, "Exhibit Design Meets the Web." *Exhibitionist* magazine (a publication of the National Association for Museum Exhibition, the standing professional committee on exhibition of the American Association of Museums), Vol. 18, No. 1 (Spring 1998).

National Science Resources Center

- STC Meets the Standards (rev.). Burlington, NC: Carolina Biological Supply Company, 1998.
- Discovery Deck: Magnets and Motors. Burlington, NC: Carolina Biological Supply Company, 1998.
- Discovery Deck: Food Chemistry. Burlington, NC: Carolina Biological Supply Company, 1998.
- Discovery Deck: Experiments with Plants. Burlington, NC: Carolina Biological Supply Company, 1998.
- Discovery Deck: Measuring Time. Burlington, NC: Carolina Biological Supply Company, 1998.
- Discovery Deck: Land and Water. Burlington, NC.: Carolina Biological Supply Company, 1998.

Smithsonian Institution Archives

- Bain, Alan L. "Smithsonian Institution Archives: Its History and Activities on Digital Imaging," conference paper. Proceedings of the Second Documenting Japan International Seminar, January 21, 1998.
- Glaser, Jane, editor. *It* (Newsletter of the International Commmittee for the Training of Personnel (ICTOP) of the Interational Council of Museums) 15, no. 1 (March 1998) and 15, no. 2 (August 1998).
- Henson, Pamela M. "The Smithsonian Institution," in A Historical Guide to the U.S. Government, edited by George T. Kurian, et al. New York, Oxford University Press, 1998.
- Millikan, Frank R. "Joseph Henry's Grand Meteorological Crusade." *Weatherwise*, v. 50, no. 5 (October/November 1997): 14–17.
- National Collections Program. Smithsonian Institution Collection Statistics, 1997. Washington, D.C.: Smithsonian Institution Archives, 1998.
- Rothenberg, Marc. "Smithsonian's commitment to Native Americans began with Henry," *Torch*, 97–11 (November 1997): 3.
- . Union General paid final respects to Henry with a touching eulogy," *Torch*, 97–12 (December 1997): 3.

- Smithsonian Institution Archives. OSIA Annual Report for Fiscal Year 1997. Washington, D.C.: Smithsonian Institution Archives, March 1998.
- Tompkins, William G. "Legal and Erhical Issues: Fish and Wildlife." *The New Museum Registration Methods*, edited by Rebecca A. Buck and Jean Allman Gilmore. Washington, D.C.: American Association of Museums, 1998.
- Williams, Kathleen. "Smithsonian Institution Archives news in brief," *Museum Archivist*, v. 12, no. 2 (September 1998): 7–8.

Smithsonian Institution Libraries

- Carr, Tim and Debra Shumate. "Postal Service in Colonial America: a Bibliography of Material in the Smithsonian Institution Libraries' National Postal Museum Branch." *Philatelic Literature Review* 47 (no. 1, 1998).
- DeGroff, Amy B. "The Edge of the Web: Half-Caf Java—Using JavaScript to Power Web Pages." *LITA Newsletter* 18(1) (Winter 1997): 22–23.

Ellis, Janice Stagnitto. "Aloft in a Balloon: Treatment of a Scrapbook of an Early Aeronautica Collected by William Upcott, 1783–1840" in *The Book and Paper Group Annual.* American Institute for Conservation, 16 (1997): 9–13.

- Journal 122 (17) (October 15, 1997): 91.
- . Review. The Prodigy by Noel Hynd. Library Journal 122 (19) (November 15, 1997): 76.

Nancy E. Gwinn. Review. From Grants to Gigabytes: Communications and Society by Dan Lacy. The Library Quarterly 67 (4) (October 1997): 399–402.

- Carolyn Hamilton. "Sharing the Joy of Giving at New Southern Rock" in *The Washington Informer* 34 (33) (June 3–10, 1998): 18.
- Martin R. Kalfatovic and Amy B. DeGroff. "Project Access: Providing Internet Access to the Smithsonian Institution Research Community" in Finding Common Ground: Creating the Library of the Future Without Diminishing the Library of the Past. Cheryl M. LaGuardia and Barbara A. Mitchell, eds. 27–36. New York: Neal-Schuman, 1998.
- . (With Joan Stahl.) "An Insider's Guide to Washington, D.C." *Library Journal* 123 (10) (June 1, 1998, Special Supplement): S15.
- -------. "What's Everyone Reading? (Nikolai Gogol: The Fastest Troika Imaginable)." Friends of the Arlington Public Library News (Summer 1998): 4.

———. "Edge of the Web: What's WYSIWYG for You is WYSIWYG for Me: Cascading Style Sheets." LITA Newsletter 19.2 (Spring 1998). At http://www.lita.org/newslett/.

. Review. "Jumping JavaScript" by Janice Winsor and Brian Freeman (1997). Telecommunications Electronic Review (TER) 5.4 (May 1998). At http://www.lita.org/ter/ter-5-4.html.

. Review. "Sotheby's: The Inside Story" by Peter Watson. Library Journal 123 (3) (February 15, 1998): 138.

. Review. "Building the Getty" by Richard Meier (1997). Library Journal 122.20 (December 1997): 98.

. Review. "The Art Forger's Handbook" by Eric Hebborn (1997). Library Journal 122 (15) (September 15, 1997): 68.

. Review. "Encyclopedia of Physical Anthropology." (1997). RQ 36 (4) (Summer 1997): 603–4.

Amy E. Levin. "Bibliography for Women's History Month: Health, History, and Lifestyle." At http://www.sil.si.edu/SILPublications/womenshistorybib.htm (August 1998).

Sheila M. Riley. "A Report from the ALCTS/LITA Program: 'Managing Metadata for the Digital Library'" LITA Newsletter 19 (3) Summer 1998. Also at http://www.lita.org/newslett/v19n3/19963tx.4c.

. Review. "Tell Me Lies" by Jennifer Cruise. Library Journal 123 (3): 169. February 15, 1998.

. Review. "The Unexpected Salami" by Laurie Gwen Shapiro. Library Journal 123 (6): 125. April 1, 1998.

. Review. "Ghost Children" by Sue Townsend. Library Journal 123 (10): 161. June 1, 1998.

Lucien R. Rossignol with Rosalee McReynolds. "Using ProQuest Statistics as an Aid in Collection Development" in *Proceedings of the North American Serials Interest Group*, eds.C.N. Simser and M.A. Somers, pp. 263–266. Binghamton, N.Y.: Haworth Press, Inc., 1998.

Janet L. Stanley. Modern African Art (1998), at www.sil.si.edu.

Mary Augusta Thomas, Pat Ensor, and Milton T. Wolf, eds. Information Imagineering: Meeting at the Interface. Chicago: American Library Association, 1998.

Smithsonian Office of Education

Smithsonian in Your Classroom

"How Things Fly: Activities for Teaching Flight" Sep/Oct 1997

"Plants and Animals: Partners in Pollination" Nov/Dec 1997 "Teaching from Objects and Stories: Learning about the

Bering Sea Eskimo People," Jan/Feb 1998

"What Is Currency? Lessons from Historic Africa," May/Jun 1998

Institutional Studies Office

 Bielick, S. and Doering, Z.D. 1998. Selected Characteristics of the Smithsonian Institution (SI) Workforce (Research Note 98–10).
 Washington, D.C.: Smithsonian Institution.

Bielick, S. and Karns, D.A. 1998. Still Thinking About Thinking (Report 98–5). Washington, D.C.: Smithsonian Institution.

- Diehl, S.K. and Kalata, J.M. 1998. Uniting Lives: Constituent Perspectives on the 1997–98 School Year Anacostia Museum/Center for African American History and Culture and Lucy E. Moten Elementary School Partnership (Research Note 98–5). Washington, D.C.: Smithsonian Institution.
- DiGiacomo, K.R. and Doering, Z.D. 1998. 1997 Visits to Smithsonian Museums (Report 98-2). Washington, D.C.: Smithsonian Institution.
- DiGiacomo, K.R., Karns, D.A., and Doering, Z.D. 1998. Teachers Talk: A Study of Smithsonian in Your Classroom conducted for the Smithsonian Office of Education (Report 98–8). Washington, D.C.: Smithsonian Institution.
- DiGiacomo, K.R. with Karns, D.A., Pekarik, A.J., Smith, S. J, Doering, Z.D. 1999. Summer Visitors to The Janet Annenberg Hooker Hall of Geology. Gems and Minerals at the National Museum of Natural History (Report 99–1). Washington, D.C.: Smithsonian Institution.

Doering, Z.D., DiGiacomo, K.R. and Pekarik, A. 1998. Images of Native Americans: A Background Visitor Study for the National Museum of the American Indian (Report 98-3). Washington, D.C.: Smithsonian Institution.

Doering, Z.D., Pekarik, A.J., and Kindlon, A.E. 1997. Exhibitions and Expectations: The Case of "Degenerate Art." *Curator*, 40 (2) (Research Note 97–9).

Doering, Z.D. and Smith S.J. 1998. *Racial and Ethnic Distributions* (Research Note 98–1). Washington, D.C.: Smithsonian Institution.

 Doering, Z.D., Smith, S.J. and Kalata, J.M. 1998. Smithsonian Contributing Members: Results from the 1997 Contributing Membership Program Survey (Report 98–1). Washington,
 D.C.: Smithsonian Institution (Report 98–1A: Summary).

Institutional Studies Office. 1998. Background Studies for BodyWorks: A Forthcoming Exhibition at the National Museum of American History (Research Note 98–3). Washington, D.C.: Smithsonian Institution.

- Institutional Studies Office. 1998. Exploring Amazonia: Three Studies of Visitors at the National Zoological Park (Report 98–9). Washington, D.C.: Smithsonian Institution.
- Institutional Studies Office. 1998. NASM Tracking Study: Background for a Wayfinding System (Research Note 98–4). Washington, D.C.: Smithsonian Institution.

Institutional Studies Office. 1998. Science on the Mall: Concept Testing Interviews Summary Report (Research Note 98–2). Washington, D.C.: Smithsonian Institution.

Institutional Studies Office. 1998. Talks with Engaged Visitors at the National Museum of American Art and the National Portrait Gallery (Research Note 98–7). Washington, D.C.: Smithsonian Institution.

Institutional Studies Office. 1998. Visitor Responses to the Mammal Hall at the National Museum of Natural History (Research Note 98–6). Washington, D.C.: Smithsonian Institution.

Kalata, J.M. 1998. Air Transportation: Exhibition Plan Interviews Summary Report (Research Note 98–11). Washington, D.C.: Smithsonian Institution.

Kalata, J.M. and Barone, N. 1998. Combining Early Childbood Education and Museum Learning: A Seminar Evaluation (Research Note 98–12). Washington, D.C.: Smithsonian Institution.

- Kalata, J.M., Doering, Z.D., and Pekarik, A.J. 1997. On the Road with Rock and Soul. *Curator*, 40 (4) (Research Note 97–10).
- Smith, S. J and Pekarik, A. 1998. More Asian Art Experiences: Visitor Preferences and Responses to Twelve Centuries of Japanese Art from the Imperial Collection (Report 98–7). Washington, D.C.: Smithsonian Institution.

Office of General Counsel

Browne, Rachelle V. (Coauthor) Building Community Museums.

Office of Public Affairs

Blue Bulletin. A biweekly two-to-four-page newsletter with administrative information for staff. Circulation is to every Smithsonian staff member. Editor: Colleen Hershberger

- The Torch. A monthly newspaper for Smithsonian employees, which highlights staff roles in research, exhibitions, collections and other activities; exhibitions "Now Showing"; classified ads; staff "Spare Time" activities; and more. Circulation is 10,600, which includes staff, volunteers, Smithsonian boards and commissions, and a list of interested individuals and organizations outside the Smithsonian. Editor: John Barrat
- Smithsonian Institution Research Reports. A quarterly newsletter that disseminates information on Smithsonian research to an audience of some 60,000 readers, mostly Smithsonian Contributing Members but also scientists, scholars, libraries, museums, universities, journalists and others. Editor: Jo Ann Webb

The Smithsonian Institution and Its Subsidiaries, September 30, 1998

The Secretary

Office of the Secretary

The Secretary I. Michael Heyman Executive Assistant James M. Hobbins Deputy Executive Assistant Kathy A. Boi Personal Assistant Barbara A. Cederborg Administrative Assistant Carol F. Anderson Special Assistant Leigh White Secretariat Records Management Supervisor Betty J. Russell

Office of Inspector General

Inspector General Thomas D. Blair Deputy Inspector General and Counsel Richard C. Otto Office Assistant Earl R. Bice Administrative Officer Henry E. Goode Jr. Auditor Peter D. Gould Auditor Denita B. Henderson Criminal Investigator Robert L. Johnson Auditor Seksin Kardmai Supervisory Auditor Kevin E. Kreitz Auditor Lynn E. Lantz Auditor Lisa V. Leonard Auditor Gary S. Ling Supervisory Auditor Brian W. Lowe Criminal Investigator Anthony G. Medici Management Analyst Kimm A. Richards Supervisory Criminal Investigator Gerard A. Roy Auditor Joyce E. Smith Supervisory Auditor Joan M. Trudeau

Office of Planning, Management and Budget

Director L. Carole Wharton Assistant Director for Budget Formulation and Execution C. Austin Matthews Assistant Director for Compliance and Representation Mary J. Rodriguez Assistant Director for Program Planning and Management Support Kathleen R. Johnson Assistant Director for Policy Development Margaret C. Gaynor Associate Director for Systems and Administrative Support Jack D. Zickafoose

Office of Membership and Development

Executive Director for Development Robert V. Hanle Director of Individual Giving and Volunteer Relations Diana D. Duncan Director of Administration and Operations Margo H. Knight Director for Corporate Relations Joni Henderson Development Officers Barbara W. Freeman Carrie Harrison Linda A. Robertson Program Manager, Smithsonian National Board Judie Boerger Database Coordinator Ann Angel Bissell

Administrative Program Officer Jerry Jankowski Writer/Edstor Grey Hautaluoma

Contributing Membership Program Manager Christine Skennion

Smithsonian Women's Committee

Program Coordinator Cynthia Goodson

The Provost

Office of the Provost

The Provost J. Dennis O'Connor Executive Officer for Administration Mary Tanner Exectuive Officer for Programs Barbara Schneider Ruth Selig Confidential Assistant Sandy Reid SI Webmaster Peter House Web Manager Melissa Lane Awards Administrator Joan Zavala Administraive Officer Arleen McClain Program Assistant Vera Chase Secretary Iris Washington Program Specialist Neil Kotler Program Assistant Priscilla Brown Computer Specialist Rafael Pena Program Analyst Richard Haas Management Support Assistant Taneesha Barnes

Anacostia Museum and Center for African American History and Culture

Director

Steven Cameron Newsome Associate Director for Research and Collections Deborah Willis Associate Director for External Affairs Shireen Dodson Associate Director for Public Service Robert Hall Associate Director for Facilities and Special Projects Sharon A. Reinckens

Archives of American Art

Director Richard J. Wartenmaker West Coast Regional Director Paul J. Karlstrom Curator of Manuscripts Elizabeth S. Kirwin Editor, Journal Darcy Tell Assistant to the Director and Liaison to the Board of Trustees Skip Moellman Assistant Director for Archival Programs James B. Byers Chief, Collections Processing Barbara Dawson Aikens Registrar Susan Cary Chief, Reference Services Judith E. Throm Catalog and Internet Resources Manager Karen B. Weiss

Assistant Director for Operations Dianne G. Niedner Administrative Officer Brinah White Assistant Director, Membership and Development Nora Trebbe Maroulis Grant Coordinator Mary Piznar Membership Coordinator Athena Kaldis Curator Emeritus Garnett McCoy

Cooper-Hewitt, National Design Museum

Director Dianne Pilgrim Special Assistant to the Director Thomas Reynolds Assistant Director for Administration Linda Dunne Special Assistant to the Director Nerissa Tackett Assistant Director for Public Programs Susan Yelavich Financial Program Administrator Robin A. Schlinger Management Analyst Lorna Hannah Budget Assistant Rona Simon Museum Shop Manager Chris Masaoay Assistant Shop Manager Oliver Hummel Facilities Manager Angelo Rodriguez Head of Development and Public Affairs Laura James Assistant Development Officer Katherine Reed Public Information Specialist Barbara Livenstein Special Events Manager

Pamela Haylock

Coordinator Marla Musick Registrar Cordelia Rose Associate Registrar Steve Langehough Assistant Registrar Juliette Ibelli Head of Security James Kirk Assistant Curator of Applied Arts & Industrial Design Deborah Shinn Curator of Drawings & Prints Marilyn Symmes Assistant Curator Gail Davidson Paper Conservator Konstanze Bachmann Curator of Textiles Gillian Moss Senior Researcher Milton Sonday Textiles Conservator Lucy Commoner Collectikons Manager Barbara Duggan Curator of Wallcoverings Joanne Kosuda-Warner Head of Design Department Ellen Lupton Exhibition Curator, Special Projects Lucy Fellowes Exhibition Specialist Christine McKee Writer-Editor Patty O'Connell Librarian Stephen Van Dyk Reference Librarian Claire Gunning Head of Education Dorothy Dunn Program coordinator for School Programs Kerry MacIntosh Program Coordinator for Audience Development Sharon Mei Mah Program Coordinator for Adult Audience Egle Zygas

Membership & Volunteer

Department Head, Image Rights & Reproduction / Photographic Services Jill Bloomer Head of Plant Services John Hanson Director of the Cooper-Hewitt Museum / Parson's Master Program Maria Conelli

Center for Folklife Programs and Cultural Studies

Director Richard Kurin Deputy Director Richard Kennedy Director and Curator. Smithsonian Folkways Recordings Anthony Seeger Director, Smithsonian Folklife Festival Diana Parker Director, Cultural Studies and Communication James Early Senior Ethnomusicologist Thomas Vennum, Jr. Assistant Director, Smithsonian Folkways Amy Horowitz Administrative Officer Barbara Strickland Folklorists Olivia Cadaval Diana Baird N'Diaye Peter Seitel Folklorists/Education Specialists Betty J. Belanus Marjorie Hunt Festival Technical Director/ Folkways Sound Production Supervisor Pete Reiniger Program/Publications Manager Carla M. Borden Program Manager John W. Franklin

Design Director Kenn Shrader Coordinator, Latino Cultural Resource Network Cynthia Vidaurri Program Specialist/Intern Coordinator Arlene Reiniger Archivist C. Jeffrey Place Assistant Archivist Stephanie Smith Media Specialist Charles Weber Administrative Assistants Linda Benner Bill Holmes Heather MacBride Cultural Studies and Communication Program Assistant Cenny Hester Folkways Manufacturing Coordinator Michael Maloney Folkways Specialist Dudley Connell Folkways Marketing Manager Brenda Dunlap Assistant Folkways Marketing Manager Chris Weston Folkways Production Coordinator Mary Monseur Folkways Sound Engineer Tom Adams Folkways Fulfillment Specialists Lee Michael Demsey Judy Gilmore Matt Levine Ronnie Simpkins Research Associates Roland Freeman Daniel Goodwin Ivan Karp Alan Lomax Worth Long Rene Lopez Research Collaborator Kate Rinzler

Hirshhorn Museum and Sculpture Garden

Director James T. Demetrion Assistant Director for Administration Beverly Lang Pierce Assistant Director for Art and Public Programs Neal Benezra Curators Valerie J. Fletcher Frank Gertings Judith Zilczer Phyllis Rosenzweig Olga M. Viso Publications Manager Jane McAllister Head, Public Affairs Sidney Lawrence Librarian Anna Brooke Chief Photographer Lee Stalsworth Education Program Director Linda Powell (from June 1998) Conservators Laurence Hoffman Lee Aks A. Clarke Bedford Susan Lake Chief, Exhibits and Design Edward Schiesser Design and Production Supervisor Robert Allen Registrar Brian Kavanagh Building Manager Fletcher Johnston Assistant Building Manager Pamela Smith

National Air and Space Museum

Director Donald D. Engen Deputy Director Donald S. Lopez Manager, Capital Campaign/Development Ronald Mirenda Supervisory Development Officer Anne Seeger Supervisor, Public Affairs J. Michael Fetters Manager, Special Events Linda Hicks

Collections and Research Department

Associate Director for Collections and Research Ted A, Maxwell

Aeronautics Division

Chairman Dominick A. Pisano Curators Tom Alison John Anderson Dorothy Cochrane Tom Crouch R.E.G. Davies Von D. Hardesty Peter Jakab Russell E. Lee Richard Leyes Michael J. Neufeld F. Robert van der Linden

Space History Division

Acting Chairman Allan A. Needell Curators Paul E. Ceruzzi Martin Collins David DeVorkin Cathleen S. Lewis Valerie Neal Frank Winter

Center for Earth and Planetary Studies Division

Chairman

Bruce A. Campbell Geologists Mary Bourke Patricia A. Jacobberger Jellison James R. Zimbelman Robert A. Craddock Thomas Watters Geophysicist Bruce A. Campbell Geographer Frederick Engle Andrew Johnston

Collections Division

Chief, Collections Division Thomas M. Alison Chief, Preservation/Restoration Unit William C. Reese Chief, Collections Processing Unit John E. Fulton Conservator Ed McManus

Archives Division

Chairman Thomas F. Soapes Supervisory Archivist Marilyn Graskowiak Supervisory Technical Information Specialist Dana Bell

Exhibits and Public Services Department

Associate Director for Exhibits and Public Services Nadya A. Makovenyi

Exhibits Division

Chief Sandy Rittenhouse-Black Chief, Design Unit Stephen H. Estrada Supervisor, Audiovisual Unit David N. Heck Supervisor, Production Unit David Paper Chief, Media Unit Patricia A. Woodside Planetarium Director Cheryl Bauer

Public Services Division

Chief LeRoy London Supervisor, Education Unit Maureen Kerr Manager, Theater/Planetarium Operations Robert Watson Coordinator, Docent Program Unit Carolyn Triebel

Administrative Services Department

Associate Director for Administrative Services Elizabeth R. Scheffler

Information Technology Division

Manager Phouy Sengsourinh

Building Management Division

Building Manager Richard Kowalczyk Special Assistant for Plans Claude D. Russell

National Museum of African Art

Director Roslyn A. Walker Assistant Director, Administration Patricia L. Fiske Assistant Director, Exhibit Design and Facility Alan Knezevich Senior Scholar Emeritus Roy Sieber

Curatorial Department

Curators Lydia Puccinelli Assistant Curators Bryna Freyer Andrea Nicolls

Public Affairs Department

Public Affairs Officer Janice L. Kaplan

Education Department

Curator of Education Edward Lifschitz Assistant Curator of Education Veronika Jenke Education Specialists Peter Pipim

Registration Department

Registrar Julie Haifley

Conservation Department

Conservator Steve Mellor

Eliot Elisofon Photographic Archives

Curator of Photographic Archives Christraud M. Geary

Warren M. Robbins Library

Librarian Janet Stanley

Publications Office

Writer-Editor Migs Grove

National Museum of American Art

Office of the Director

Director Elizabeth Broun Deputy Director Charles J. Robertson

Curatorial Office

Chief Curator Jacquelyn D. Serwer Deputy Chief Curator Lynda R. Hartigan Associate Curator (Painting and Sculpture) Andrew L. Connors Senior Curator (Photography) Merry A. Foresta Curator (Sculpture) George Gurney Associate Curator (Latino art) Helen M. Lucero Senior Curator (Painnting and Sculpture) Virginia M. Mecklenburg Senior Curator (Graphic Arts) Joann G. Moser Senior Curator (Painting and Sculpture) Richard N. Murray Senior Curator (Painting and Sculpture) William H. Truettner Collections Research Coordinator Gwendolyn F. Everett Senior Conservator Stefano Scaferra

Renwick Gallery

Curator-in-Charge Kenneth R. Trapp Senior Curator Jeremy Adamson Operations Administrator Ellen M. Myette

Research & Scholars Center

Chief Rachel M. Allen Intern Program Officer Judith H. Houston Librarian Cecilia H. Chin Research Database Coordinator Christine Hennessey Collection Database Administrator Mary Ellen Guerra Coord. of Image Collections Joan R. Stahl

Office of Educational Programs

Chief Nora M. Panzer Public Programs Coordinator N. Faye Powe

Office of Registration & Collection Management

Registrar Melissa L. Kroning Associate Registrar Abigail Terrones Asst. Registrar (Packing and Shipping) Michael R. Smallwood

Office of Design & Production

Chief John R. Zelenik Designer Claire F. Larkin Graphics Coordinator/Designer Robyn L. Kennedy Exhibitions Project Coordinator Anthony R. Giuffreda

Administrative Office

Administrative Officer Maureen E. Damaska

Office of External Affairs

Chief W. Robert Johnston Deputy Chief Barbara M. Cox Special Events Coordinator Elizabeth R. Ward

Office of Print & Electronic Publications

Chief Theresa Slowik

Office of Development

Development Officer Katie M. Ziglar Membership Marketing Coordinator Maria Vallecillo Acting Public Affairs Officer Judith Bell

Office of Information Technology

Chief Thornton Staples Computer Support Manager Michael Cummings

Head, New Media Initiatives Jeffrey Gates Project Dir., New Media Learning Environments Sherwood A. Dowling

National Museum of American History

Office of the Director

Director Spencer Crew Deputy Director Martha Morris Assistant Director for Strategic Initiatives Katherine Spiess Special Assistant to the Director Debora Scriber Miller Secretary Tarika Carter King Management Support Assistant Sillvan Carlson Planning Specialists Nanci Edwards Kathleen Fleming Patrick Ladden

Project Management Office

Project Management Coordinator Eleanor Boyne

Office of Curatorial

Affairs

Associate Director Lonnie Bunch III Program Manager Lynn Chase Assistant to the Associate Director Joyce Ramey

Special Projects Office

Project Managers Camilla Clough Kate Henderson Museum Specialist David Miller

Department of History

Acting Assistant Director Ramunas Kondratas

Interdisciplinary Initiatives Arthur Molella Secretaries Arevivia Amos Vickie Tierney Chandra Williams Management Support Assistant Wendy Watkins Collections Support Office Museum Specialists Lisa Brenner Bishop Alicia Cutler Jane Fortune Kathleen Golden Lisa Kathleen Graddy Jim Hughes Sue Ostroff Janet Rockenbaugh Jane Rogers Wavne E. Wakefield Diane Wendt

Assistant Director for

Smithsonian Without Walls

Director Judith Gradwohl Program Coordinator Kathleen Connolly Program Specialist Ione Anderson

Archives Center

Chief Archivist John A. Fleckner Deputy Chief Archivist Robert S. Harding Archivists David E. Haberstich Reuben M. Jackson Cathy Keen Ann Kuebler Mimi Minnick Craig A. Orr Alison Oswald Deborra A. Richardson Scott W. Schwartz Wendy Shay Program Assistant Graciella Berkovich Historian Fath Davis Ruffins

Museum Specialist Vanessa Broussard Simmons

Division of Cultural History

Chair Rex Ellis Assistant Chair Odette Diaz Schuler Administrative Technician Jane Woodall Management Support Assistants Lynetta Jones David Hill Curators James Weaver Richard Ahlborn Rayna D. Green John Edward Hasse Cynthia Adams Hoover Charles F. McGovern Marvette Perez Harry Rand Historians Dwight Blocker Bowers James Oliver Horton Program Coordinators Howard Bass Kenneth Kimery Matthew Watson Project Assistants Deena Gift John McKiernan-Gonzalez Museum Specialists Ellen Roney Hughes David H. Shayt Gary Sturm Exhibits Interpreter Kimberly Kelly Producer James Zimmerman

Smithsonian Chamber Music Society

Executive Director Patrick Rucker Artistic Director Kenneth Slowik Division of the History of Technology

Chair Steven Lubar Assistant Chair **Jennifer** Locke Clerk Typist Grace Boone Secretary Shirley Jordan-Stanton Curators Pete Daniel Paul F. Johnston Donald E. Kloster Carlene Stephens Jeffrey K. Stine William L. Withuhn Bardton Hacker Museum Specialists Harry Hunter Paula Johnson Larry Jones Peter Liebhold Sarah Rittgers David Todd L. Susan Tolbert Margaret Vining Roger White William E. Worthington Timothy Mitchell Margaret Dennis Historian Emeritus James S. Hutchins

Division of Information Technology and Society

Acting Chair Helena Wright Chair David Allison Assistant Chair Joan Boudreau Secretary Cynthia Joynes Program Manager Karen Lee Curators Richard G. Doty Jon B. Eklund Bernard S. Finn Paul Forman Elvira Eliza Clain-Stefanelli Museum Specialists Nance Briscoe Michelle Delaney Peggy Kidwell Douglas Mudd R. Stanley Nelson Roger Sherman Elliot Sivowitch Shannon Thomas Harold Wallace Curator Emeritus Elizabeth M. Harris Management Support Assistant Queen Brown

Division of Science, Medicine and Society

Chair Ray Kondratas Assistant Chair Steven Turner Secretary Gertrude Ross-Padgett Museum Specialists Judy Chelnick Ann M. Seeger Curators Ion B. Eklund Patricia Gossel G. Terry Sharrer Linda Tucker Deborah J. Warner Katherine Ott

Division of Social History

Chair Susan Myers Assistant Chair Shelly Foote Secretaries Dovon Harris Kim Knoblock Jennifer Strobel Museum Specialists Marilyn Higgins Sheila Alexander Doris M. Bowman Barbara S. Janssen Claudia Brush Kidwell Bonnie E. Lilienfeld Jennifer Oka Harry Rubenstein Anne M. Serio Melodie Sweeney

Priscilla O. Wood William H. Yeingst Cindy Petony Project Assistants Soledad Campos Denise Meringolo Shellev Nickles Adminstrative Technician Sandra Matthews Curators Emeritus Rita J. Adrosko Anne C. Golovin Edith P. Mavo Keith E. Melder Curators Larry Bird Rodris Roth Barbara Clark Smith Museum Conservators Katherine Dirks Karen J. Harris Historian Lonn Wood Taylor

Lemelson Center for the Study of Invention and Innovation

Director Arthur Molella Program Manager Claudine Klose Historian Joyce Bedi Educators Michael Judd Sondra Berger Program Coordinator Tanya Garner Research Assistant Monica Smith Project Assistant Emily Wilson Public Affairs Specialist Heather Bruce

Department of Collections Management Services

Acting Assistant Director Katen Garlick Program Manager Ray Hutt Secretary Erika Mack *Manager* Margaret Grandine

Master Plan

Project Manager Frances Dispenzirie Museum Technicians Kristin DeGrace

Administrative Services

Manager Rosemary Phillips Secretary Frances Jones

Collections Documentation Services

Manager Katharine Stewart Collections Documentation Specialists David Board Bernard Gallagher Andrea Heiss Deborah Schaefer-Jacobs

Offsite Storage Management

Manager Steve Hemlin Museum Specialists Stacey Kluck David Lewis Tamura Moore James Oakley **Richard Siday** Museum Technicans Craig Brunetti Scott Bruton Edward Christian Gail Everson Lehua Fisher Christopher Moore Alicia Freitag Donald Leonard Scott Neel Wendy Wiener Jeannie Whited Neal Walters Cedric Yeh Computer Specialist Martin White

MSC Move Project Manager Ginger Deucher Program Assistant Beverly Wise

Preservation Services

Preservation Administrator Joan Young Museum Specialist Debbie Hashim Conservators Polly Willman Beth Richwine Richard Barden Lynne Gilliland Carolyn Long Suzanne Thomassen-Kraus Museum Technician Amy Venzke

Registration Services

Registrar Jeanne Benas Assistant Registrar Ed Ryan Registration Specialists Tom Bower Nancy Card Museum Specialists Batja Bell Patricia Mansfield Stephen Velasquez Registration Technicians Audrey Ellis Estelle Hurley Associate Director Harold Closter Senior Program Manager Catherine Perge Secretary Barbara Gilmartin

Department of Education and Visitor Services

Director Nancy McCoy Secretary Cassandra Williams Education Specialists Martha Jo Messerole Burt Glassman Amy Bartow-Melia Intern and Fellowship Specialist Allison Wickens Educators Theresa Esterlund Tim Grove Aniceto Navarro Heather Paisley-Jones Program Assistants Alice Gergely Andrea Lowther Howard Mortison Exhibit Coordinator Tom O'Brien

Office of Public Services

Department of Exhibits Audio/Visual and Services

Director Tom Tearman Exbibits Maintenance Coordinator Mary Miller Motion Picture Projectionist Henry Cao Exhibits Aides Joe Grace Charles Sthreshley Supervisory Exhibits Specialist Ralph Logan Electronics Technician Richard Wakefield

Program in African American Culture

Director Niani Kilkenny Historian Alonzo Smith Program Coordinator Luvenia George Office Manager Regina Taylor-Wynn

Department of Program Planning and Design

Director Harold Aber Secretary Kay Habeger Visual Information Specialists/Designers Russell Cashdollar Stevan Fisher Conny Raitzky Ann Rossilli Nigel Briggs Exhibit Specialists Bob Norton Marcia Powell

Department of Program Production

Director Kathryn Campbell Administrative Technician Marilyn Turner

Graphics

Supervisory Exhibits Specialist Ornar Wynn Exhibits Specialists Lou Covey Brian Jensen John Nelson Diane Pryor Beverly Robinson Juan Smith Eric Chamberlain Barbara Cross Visual Information Coordinator Marion Gill

Cabinets

Supervisory Exhibits Specialist Peter Albritton Exhibits Specialists Bill Roseberry Geoffrey Ward Billy Powell

Historic Restoration

Shop Supervisor Terry Conable Exhibits Specialists Robbie Barrett Joe Criste Daragh Cassidy

Department of Publications

Writers/Editors Nancy Brooks Joan Mentzer Administrative Technichian Lydia Wallick Office Clerk Jamal Pope Publications Specialist/Graphics Designer Sue Walther

Office of the Capital Campaign and External Affairs

Capital Campaign Office

Associate Director Elizabeth Perry Campaign Associates Eva Fischer Mary Jane Appel

Office of External Affairs

Department of Business Activities

Management Support Clerk Rosa Suau

Office of Development

Director

Ruth Sexton Development Specialist Kate Clinton Development Assistants Danyelle Kensey Meghan Gross

Office of Special Events

Director

Elizabeth Little Special Events Coordinators Arlene Fenlon Jennifer Sawitzsky

Department of Public Affairs

Director Melinda Machado Public Affairs Specialists Valeska Hilbig Kristian Knight Public Affairs Assistant Dia Adams

Office of Capital Programs

Associate Director Ronald Becker Management Support Assistant Margaret MacDonnell Program Manager Carol Frost Program Assistant Frances Jones Clerk Typist LaShawn Barnes

Star-Spangled Banner Project

Museum Technicians Abagail Freeman Simran Dhami Conservators Suzanne Thomassen-Krauss LaTasha Harris Michele Pagan

Office of Facility Planning and Management

Director Jim Whoolery Fatility Manager Richard Day Assistant Facility Manager Ken Jordan Building Management Assistant Donna Tillman Safety Manager Bill Prebble General Foreman Sinclair Jennings Management Support Assistant Juanita Garner Clerk Typist Joyce Clark Space Management Specialist Ricky Drake Processing Clerk, Shipping/Receiving Hazel Jones Rigging Worker Supervisor Steve Jones

Custodial Office

Custodial Foremen Flovd Harris Irene Short Lennette Weaver Custodial Workers Vincent Nunnicut David Felix Carolyn Anderson Wesley Johnson Malcolm Archer William Brock Bernell Brown Catherine Butler Yverte Clanton Armanrey Devaughn Priscilla Dickerson **Delphine Dicks** John Dixon Barry Duncan Marion Dunsmore Reginald Eley William Ellis Walter Feaster Nathaniel Jennings Theresa Jones Laura McKnight Gregory McNeil Deborah Morton Beatrice Newland Michael Newlon Irvin Suggs Tim Witherspoon Yvonne Lennon Linda Smith

Rigging

Rigging Worker Leader Donald Phillips Riggers Andrew Goffney Harrison Hawkins Gregory Powell John Ridout Milton Williams Laborers Darnell Eddy Myron Johnson

Maintenance

Electrical Worker Bill Cole Maintenance Mechanics Fred Dunsmore Bo Matchett Todd Coombs Oplants Electricians John Kerns James Reed

Office of Administrative and Automation Services

Associate Director Dennis Dickinson Budget Director Richard Nicastro

Administrative Office

Budget Analyst Sandra Dunnigan Management Analyst Maggie Limehouse Administrative Specialist Frank Roche Adminstrative Technician Dan Weinwurm Clerk Typist Wendy Coleman

Computer Services Center

Chief Brad Howard Computer Programmer Analysts Sherman Ellegood Elizabeth Fite Computer Specialists Rob Gaskill Barbara Jordan Steve Stewart Brad Tesh Raelene Worthington National Museum of the American Indian

Director W. Richard West

Office of the Director

Deputy Director Douglas Evelyn

Office of Administration

Assistant Director for Administration Donna A. Scott

Office of National Campaign and External Affairs

Director John Colonghi Deputy Director Maggie Bertin

Office of Public Programs

Assistant Director for Public Programs Charlotte Heth

Office of Public Programs—GGHC (NY)

Deputy Assistant Director for Public Programs John Haworth

Office of Exhibitions

Deputy Assistant Director for Exhibits James Volkert

Office of Cultural Resources

Assistant Director for Cultural Resources Bruce Bernstein Deputy Assistant Director for Cultural Resources George Horse Capture

Office of Community Services

Assistant Director for Community Services Tim Johnson

National Museum of Natural History

Director Robert W. Fri Associate Director for Operations Daniel Dreyfus Associate Director for Research and Scientific Collections Ross Simons Associate Director for Public Programs Robert D. Sullivan Acting Associate Director for Development and Public Affairs Shelley Goode

National Portrait Gallery

Director Alan Fern Deputy Director Carolyn K. Carr Associate Director for Administration Barbara A. Hart Administrative Officer Eloise P. Baden

Curator of Painting and Sculpture Ellen G. Miles Curator of Photographs Mary C. Panzer Curator of Prints and Drawings Wendy Wick Reaves Senior Historian Frederick S. Voss Computer Specialist Andrew Klafter Senior Conservator Cindy Lou Ockershausen Development Officer Patrick M. Madden Education Program Director, Acting Glenda Buff Chief. Design and Production Nello Marconi Curator of Exhibitions Beverly J. Cox Keeper, Center for Electronic Research and Outreach Semirer Catalog of American Portraits Linda Thrift Editor of the Charles Willson Peale Papers Sidney Hart Librarian Cecilia Chin Chief Photographer Rolland White Publications Officer Frances K. Stevenson Public Affairs Officer Brennan Rash Registrar Suzanne C. Jenkins Facilities Manager

National Postal Museum

Daniel Davies

Director James H. Bruns Administrative Officer Antoinette Williams

Financial Officer Polone M. Bazile Registrar David T. Wilson Head of Education Esther Washington Exhibitions Manager Patricia M. Burke External Affairs and Development Officer Nancy R. Lynner Museum Program Specialist Nancy Pope Museum Specialist (Philately) Joseph Geraci Writer/Editor Jeffery L. Brodie Building Manager Greg Cunningham Librarian Timothy Carr Protection Services Captain Gordon Swain

National Zoological Park

Director Michael H. Robinson Deputy Director McKinley Hudson

Conservation and Research Center

Associate Director for Conservation Chris M. Wemmer Deputy Associate Director for Conservation Scott R. Derrickson Conservation Training Officer Rasanayagam Rudran Head, Field Research Unit John Rappole Senior Veterinarian Mitchell Bush

Reproductive Physiology Unit

Head, Reproductive Physiology Unit David Wildt Research Veterinarian Steven Monfort Endocrinologist Janine Brown Therologist JoGayle Howard Fish Cryobiologist Mary Hagedorn

Mammal Unit

Head, Mammal Unit Linwood Williamson

Education Project

Leader, Education Project Jennifer Buff

Biological Programs

Associate Director for Biological Programs Benjamin Beck

Department of Zoological Research

Assistant Director for Zoological Research Daryl Boness Research Nutritionist Olav Oftedal

Migragory Bird Center

Director, Migratory Bird Center Russell Greenberg

Molecular Genetics Laboratory

Chief, Molecular Genetics Laboratory Robert Fleischer

Exhibit Programs

Curator Michael Davenport Alan Peters Belinda Reser Miles Roberts Vincent Rico John Seidensticker Lisa Stevens Paul Tomassoni

Department of Nutritional Resources

Manager, Department of Nutritional Resources Maty Allen

Department of Pathology

Head, Department of Pathology Richard Montali

Department of Animal Health

Head, Department of Animal Health Richard Cambre

Office of Public Affairs

Chief, Office of Public Affairs Robert Hoage

Development

Head of Development Teresa Larson

Business Office

Business Manager Nancy Johnson

Office of the Registrar

Registrar Judith Block

Interpretive Programs

Associate Director for Interpretive Programs David Jenkins

Office of Security and Communications

Chief vacant

226

National Zoological Park Police

Captain Robert McCready

Division of Exhibit Interpretation

Head, Division of Exhibit Interpretation Lynn Dolnick

Office of Management Services

Administrative Officer vacant

Office of Safety and Occupational Health

Manager, Safety and Occupational Health Garrick Smith

Facilities and Management

Assistant Director for Facilities and Management Robin Vasa

Smithsonian Astrophysical Observatory

Director Irwin Shapiro

Associate Directors

Planning Bruce Gregory Atomic and Molecular Physics Kate Kirby High Energy Astrophysics Stephen Murray Optical And Infrared Astronomy Robert Kirshner Planetary Sciences Brian G. Marsden Radio and Geoastronomy Philip Myers Solar and Stellar Physics Eugene H. Avrett Theoretical Astrophysics George Rybicki

Department Managers

Central Engineering Richard B. Dias Computation Facility Van L. McGlasson Contracts, Grants, and Property Management John Harris

Financial Management

Accounting Section Chief Robert Palleschi Budget Section Chief James Taylor Human Resources Laura Conway Library Donna Coletti Management Information Systems Rosalie Blum Publications James Cornell Science Education Philip M. Sadler Subcontracts and Procurement Peter Sozanski Trank Nancy M. Adler

Scientific Staff

Thomas Aldcroft Yakov Alpert Alice Argon Matthew Ashby Eugene Avrett James Babb Sallie Baliunas Simon Bandler Frederic Baudin Barbara Bell* Edwin Bergin

Harvard members of the Harvard-Smithsonian Center for Astrophysics Mark Birkinshaw Raymond Blundell Jay Bookbinder Bram Boroson Nancy Brickhouse Roger Brissenden Benjamin Bromley Anthony Burek Nelson Caldwell Nuria Calvet Alastair Cameron* Robert Cameron Nathaniel Carleton Cesare Cecchi-Pestellini* Kelly Chance John Chandler Jon Chappell Mario Cosmo Sreven Cranmer Alexander Dalgarno Thomas Dame Laurence David James Davis Robert Davis Edward DeLuca Rosanne Di Stefano Danuta Dobrzycka Adam Dobrzycki R. Hank Donnelly Jeremy Drake Andrea Dupree Richard Edgar Peter Edmonds* Antonio Eff-Darwich Pena Guenther Eichhorn Martin Elvis Ruth Esser Robert Estes Ian Evans Nancy Evans Giuseppina Fabbiano Daniel Fabricant Emilio Falco-Acosta Giovanni Fazio George Field Silvano Fineschi Fabrizio Fiore Craig Foltz Christine Forman William Forman Robert Forrey* Fred Franklin Linda French* Antonella Fruscione Terrance Gaetz

Charles Gammie Michael Garcia Larry Gardner Peter Garnavich* John Geary Margaret Geller Owen Gingerich Leon Golub Alvssa Goodman* Paul Gorenstein Carl Gottlieb* Roy Gould Dale Graessle Paul Green Lincoln Greenhill Jonathan Grindlay* Mario Grossi Marvin Grossman* Gordon Gullahorn Mark Gurwell Shadia Habbal F. Rick Harnden Daniel Harris Ilana Harrus Lee Hartmann Martha Hazen* Eric Heller Todd Henry Paul Ho Matthew Holman Eric Hooper Joseph Hora John Huchra John Hughes Per Jarlemark Diab Jerius David Johnson Kenneth Jucks Jiahong Juda Michael Juda Philip Kaaret Wolfgang Kalkofen Margarita Karovska Edwin Kellogg Almus Kenter Scott Kenvon Eric Keto Vasili Kharchenko Dong-Woo Kim Kate Kirby Robert Kirshner* Steven Kleiner Yuan-Kuen Ko Christopher Kochanek* John Kohl

Sylvain Korzennik Ralph Kraft Thomas Kurosu Robert Kurucz Charles Lada Adair Lane David Latham David Layzer* Daniel Lebach Myron Lecar Joseph Lehar Abraham Loeb* Enrico Lorenzini Iane Luu* Maxim Markevitch Brian Marsden Ursula Marvin Alessandra Massarotti* Smita Mathur Edward Mattison Susan Mattson Michael McCarthy Jeffrey McClintock Jonathan McDowell Brendan McLaughlin Brian McLeod Brian McNamara Gary Melnick Joseph Michels Glenn Milne Mari Paz Miralles James Moran Stephen Murray Philip Myers Balakrishnan Naduvalath* Ramesh Narayan* Tomohiko Narita* Fabrizio Nicastro Joy Nichols Robert Noves Rav O'Neal Scott Paine Alexander Panasyuk Costas Papaliolios William Parkinson* Michael Pearlman Ue-Li Pen* Michail Petaev James Phillips Paul Plucinsky Rene Plume William Press* Andrea Prestwich Francis Primini Michael Ratner

John Raymond Robert Reasenberg Mark Reid Dana Riley Black* Suzanne Romaine Laurence Rothman Arnold Rots George Rybicki Steven Saar Hossein Sadeghpour Philip Sadler* Dimitar Sasselov* Jonathan Schachter Rudolph Schild Eric Schlegel Matthew Schneps Herbert Schnopper Daniel Schwartz Frederick Seward Aneta Siemiginowska Eric Silver Ionel Simbotin* Patrick Slane Howard Smith Peter Smith* Randall Smith Willie Soon Regina Soufli Marco Spaans Robert Spurr Antony Stark John Stauffer Robert Stefanik Robert Stern **Richard Stoner** Leonard Strachan Harvey Tananbaum Patrick Thaddeus Eric Tollestrup Volker Tolls Guillermo Torres Wesley Traub Ginevra Trinchieri Wallace Tucker Han Uitenbroek Adriaan Van Ballegooijen Leon VanSpeybroeck Vladimir Vassiliev Robert Vessot Jan Vrtilek Saeqa Vrtilek Ronald Walsworth Zhong Wang Robert Ward* Bradford Wargelin

Harry Warren Trevor Weekes Fred Whipple Belinda Wilkes Steven Willner David Wilner Robert Wilson Scott Wolk Jonathan Woo Brian Wood John Wood Kenny Wood Diana Worrall Min Yan* Kouichi Yoshino Ken Young Robert Zacher Xiaolei Zhang Ping Zhao Martin Zombeck

Smithsonian Center for Materials Research and Education

Director

Lambertus van Zelst Assistant to the Director Beverly M. Smith Administrative Officer Vernetta M. Williams Administrative Staff Loretta E. Ester-Clark Francine T. Lewis Jocelyn D. Sellers

Education and Training

Education Coordinator Donald C. Williams Archives Conservator Fei-wen Tsai Senior Furniture Conservator Melvin J. Wachowiak Senior Objects Conservator Carol A. Grissom

^{*}Harvard members of the Harvard-Smithsonian Center for Astrophysics

Objects Conservator Harriet (Rae) F. Beaubien Paintings Conservator Jia-sun Tsang Senior Paper Conservator Dianne van der Reyden Senior Textile Conservator Mary W. Ballard

Research

Research Coordinator Ronald L. Bishop Senior Research Biochemist Noreen C. Tuross Research Biologist Connie J. Kolman Senior Research Ceramic Scientist Pamela B. Vandiver Senior Research Chemists M. James Blackman Charles S. Tumosa Research Chemist Emile C. Joel Metallurgist Martha E. Goodway Senior Research Organic Chemist W. David Erhardt Research Organic Chemists Mary T. Baker David W. von Endt Senior Research Photographic Scientist Mark McCormick-Goodhart Senior Research Physical Scientist Marion F. Mecklenburg

Support and Collaboration

Scientific Support Coordinator Melanie E. Feather Analysical Chemist Carnie S. Thompson Biochemist Jill L. Russ Microscopist Harry A. Alden Organic Chemist Walter R. Hopwood Senior Paintings Conservator Roland H. Cunningham Technical Information Specialist Ann B. N'Gadi

Smithsonian Environmental Research Center

Director Ross B. Simons Assistant Director Anson H. Hines Facilities Manager Paul F. Tavel Education Specialist A. Mark Haddon Animal Ecologists James F. Lynch Ilka C. Feller Gregory M. Ruiz Chemical Ecologist Thomas E. Jordan Environmental Chemist David L. Correll Environmental Engineer Gary Peresta Ecologist Geoffrey G. Parker Microbial Ecologists D. Wayne Coats Charles L. Gallegos Madeler Donald E. Weller Plant Ecologists Dennis F. Whigham Catherine Lovelock Photobiologist Patrick J. Neale Plant Physiologist Bert G. Drake

Smithsonian Tropical Research Institute

Director Ira Rubinoff Deputy Director Anthony G. Coates Assistant Director for Facilities Carlos Tejada Assistant Director for Fellowships and Education Georgina de Alba Assistant Director for International and External Affairs Elena Lombardo Assistant Director for Scientific Support Services Howard S. Barnes Comptroler Leopoldo León Executive Officer and Assistant Director for Administration and Legal Affairs Leonor G. Morta Special Advisor to the Director for Technology Transfer/Environmental Policy Issues Stanley Heckadon-Moreno

Accounting Office

Accounting Officer Carlos Urbina

Development Office

Head, Development Office Lucy B. Dorick (resigned on August 21, 1998) Development Officer Lisa Barnett

Diving Office

Diving Officer José Espino

Human Resources Office

Personnel Management Specialist Carmen Sucre

Office of Information Technology

Information Technology Officer Francisco Rivera

Library

Branch Librarian Vielka Chang-Yau

Office of Physical Plants

Branch Engineer Fernando Pascal

Photographic Department

Photographer Marcos A. Guerra Electronic Imaging Specialist Alejandro Caballero

Procurement Office

Supervisor, Contract Specialist Mercedes Arroyo

Protocol Office

Protocol Officer Mónica Alvarado

Safety Office

Safety Officer José Ramón Perurena

Security Office

Security Manager Alejandro Arze

Scientific Support Services

Management Specialist (Scientific) Raineldo Urriola Tupper Center, Ancon and Galeta Manager Audrey M. Smith BCI Scientific Coordinator Oris Acevedo BCI Manager Daniel Millán Naot Support Services Manager Mercedes Denis Naos Laboratories Scientific Coordinator Anibal Velarde

Visitor Services Office

Visitor Services Manager Gloria Maggiori

Scientific Staff

Emeritus Senior Scientist A. Stanley Rand Senior Scientists Jeremy B.C. Jackson Olga F. Linares Mary Jane West-Eberhard Staff Scientists Annette Aiello Penelope Barnes Eldredge Bermingham John H. Christy Richard G. Cooke Paul Colinvaux (retired on September 30, 1998) Mireya Correa Luis D'Croz William G. Eberhard Helena Fortunato Robin Foster Héctor Guzmán Stanley Heckadon-Moreno E. Allen Herre Llewellya Hillis (departed on September, 1998) Nancy Knowlton Egbert G. Leigh, Jr. Harilaos Lessios Dolores Piperno D. Ross Robertson David W. Roubik Noris Salazar Allen Fernando Santos-Granero Neal G. Smith William Wcislo Donald M. Windsor Klaus Winter S. Joseph Wright

Center for Tropical Forest Science

Director Elizabeth C. Losos

Center for Tropical Palaeoecology and Archaeology

Director

Jeremy B.C. Jackson Research Associates Tomás Arias Héctor Barrios Mary Alice Coffroth Laurel Collins Gregory S. Gilbert Nicholas Georgiadis Mahabir Gupta Stephen Hubbell Roberto Ibáñez Jorge Illueca Peter Jung Elisabeth Kalko Howard R. Lasker Stephen Mulkey Catherine Porvin Diomedes Quintero Robert E. Ricklefs Tyson Roberts Michael Ryan Julieta Carrión de Samudio Rafael Samudio Hans-Ulrich Schnitzler Robert Stallard Henry Stockwell Melvin Tyree Fredic V. Vencl Gerhard Zotz

Center for Museum Studies

Director Rex M. Ellis Deputy Director Bruce C. Craig Administrative Officer Eleanor M. David Director's Secretary Tiphanie Hill Research Manager Nancy J. Fuller American Indian Museum Studies Manager Karen Coody Cooper Museum Programs Specialist Magdalena Mieri Curriculum Coordinator Bettie J. Lee Secretary David Hill Emeritus Senior Scholar Stephen E. Weil

Intern Services

Intern Services Coordinator Elena Piquer Mayberry Intern Services Assistant Eric Jack Baker

Office of Exhibits Central

Director Michael Headley

Administration

Assistant Director Mary Dillon Bird Administrative Officer Debbie H. Yang Projects Manager George Quist

Design, Editing, and Graphics

Team Leader Mary Dillon Bird

Modelmaking

Team Leader Richard J. Kilday

Fabrication

Team Leader Rick Pelasara

National Science Resources Center

Executive Director Douglas M. Lapp Deputy Director for Development, External Relations, and Outreach Sally Goetz Shuler Administrative Officer R. Gail Thomas Computer Analyst Leonard West, Sr. Project Director, Science and Technology Concepts for Middle Schools (STC/MS) Kitty Lou Smith Information Dissemination Director Evelyn M. Ernst Publications Director Dean Trackman

Smithsonian Institution Archives

Director Edie Hedlin

Archives Division

Archivist and Division Director Alan L. Bain Associate Archivists William E. Cox James A. Steed Kathleen M. Williams Assistant Archivists La Nina M. Clayton R. Shawn Johnstone Bruce R. Kirby Michele Lee Tammy L. Peters

Technical Services Division

Division Director Fynnette L. Eaton Associate Archivist Paul H. Theerman Archives Specialist Gerald J. Rosenzweig

Institutional History Division

Historian and Division Director Pamela M. Henson

Joseph Henry Papers Project

Editor Marc Rothenberg Assistant Editor Kathleen W. Dorman Staff Historians Deborah Y. Jeffries Frank R. Millikan

National Collections Program

National Collections Coordinator William G. Tompkins Assistant National Collections Coordinator Lauri A. Hinksman

Smithsonian Institution Traveling Exhibition Service (SITES)

Director Anna R. Cohn

Administration

Deputy Director Lori Yarrish

Program

Associate Director for Program Frederica R. Adelman

External Relations

Associate Director for External Relations Andrea Stevens

Development and Marketing

Director of Development and Marketing Johleen D.N. Cannon

International Gallery Director Anne Gossett

Smithsonian Office of Education

Director Ann Bay Deputy Director Thomas Lowderbaugh Publications Director Michelle Smith

Office of Sponsored Projects

Director Ardelle G. Foss Assistant Director J. Scott Robinson Administrative Officer Dorothy C. Smith Office Assistant Vladamier X. Bouvier

Grant Management Unit

Grant/Contract Administrator Kathleen Hindle Karen E. Otiji Grant/Contract Specialist Keron Hopkins Karen Williamson Financial Management Unit

Grant/Contract Financial Manager Edgard Padilla Financial Analyst Delores Clyburn Leni Figueiras Financial Specialist Marie A. Rogers Indirect Cost/Audit Analyst Darryl Greene

Accessibility Program

Smithsonian Accessibility Coordinator Janice Majewski Program Specialist Elizabeth Ziebarth

Institutional Studies Office

Director Zahava D. Doering Exhibition & Museum Audience Analyst Andrew J. Pekarik Social Science Analysts Stacey L. Bielick Kerry R. DiGiacomo Jean M. Kalata David A Karns Statistician Steven J. Smith

The Under Secretary

Office of the Under Secretary

The Under Secretary Constance B. Newman Executive Director Anna B. Martin Confidential Assistant Constance E. Lykes

Office of the Chief Financial Officer

Chief Financial Officer Rick R. Johnson

Organizational Development Branch

Organizational Performance Consultant Jack Johnson

Office of the General Counsel

General Counsel John E. Huerta Deputy General Counsel James D. Douglas Marsha S. Shaines Assistant General Counsel Rachelle V. Browne Ildiko P. DeAngelis Mildred M. Glover Lauryn G. Grant Elaine L. Johnston Lisa A. Landsman John K. Lapiana Chris Nicholson James I. Wilson Associate General Counsel Alan D. Ullberg Legal Assistants Debra Y. Belton William C. Lamborn Mariko C. Murray Moire M. Queen Anne H. Westbrook Special Assistant Lisa B. Bennett Management Support Assistant Sue E. Lake Queenie C. Gray Receptionist Fernando J. Arce

Office of Communications

Director David J. Umansky Secretary to the Director Michelle Carr

Media Relations, Office of Public Affairs Associate Director Linda St. Thomas Staff Mary Combs Vicki Moeser Hamlet Paoletti Rachel Sears Elizabeth Tait

Publications, Office of Public Affairs Associate Director Kathryn Lindeman Staff Ana Acosta John Barrat Colleen Hershberger

Jo Ann Webb

Visitor Information and Associates' Reception Center

Director Mary Grace Potter Deputy Director Vacant Administrative Officer Grace Tull Computer Specialist Dana Small Unit Manager, Public Inquiry Mail and Telephone Information Services Katherine Neill Ridgley Unit Manager, Information Resource Division Iane Gardner Coordinator, Telephone Information Services Cordelia Benedict Coordinator, Behind the Scenes Volunteer Program Roberta Buchanan Associate Coordinator, Visitor Information Unit Tricia Byrne Associate Coordinator, Visitor Information Unit Sheila Washington

Office of Contracting

Director John W. Cobert

Federal and Trust Contracting Division

Manager Lynn Spurgeon Deputy Manager Paulette Pressley

Business Contracting Division

Manager Ronald F. Cuffe Deputy Manager Lisa A. Keenan

Administration Division

Manager John P. Howser

Procurement Branch

Assistant Manager Laura Simmons

Travel Services Division

Manager Judith Petroski

Property and Inventory Management Branch

Chief Joseph Swihart

Storage, Distribution, and Control Section

Supervisory General Supply Specialist Leon Smith

Systems Division

Manager Theresa Pomeroy

> Office of Equal Employment and Minority Affairs

Director Era L. Marshall Special Assistant to Director McKinley Harris Diversity/Affirmative Employment Program

Diversity/Affirmative Employment Program Manager Carol Gover

Special Emphasis Program

Special Emphasis Program Manager Pauline Fletemeyer

Complaints Program

Complaints Program Manager Vacant

Pre-Complaint Program

Pre-Complaint Program Manager Angela Roybal

Small Disadvantaged Business Utilization Program

Small Disadvantaged Business Utilization Program Manager Mauricio Vera

Office of Environmental Management and Safety

Director F. William Billingsley

Administrative Services Branch

Branch Chief Deborah M. Becker

231

Fire Protection and Safety Division

Assistant Director J. Andrew Wilson

Environmental Management Division

Assistant Director Rachel L. Gregory

Occupational Health Services Division

Assistant Director Walter G. Bailey

Office of Physical Plant

Director Michael J. Sofield Deputy Director Vacant Special Assistant to the Director William Thomas Financial Management Officer Sherell Vucci Associate Director, Architectural History and Historic Preservation Cynthia R. Field

Assistant Director, Crafts Services Division Judie Cooper Assistant Director, Construction Management Division Derek Ross Assistant Director, Facilities Planning Division Harry Rombach Associate Director, Engineering & Design Division Larry Stuebing Assistant Director, Horticulture Services Division Nancy Bechtol Assistant Director, Project Management Division Sheryl Kolasinski Assistant Director, Utilities Operations & Maintenance Division Howard L. Wink, Jr. Chief, Support Services Group C.W. Arthur Chief, Personnel, Policy, and Training Nancy Johns Chief, Information Services Mickey Stam

Office of Protection Services

Director David F. Morrell Deputy Director, Operations James J. McLaughlin Associate Director, Administration Susan T. Tracey

Smithsonian Magazine

Publisher Ronald C. Walker Editor Don Moser Board of Editors Kathleen M. Burke Suzanne Crawford Jim Doherry Marlane A. Liddell Sally Scott Maran Edgar Rich John P. Wiley, Jr. Associate Publisher, Circulation Liberta Abbondante Associate Publisher, Administration Carey O. Randall Director of Production E. Cherry Doyle Publisher Emeritus Joseph J. Bonsignore Founding Editor and Publisher Edward K. Thompson

The Smithsonian Associates

Director Mara Mayor Deputy Director Barbara S. Tuceling Associate Director for Educational and Cultural Programs Carol Bogash Associate Director for Marketing and Membership Holly Dell Tyler

Resident Associates Program

Program Managers Faye Dale Browning Binney Levine Senior Programmers Stephen Diamond Cheryl Taylor

Study Tours and Seminars

Program Manager Amy Kotkin Deputy Program Manager Prudence Clendenning Senior Program Coordinators Karen Gray Mary Beth Mullen Barbara York

Donors to the Smithsonian Institution in Fiscal Year 1998

The Board of Regents and the Secretary of the Smithsonian Institution join with the entire staff in thanking all of the Institution's friends for the generosity they have shown with their financial support, gifts to the collection, and in-kind donations. Gifts are recorded under the title of the recipient bureau or office, with a brief description of the gift where appropriate. If perchance the name of any donor has been omitted from these lists, it is an inadvertence and in no way diminishes the Institution's gratitude. Many gifts were received from donors who prefer to remain anonymous; the Smithsonian wishes to thank these people, as well, for their support.

Archives of American Art

Donors of Financial Support

\$ 500,000 or more

The Brown Foundation, Inc.

\$ 50,000 or more

The Henry Luce Foundation, Inc.

\$ 25,000 or more

Jennie Stoddard Charitable Trust

\$10,000 or more

The Beinecke Foundation, Inc. The Honorable and Mrs. Max N. Berry Mr. and Mrs. Gerald Buck The Charles E. Burchfield Foundation Mrs. Lawrence A. Fleischman Mr. and Mrs. Joseph G. Fogg III Mr. and Mrs. William Gates, Sr. Mr. and Mrs. Hugh Halff, Jr. Mr. and Mrs. Dwight M. Kendall Mr. Henry Luce III Mr. and Mrs. Frank Martucci Dr. and Mrs. Samuel Miller Yoshiko Mori Dr. and Mrs. Meyer P. Potamkin Mrs. Stephen D. Rubin Mr. and Mrs. Keith S. Wellin

\$5,000 or more

Mr. and Mrs. Jack S. Blanton, Sr. Mr. and Mrs. Eli Broad Mr. and Mrs. Donald J. Douglass Mrs. Daniel Fraad Ms. Elizabeth Marsteller Gordon

Ms. Agnes Gund and Mr. Daniel Shapiro Mr. and Mrs. Raymond J. Horowitz Mr. and Mrs. Bruce Karatz Mr. Walter Keating Mr. and Mrs. Werner H. Kramarsky Hilva Baillie Landsman Mr. and Mrs. Alvin S. Lane Howard and Jean Lipman Foundation, Inc. Mr. and Mrs. Richard A. Manoogian Mr. and Mrs. Peter Norton Orange County Museum of Art Mr. and Mrs. Richard Roob Dr. and Mrs. Christopher Stack Mr. and Mrs. A. Alfred Taubman Time, Inc.

\$1,000 or more

Mr. and Mrs. Alexander Acevedo Warren and Jan Adelson Dr. Stephen Andrus Mrs. Amy Cohen Arkin Mr. and Mrs. Thomas M. Armstrong III Mr. and Mrs. Ted Ashley Milton & Sally Avery Arts Foundation, Inc. The Barkley Fund The Barra Foundation, Inc. Mrs. Anne Bass The Honorable Michael Baurne Beacon Hill Fine Art Mrs. Nancy T. Behrman Ms. Louise Bourgeois Ms. Rena A. Bransten Mr. and Mrs. Georges Brigham Dr. Irving F. Burton Mr. and Mrs. Ralph C. Chapa Christie's Inc. Mr. and Mrs. Raymond M. Cracchiolo Mr. and Mrs. Duval Cravens Mary Sharp Cronson Mr. Bruce A. Davis Yvonne de C Segerstrom Dr. and Mrs. Francis de Marneffe Michael and Dudley Del Balso Mr. and Mrs. Richard P. Doerer Mr. and Mrs. Joel S. Ehrenkranz Mr. and Mrs. Robert Eichenberg Mr. and Mrs. Anthony Enders The Charles Engelhard Foundation Mr. and Mrs. Arthur A. Feder Mr. and Mrs. Stuart P. Feld Mr. and Mrs. Arthur Fleischer, Jr. Mrs. Helena Fraser

Mr. and Mrs. Robert J. Friedlander Mr. and Mrs. Julian Ganz, Jr. Dr. and Mrs. Frank C. Glover Ms Barbara Goldsmith Mr. and Mrs. Leonard Goodman Mrs. Robert S. Greenbaum Mrs. Rachel K. Grody Mr. and Mrs. Lawrence K. Grossman Mr. and Mrs. Henry Grunwald Mr. and Mrs. John M. Haddow Mr. and Mrs. D. George Harris Mr. and Mrs. F.W. Herlitz Mr. and Mrs. Frank W. Hoch Mr. and Mrs. Benjamin D. Holloway Ms. Jan Holloway Mr. and Mrs. John K. Howat Mr. and Mrs. Richard J. Janes Dr. Helen I. Jessup Mr. Harry Kahn Mrs. Allan H. Kalmus Suzanne Kayne Mr. and Mrs. Richard Kelly Mr. and Mrs. John Klingenstein M. Knoedler & Co. Mr. and Mrs. David W. Kornblatt Dr. Diana Korzenik Kraushaar Galleries Mr. and Mrs. Leonard A. Lauder Mr. and Mrs. Ronald S. Lauder Melvin and Thelma Lenkin Dr. and Mrs. Clinton N. Levin Barbara W. Liberman Mrs. Dorothy Lichtenstein Dr. and Mrs. Kim K. Lie Mr. and Mrs. Robert E. Linton Mr. Steve Martin Robert and Jane Meyerhoff Mr. Jack Nash Mrs. Evelyn Stefansson Nef Ms. Lynn Nesbit Mr. Roy R. Neuberger Overbrook Foundation Pasadena Art Alliance Mr. and Mrs. Richard E. Pate III Mr. and Mrs. Dana M. Raymond Mr. and Mrs. John Richards Mr. Joel Rosenkranz and Ms. Janis Conner Mrs. Walter Scheuer Mr. and Mrs. Abbott K. Schlain Mr. and Mrs. Morton L. Scholnick Mr. and Mrs. Alan E. Schwartz Miss Judith Selkowitz Mrs. Stuart R. Shamberg Mr. Sydney L. Shaper Mr. and Mrs. Jon Shirley

Mr. and Mrs. Theodore Slavin Mr. and Mrs. Harry Spiro Mr. and Mrs. Theodore R. Stanley Mrs. Elizabeth Strong-Cuevas Judith Ogden Lady Thomson Mrs. Helen S. Tucker Steven C. Walske and Janina A. Longtine Mr. and Mrs. William B. Warner Mr. and Mrs. Alvin Wasserman Dr. Richard Wattenmaker Mr. and Mrs. Robert Wechsler Mr. and Mrs. William H. Weed Ms. Shelby White and Mr. Leon Levy Mrs. Wallace S. Wilson Mr. and Mrs. C. Bagley Wright Mr. Richard T. York

\$ 500 or more

Dr. Lourdes V. Andaya Mr. and Mrs. Robert Bahssin Mr. Louis C. Baker Mr. Geoffrey C. Beaumont Mrs. Edwin A. Bergman Mr. and Mrs. James Biben Dr. and Mrs. John Bielawski Dr. Annette Blaugrund Dr. and Mrs. George Blum Mrs. Ruth Bowman Ms. Karen Johnson Boyd Ms. Bettina Brendel Dr. Philip L. Brewer Mr. and Mrs. H. Theodore Brosch Mr. and Mrs. Frederick Brown Mrs. John Lee Bunce Mrs. Rosalie K. Butzel Mr. and Mrs. Howard B. Carnden Mrs. Robert J. Chapman Mrs. Norbert Considine Mrs. Ellen R. Cooper Mrs. Therese Crandall Dr. and Mrs. C. Arnold Curry Mr. and Mrs. Joseph L. Davidson Ms. Gabriella De Ferrari and Mr. Raymond Learsy Miss Annette M. De Lorenzo Mrs. Luz Lajous de Madrazo Mr. and Mrs. Brian Dillon Mr. and Mrs. Cameron B. Duncan Mrs. Dorothy Dunitz Dr. Henry Durst Mr. and Mrs. Barney A. Ebsworth Ms. Julie Eichenberger Mrs. Ann Eisenberg

Dallas Ernst Mrs. Carol J. Feinberg Mr. Blaine V. and Mrs. Diane A. Fogg Gannett Foundation, Inc. Mr. David A. Gardner and Ms. Lynn Shostack Mr. and Mrs. Yale Ginsburg Mr. Arnold Glimcher Ms. Laura Goldfeld Mrs. John Goldsmith Mr. and Mrs. Sam H. Goodman Ms. Helen Gorenstein Edith Greenwood Mr. and Mrs. Roger Hallowell Dr. and Mrs. Reginald Harnett Jim Herrington and Carol Camiener Mr. Charles Hess Louise Hodgson Ms. Catherine W. Holmes Dr. Linda Hyman Milton and Sheila Hyman Mrs. Philip Iselin Mrs. Janet Jager Ms. Wendy Jeffers Mr. and Mrs. David Jensen Mr. and Mrs. Lawrence M. Johnson Mrs. Maxine C. Johnson Martin and Cis Maisel Kellman Mr. and Mrs. Robert L. Kemper Dr. and Mrs. Charles Kessler Ms. Joan Peterson Klimann Virginia C. Krueger Mr. and Mrs. Alan D. Levy Mrs. Marion Lynton Mr. and Mrs. Tom F. Marsh The Martin Foundation for the Creative Arts Mrs. Nan Tucker McEvoy Ms. JoAnn McGrath Mr. John Merow Barbara T. Missett Mrs. Annalee G. Newman Mrs. Harris K. Oppenheimer Mrs. Janice C. Oresman Mr. and Mrs. Samuel Oroshnik Mr. Frank Person Mr. and Mrs. Bernard E. Pincus Mrs. George B. Post Mrs. Frances G. Pratt Mr. and Mrs. Richard Prentis Mr. and Mrs. Irving W. Rabb Ms. Cherry Rainone Tara K. Reddi Mr. and Mrs. Robert B. Rosowski Mr. Fayez Sarofim

Mr. and Mrs. Douglas A. Schubot Mr. and Mrs. Peter L. Sheldon Mr. and Mrs. Morris P. Silver Mrs. J. Scott Smart Mrs. Ronald P. Stanton Mr. Theodore Stebbins, Jr. Ms. Elizabeth R. Steele Mr. and Mrs. George Strumbos Dr. and Mrs. Floyd Tukel Ms. Karen M. Van Antwerp Vose Galleries of Boston Mr. Duane A. Wakeham Mrs. Joan Washburn Mr. and Mrs. Cameron Waterman Mr. Jerome Westheimer Mr. and Mrs. Dave H. Williams Mrs. Warren R. Woodward Mr. Ezra K. Zilkha

\$ 250 or more

Ms. Lydia Anderson Mr. and Mrs. Eugene Applebaum Mrs. William Arthur Mr. Richard Brown Baker Dr. and Mrs. James Bannon Mrs. Donna Barnett Mr. and Mrs. William G. Beaumont Mr. Sherman Becker Mrs. Marcia Allen Bielfield Mr. and Mrs. Charles L. Biggs Mr. and Mrs. Robert J. Blinken Ms. Esther Bloch Mr. and Mrs. Donald J. Blum Mr. and Mrs. Paul Borman Mr. Kenneth A. Brower Mr. Michael Brown John W. Butler, Jr. and John M. VanderLinden Mrs. Samuel C. Butler Mrs. Electra M. Carlin Mr. and Mrs. David M. Chamberlain Mr. and Mrs. Daniel Clark Barbara B. Cohn Mrs. Lammot DuPont Copeland Ms. Priscilla Cunningham Mrs. Catherine G. Curran Mr. Marvin H. Davidson Mary T. Driggs Mrs. Regina F. Dubin Mr. and Mrs. Lawrence F. Du Mouchelle Mrs. Pierre Dupont Ms. Virginia Dwan Mr. and Mrs. Allan B. Ecker Mr. and Mrs. Christian P. Erdman

Mr. and Mrs. Alex J. Etkin Mrs. Hortense F. Feldblum Mr. and Mrs. Christopher Forbes Mrs. Ivan Frankel Morton and Harriett Freedman Mrs. John S. French Mr. and Mrs. Walter J. Fried Miss Elizabeth H. Fuller Howard and Melinda Godel Mrs. Henry Goldberg Mrs. Beatrice Golden Mr. and Mrs. Robert C. Graham, Jr. Mr. and Mrs. Richard Grav Dr. and Mrs. Paul Green Dr. Vartan Gregorian Mr. Philip J. Hahn Ruth and Robert Halperin Harcourt General, Inc. Mr. John W. Harris Mr. and Mrs. E.H. Heaton Mr. and Mrs. Stuart E. Hertzberg Mr. and Mrs. Gedale Horowitz Tabitha Huber Inchbald School of Design Mrs. David Jacknow Mrs. Morris I. Jaffe Mr. and Mrs. George F. Jewett, Jr. Mr. and Mrs. Donald J. Katz Mrs. John M. Kingsland Ruth and Alfred Koeppel Robert P. and Arlene R. Kogod Dr. and Mrs. Richard W. Kulis Mrs. Roger Kyes The Lachaise Foundation Brigitte Lagoutte Mrs. Nanette L. Laitman Mr. and Mrs. David Leader Helen Lerner Mrs. Robert H. Levi Mr. William S. Lieberman Ms. Beverly Lopatin Susan W. Lovett Mrs. Robert A. Malin Mr. and Mrs. Joel Mallin Mrs. Susan McClatchy Mrs. Wilbur McDonald Dr. Martyna Miskinis Mrs. Edward P. Moore Mr. and Mrs. Donald F. Morris Mr. and Mrs. Lester S. Morse, Jr. Mrs. Katherine H. Coudon Murphy Mr. Raymond D. Nasher Dr. and Mrs. Kevin T. O'Donnell Ms. Elizabeth M. Petrie Mr. and Mrs. Leo Rabkin

Mrs. James A. Rawley Readers Digest Foundation, Inc. Mr. Ray Redfern Samuel M. and Sheila W. Robbins Mr. David Rockefeller, Sr. Mr. Norman H. and Mrs. Dulcie Rosenfeld The Rosh Foundation Mrs. Sunne Savage-Neuman Mrs. Ann McGovern Scheiner Miss Lillian Schwartz Mr. and Mrs. Frederic A. Sharf Carol Mary Shava Dr. and Mrs. Robert R. Silver Mr. and Mrs. Jerome Singer Mr. and Mrs. Alan B. Slifka Mrs. Betty S. Smith Mr. James W. Snyder Mr. and Mrs. Steven J. Stadler Bayard and Frances Storey Mr. and Mrs. Stephen Strome Mr. Bernard E. Sullivan Mrs. Roselyne C. Swig Susan Talbor Dr. and Mrs. Jacob Y. Terner Mrs. Mara Thorpe Mr. Robert C. Vose III Mr. and Mrs. William C. Wallstein Ms. Ann Kirk Warren Ms. Ruth Westphal Wildenstein & Co., Inc. Mr. and Mrs. James H. Wineman Mr. and Mrs. Erving Wolf

Archives of American Art

Donors to the Collection

- Harriet Dyer Adams. Harriet Dyer Adams papers relating to David Smith, ca. 1950–1951. 23 items. November 6, 1997 and March 5, 1998 (05.980097G) Collected: 1998/03/05, 1997/10/14, R. Brown, Boston
- Lisa Adams. Craig Kauffman letters to Lisa Adams, 1986–1991. 39 items. (08.980629G) Collected: 1998/06/29, P. Karlstrom, Los Angeles
- Mary E. Adams. Gift: Wilhelm Valentiner letters to Mary E. Adams, 1954– 1957. 8 items + typescripts. October 7, 1997 (08.971007G) Collected: 1997/10/02, P. Karlstrom, Los Angeles

Mary E. and Clinton Adams. Oral history interview with Mary and Clinton Adams, I sound cassette (60 min.) : analog. Oral History Project (08.9804240H) Interview conducted: 1998/04/24 P. Karlstrom Los Angeles

Jo Harvey Allen. Oral history interview with Jo Harvey Allen, 2 sound cassettes (2 hrs.): analog. Oral history project (08.9804210H) Interview conducted: 1998/04/21, P. Karlstrom, Los Angeles

Terry Allen. Oral history interview with Terry Allen, 3 sound cassettes (3 hrs.): analog. Oral history project (08.980424OH) Interview conducted: 1998/04/22, P. Karlstrom, Los Angeles

Xiomaria Almaguer-Levy. Gift: Tomás Oliva papers, [ca. 1957–1995]. 0.4 linear ft. (ca. 30 items) (4.980204G) Collected: 1998/02/04, L. Kirwin, Washington, D.C.

Joan Ankrum. Oral history interview with Joan Ankrum, 1997 Nov. 5–1998 Feb. 4. Sound recording: 6 sound cassettes (60 min. each) : analog. Transcript: 195 pp. Oral History Project (08.981105OH) Interview conducted : 1997/11/16, 1997/11/05, P. Karlstrom, Los Angeles, Beth Broderick

Art Institute of Chicago via Jack Perry Brown, Ryerson and Burnham Libraries. Oral history interview with Serge Chermayeff, 1985 May 23–24. 126 pp. May 27, 1998 (05.980527G) Collected: 1998/05/27, R. Brown, Boston

Penelope C. Barringer for the Torpedo Factory Artists' Association. Torpedo Factory Art Center records, 1974– 1995. 9.0 linear ft. (04.980625G) Collected: 1998/06/25, L. Kirwin, Washington, D.C.

William, Baziotes. 1912–1963. Loan: [Sketchbooks] William Baziotes

[ca. 1933]. 2 v. (on partial microfilm reel) (02.980205L) Collected: 1998/02/05, S. Polcari, New York

 Philip C. Beam. Philip C. Beam papers, ca. 1930s–ca. 1991. 11.0 linear ft.
 (05.980720G) Collected: 1998/07/20, R. Brown, Boston

Siri Berg. Siri Berg papers, 1972–1994. 1.0 linear ft. (02.980724G) Collected: 1998/06/30, S. Polcari, New York

Douglas Berman. Berman Daferner (Gallery) [Photographs and slides] [ca. 1950–1960] 285 photographic prints : b&w; 8 x 10 in. and smaller. 5 slides : b&w. Addition: 133 slides : col. (02.960319G) Collected: 1998/05/13, 1996/03/19, S. Polcari, New York

Margherita Blanc. Giulio V. Blanc papers, 1920–1995. 11.0 linear ft. Jan. 19, 1998 (04.980119G) Collected: 1998/01/13, L. Kirwin, Washington, D.C.

Carl Oscar, Borg. 1879–1947. Carl Oscar Borg scrapbooks, 1903–1955. 3 v. (0.4 linear ft.) Gift (08.980609G) Collected: 1998/06/09, P. Karlstrom, Los Angeles

Lynn Braswell. Robert Wiegand papers and video art, 1953–1990. 6.4 linear ft. (02.980316G) Collected: 1998/03/16, S. Polcari, New York

Ruth Braunstein. Braunstein/Quay Gallery records, 1961–1997. Addition (L.A.); 20.3 ft. Collected: 1998/01/29, P. Karlstrom, San Francisco

María Brito. Oral history interview with María Brito, 1997 Oct. 25. Sound recording: 2 sound cassettes : analog. Transcript: 115 pp. Oral History Project Oct. 24, 1997 (04.971024OH)

Irving Burton. Irving F. Burton papers, 1816–1967. Photocopy of a letter signed by Eastman Johnson was given to Richard Wattenmaker in February 1998.

Paul Carey. Oral history interview with Paul Carey and Stephanie Caloia, I sound cassette (60 min.) : analog. Oral History Project (08.9710260H) Interview conducted: 1997/10/26, P. Karlstrom, Los Angeles

William E. Carnahan. Ruth Post research material on Virgil Macey Williams, 1970–1980 2.0 linear ft.
(04.980212G) Collected: 1998/02/18,
L. Kirwin, Washington, D.C.

Elise Ort Casper. (Bequest): Tim and Elise Ort Casper papers, 1945–1969. 3.2 linear ft. (04.980121G) Collected: 1998/01/21, B. Joffrion, Washington, D.C.

Maryette Charlton. Maryette Charlton research material on Frederick Kiesler, 1929–1998. 6.1 linear ft. June 2, 1998 (02.960602G) Collected: 1998/05/08, S. Polcari, New York

Nancy Clark. Nancy Clark papers relating to Fernando A. García, 1970– 1996. 0.4 linear ft. (04.971212G) Collected : 1997/12/12, L. Kirwin, Washington, D.C.

Sylvan Cole. Sylvan Cole interview June 11 and June 30, 1998. Interview conducted by Gail Annow

Robert Cottingham. Oral history interview with Robert Cottingham, 1998 July 27. 2 sound cassettes (135 min.) : analog. Oral History Project (05.980727OH) Interview conducted: 1998/07/27, R. Brown, Boston

James B. Cox and Benjamin Cox; also Phyllis B. Koch. Gardner Cox papers, 1920–1995. Addition: ca. 12.0 linear ft. (05.980916G) Addition Collected: 1998/09/21, 1998/09/16, R. Brown, Boston

Kathryn Lewis Crane. Monty Lewis papers, 1928–[ca. 1960.] 1.0 linear ft. (08.980416G) Collected: 1998/04/16, P. Karlstrom, Los Angeles

Arthur Coleman Danto. 1924–. Arthur Coleman Danto papers, 1981–1998. 1.2 linear ft. August 9, 1998 (02.980809G) Collected: 1998/07/20, S. Polcari, New York

Josephine and Salvatore Del Deo. Josephine and Salvatore Del Deo collection relaring to Provincetown artists, [ca. 1929–1970]. 0.8 linear ft. (5.980096G) Collected: 1996/06/12, 1996/07/07, 1998/08/28, R. Brown, Boston

Veronique Duca. Alfred Milton Duca papers, 1940–1997. Addition: 2.4 linear fr. (05.980612G) Addition Collected: 1998/06/12, R. Brown, Boston

Peter A. Engstrom. Loan: John Singer Sargent letter to Frank D. Millet, 1887 Oct. 20. 2 items (on partial microfilm reel) (05.980805L) Collected: 1998/08/05, R. Brown, Boston

Elin Ewald. Gift: O'Toole-Ewald Art Associates, Inc. records, 19705– 1980s]. Addition (New York): 6 linear fr. O'Toole-Ewald Art Associates, Inc., March 11, 1998 (02.920093G) Collected: 1998/03/06, S. Polcari, New York Claire Falkenstein Trust. Claire Falkenstein papers, [ca. 1930–1997]. 100 linear ft. (08.971215G) Collected: 1997/12/15, P. Karlstrom, Los Angeles

- Lawrence Fane. Lawrence Fane papers, 1967–1997. 0.4 linear ft. (02.980312G) Collected: 1998/03/06, S. Polcari. New York
- Walter Feldman. Oral history interview with Walter Feldman, I sound cassette (90 min.): analog. Oral History Project (05.980810OH) Interview conducted: 1998/08/10, B. Brown, Boston
- Richard E. Filipowski. Richard E. Filipowski papers, 1940–1995. 4.0 linear fr. (05.980089G) Collected: 1998/05/12, 1996/04/16, 1990/03/14, 1989/10/21, 1989/06/27, 1989/03/08, 1989/04/04, 1989/03/24, 1989/03/16, B. Brown, Boston
- Ed Garman. Oral history interview with Ed Garman, 4 sound cassettes (4 hrs.) : analog. Oral History Project (08.980330OH) Interview conducted: 1998/03/25–30, D. Cartwright, Los Angeles, Gerald Buck Fund
- Pauline B. Goetz. Beniamino Bufano papers, [1930s-1970]. Gift: 5.0 linear ft. (08.971214G) Collected: 1997/12/04, P. Karlstrom, Los Angeles
- Marian Gore. KPFK "Art Scene" interviews, 1962–1964. 38 sound tape reels: analog ; 7 in. Collected: 1997/12/02, P. Karlstrom, Los Angeles
- Jane Bolles Grimm. John Bolles Gallery records, 1958–1975. Addition: 1.0 linear ft. (08.971121G) Collected: 1997/11/21, P. Karlstrom, Los Angeles
- Dimitri Hadzi. Dimitri Hadzi papers, 1949–1989. Addition: 7.0 linear fr. (05.980089G) Addition Collected: 1998/01/12, R. Brown, Boston
- Cecily Hancock. Loan: Augustus Koopman papers, ca. 1887–1986. Reel 5321: Loan March 27, 1998 (05.980327L) Collected: 1998/04/27, R. Brown, Boston
- Elizabeth S. Helfman. Harry Helfman papers, 1933–1962. 14 items. Addition 2 items. March 30, 1998 and June 3, 1999 (02.960330G) Collected: 1998/03/09, S. Polcari, New York
- Dick Higgins. Dick Higgins papers, 1958–1997. 6.0 linear fr. (02.980718G) Collected: 1998/06/05, S. Polcari, New York

- Hirshhorn Museum and Sculpture Garden. Zilczer, Judith (Transfer) Papers relating to art commissioned for the Ronald Reagan Building and International Trade Center, 1992–1998. 0.4 linear ft. Collected: 1998/07/09, L. Kirwin, Washington, D.C. (04.980709T)
- Marston Dean Hodgin. Oral history interview with Marston Dean Hodgin, I sound cassette (80 min.): analog. Oral History Project (05.9808250H) Interview conducted: 1998/08/25, B. Brown, Boston
- William I. Homer. William Innes Homer papers, 1938–1980. Addition: 0.6 linear ft. (4.900080G) Addition Collected: 1998/05/17, L. Kirwin, Washington, D.C.
- Benjamin Horowitz. Heritage Gallery records, 1962–1998. 8.3 linear ft. (8.980731G) Collected: 1998/07/31, P. Karlstrom, Los Angeles
- Georgina Huck through Keith Bradley, executor of the estate of G. Huck. Peggy (Georgina Margaret) Huck papers, 1948–1996. 4.2 linear ft. (5.980098G) Collected: 1998/09/21, 1998/04/01, 1998/03/20, 1998/01/14, B. Brown, Boston
- Elizabeth Hunter. R.H. Ives Gammell papers, 1883–1981. 29 v. (on 3 microfilm reels) Addition: 0.4 linear ft. (05.911204L) Collected: 1998/02/25, 1991/12/04, R. Brown, Boston
- Bob Jamieson. Leon Polk Smith papers 1927–1997. 7.0 linear fr. July 22, 1998 (02.980722G) Collected: 1998/06/05, S. Polcari, New York
- Elizabeth A. Jones. Elizabeth A. Jones papers, 1960–1997. 7.1 linear ft. (04.971211G) Collected : 1997/12/11, L. Kirwin, Washington, D.C.
- Morris and Ruth Kadish. Loan: Reuben Kadish papers, 1936–1996. 8.0 linear ft. Loan (02.980126L) Collected: 1998/01/26, S. Polcari, New York
- Craig Kauffman. Craig Kauffman papers, [ca. 1950]–1997. 4.7 linear ft. (08.971128G) Collected: 1997/11/28, P.
- Karlstrom, Los Angeles Mary Heath Keesling. Mary Heath
- Keesling papers, 1965–1997. 0.4 linear ft. (08.971202G) Collected: 1997/12/02, P. Karlstrom, Los Angeles

- Matthew Curtis Klebaum. Nicholas Wilder Gallery records, 1965–1979. 3-4 linear ft. (8.980625G) Collected: 1998/06/25, P. Karlstrom, Los Angeles
- Misch Kohn. Misch Kohn papers, 19405–1997. 1.0 linear ft. (08.980711G) Collected: 1998/08/04, P. Karlstrom, Los Angeles
- Peter and Rose Krasnow Foundation. Peter and Rose Krasnow papers, 1914– 1975. Addition: 4.3 linear ft. Mar. 30, 1998 (08.980330G) Addition Collected: 1998/03/12, P. Karlstrom, Los Angeles
- Diane Kredenser. Nathan Kredenser papers, [ca. 1950–1990]. 3.5 linear ft. November 11, 1997 (05.971111) Collected: 1997/II/01, R. Brown, Boston
- Austreberta Laigo. Val Laigo papers, 1954–1998. 0.4 linear ft. Addition (D.C.): 0.2 linear ft. Addition (L.A.): 0.2 linear ft. (08.940427G) Additions Collected: 1998/08/24 (under 1994 deed), Los Angeles, 1994/04/27, P. Karlstrom, 1990/11/03, B. Johns, San Francisco, NWAAP
- Jacob Lawrence. Jacob Lawrence and Gwendolyn Knight papers, 1937– 1979 Addition: 3.0 linear ft. (08.970079G) Collected: 1997/10, P. Karlstrom, Los Angeles
- James Lechay. Oral history interview with James Lechay, 1998 July 9–Aug. 26 sound cassettes (150 min.) : analog. Oral History Project (05.980709OH) Interview conducted: 1998/07/09, 1998/08/26, R. Brown, Boston
- Sherman Emery Lee. Sherman E. Lee papers, 1958–1996. 9.0 linear ft. (04.971118G) Collected: 1997/11/18, L. Kirwin, Washington, D.C.
- Connie Lembark. Connie Lembark letters, 1971–1997. 16 items. (8.980306G) Collected: 1998/02/27, P. Karlstrom, Los Angeles
- Jean Lipman. Howard W. and Jean Lipman papers, [ca. 1932–1980]. Addition (L.A.): 1.0 linear ft. (08.980409G) Addition (L.A.): Collected 1998/04/09 P. Karlstrom, Los Angeles
- Jane K. Lowentritt. Kohlmeyer, Ida, 1912– . Ida Kohlmeyer papers, [ca. 1950]–1997. Reels 5280–5281 (Loan):

2.0 linear fr. Unmicrofilmed (Gift): 18.0 linear ft. Donated 1998 by Jane K. Lowentritt, Kohlmeyer's daughter and former studio manager, except for material on reels 5280–5281, which Lowentrit lent for microfilming. Kohlmeyer's maquettes for her sculpture were donated.

- The Historic New Orleans Collection. Collected: 1998/01/09, L. Kirwin, Washington, D.C.
- Gilbert Lujan. Oral history interview with Gilbert Sanchez Lujan, 1997 Nov. 17. Sound recordings: 5 sound cassettes (60 min. each) : analog. Transcript: 104 pp. Oral History Project Nov. 13, 1997 (08.971113OH) Interview conducted: J. Rangel, Los Angeles
- Michael Mazur. Loan: Michael Mazur papers, 1937–1998. 6 microfilm reels (ca. 1,400 items) (05.980077L) Collected: 1998/03/24, R. Brown, Boston
- Michael McGrory. Creative art expression and appreciation : a method of developing student ability ... a way to bridge the interval between student and professional approach / by Gladys Kelley Fitch. ca. 1937. 13 pp. Jan. 9, 1998 (05.980109G) Collected: 1998/01/12, R. Brown, Boston
- William McVey estate via Seth C. Taft, executor. William and Leza McVey papers, 1932–1974. ca. 30 linear ft. (partially microfilmed on 2 reels) (02.980096G) Collected: 1998/01/05, 1996/03/06, R. Brown, Boston; 1973/10/30, D. Barrie, Detroit
- Dorothy C. Miller via Wendy Jeffers. Dorothy C. Miller papers, 1923–1989 28.0 linear fr. 1986–1997 (02.970086G) Collected : 1997/10/01, 1995/04/03, 1995/03/22 1995/02/02, 1994/04/18, 1994/05/13, S. Polcari; 1986/11/07, B. McNaught
- Naomi Miller. Robert Venturi letter to Naomi Miller, 1967 Jan. 3. 1 item. (05.980821G) Collected: 1998/08/21, R. Brown, Boston
- Museum of Art, Rhode Island School of Design. Oral history interviews with Ed Rossbach and Katherine Westphal, 1997. Sound recordings: 8 sound cassettes. (08.980501G) Providence, RI, May 1, 1998

- National Portrait Gallery. (Transfer): Lillian B. Miller papers, 1998. 13.0 linear fr. (04.980910T) Collected: 1998/09/10, L. Kirwin, Washington, D.C.
- Barbara Nikla and John J. Lyons. Benson Bond Moore papers, 1895–1995
 (bulk 1902–1974) 5.7 linear ft. Dec.
 17, 1996 (04.961217G) Collected:
 1997/10/27, 1996/12/19, L. Kirwin,
 Washington, D.C.
- North Carolina Museum of Art. Hobson Pittman papers, 1916–1990. Addition: 1,538 f sketches. Unfilmed (artwork) (04.971204G) Addition Collected: 1997/12/04, L. Kirwin, Washington, D.C.
- Berty Parsons Estate and Foundation via William Raynor and Christopher Schwabacher. Berty Parsons papers and gallery records, 1927–1985. Addition: 2.0 linear ft. (Raynor) (02.980074G) Addition Collected: 1998/05/08, S. Polcari, New York
- Kenneth W. Prescott. Kenneth and Emma-Stina Prescott research material on artists, 1930–1987. 7.0 linear fr. Addition: 0.2 linear fr. (04-980087G) Collected: 1998/09/16, 1995/09/28, 1987/12/30, L. Kirwin, Washington, D.C.
- Noah Purifoy. Noah Purifoy papers, 19605–1998. 1.4 linear ft. (08.98092dG) Collected: 1998/09/29, P. Karlstrom, Los Angeles
- Perry T. Rathbone through his wife Eurette. Legal records relating to the estate of Mathilde Beckmann, [ca.1959–1997]. 2.0 linear ft. (05.980817G) Collected: 1998/08/17, R. Brown, Boston
- Harold B. and Sonia Thresher Richardson. Brainerd Bliss Thresher letters, 1935–1938. 0.2 linear ft. October 27, 1997 (05.971027G) Collected: 1997/09/26, R. Brown, Boston
- Arturo Rodriguez. Oral History interview with Arturo Rodriguez. Sound recording: I sound cassette : analog. Transcript: 63 pp. (04.9711140H) Interview conducted: 1997/11/14, Juan Martinez, Washington, D.C., SI Latino Pool fund
- Chuck and Jan Rosenak. Chuck and Jan Rosenak research material, 1990– 1997. 14.0 linear fr. (04.980106G)

Collected: 1998/01/06, L. Kirwin, Washington, D.C.

- Ralph Rosenthal. Loan: Ralph Rosenthal papers, 1938–1996. I partial microfilm reel (10 items) (05.980309L) Collected: 1998/03/09, R. Brown, Boston
- Norman Sasowsky. Research material on Reginald Marsh, 1921–1975. Whitney Museum of American Art, Reginal Marsh papers. Addition: 1.0 linear ft. (deed signed; on deposit since February 22, 1977) (04.980629G) Addition Collected: 1998/06/29, L. Kirwin, Washington, D.C.
- Peter Selz. Peter Howard Selz papers, 1954–1980. Addition II: 3 linear fr. 1976–1996 (08.960076G) Collected: 1997/11/10, P. Karlstrom, Los Angeles
- Linda Shaffer. Myer Shaffer papers, [ca. 1930–1950]. 1 v. (0.4 linear ft.) (08.971226G) Collected: 1997/12/09, P. Karlstrom, Los Angeles
- Caroline Sky. Arrists Equity Association, Washington, D.C. chapter records, 1965–1997. Addition: 4.0 linear ft. (4.980710G) Addition Collected: 1998/07/10, L. Kirwin, Washington, D.C.
- Carol Snow. Ruth Barker Johnston papers, 1940–1948. o.2 linear fr. (05.980115G) Collected: 1998/01/15, R. Brown, Boston
- Joseph Solman. Joseph Solman papers, 1933– 1998. Addition: 0.4 linear fr. March 9, 1998 (3 02.980309G) Addition Collected: 1998/03/02, S. Polcari New York
- Raefel Soriano. Oral history interview with Raefel Soriano. Sound recording: I sound cassette : analog. Transcript: 67 pp. Oral History Project Dec. 6, 1997 (04.971206OH) Interview Conducted: Juan Martinez, Washington, D.C., SI Latino Pool Fund
- Elsie Youngman Sprague c/o Harry Hull. Loan: Correspondence of Elsie (Mrs. William) Hooper, [ca. 1905–ca. 1942]. 93 f items. Collected: 1998/06/05, R. Brown, Boston
- Charles Strong. Oral history interview with Charles Strong, 1998 Mar 14–30 3 sound cassettes (2 hrs. 45 min.) : analog. Transcript: (58 pp.) Interview conducted: 1998/03/24–30 P. Karlstrom, Los Angeles, Jo Farb Hernandez (08.980314OH)

Susanne Suba. Susanne Suba papers, f 1939–1982. Addition (New York): 38 items. Oct. 20, 1994 and Nov. 18, 1997 (02.941020G) Collected: 1997/11/18 (hand delivered)

Beatrice Takeuchi. Takeuchi, Beatrice, 1921– . School of Design in Chicago : refugees east and west / Beatrice Takeuchi. 1998. 54 pp. July 3, 1998 (05.980703G) Collected: 1998/05/14, R. Brown, Boston

Polly Thayer. Polly Thayer papers, [ca. 1930–1995]. 2.0 linear fr. (05.980409G) Collected: 1998/02/09, R. Brown, Boston

Roberta L. Thompson. Gift: John Altoon artwork and papers, [ca. 1940– 1969]. I.9 linear ft. January 3, 1998 (08.980103G) Collected: 1997/12/23, P. Karlstrom, Los Angeles

Sue M. Thurman. Oral history interview with Sue M. Thurman, 1993 Apr. 23– 1998 Mar. 11. 5 sound cassettes (7-1/2 hrs.) : analog. Oral History Project (05.980097OH) Interview conducted: 1998/03/Π, 1998/02/Π, 1998/02/03, 1998/01/06, 1997/12/03, 1997/09/30, 1993/04/23, R. Brown, Boston

Harold Tovish. Oral history interview with Harold Tovish. 3 sound cassettes (225 min.) : analog. Oral History Project: Nov. 13 1997–Apr. 7, 1998 (05.970098OH) Interview conducted: 1998/04/II, 1997/12/30, 1997/11/13, B. Brown, Boston

Nancy Uyemura. Matsumi Kanemitsu papers, [ca. 1970–1990]. Addition: 3.3 linear ft. (8.980094G) Addition Collected: 1998/08/14, P. Karlstrom, Los Angeles

Tony Vevers. Oral history interview with Tony Vevers. 2 sound cassettes (165 min.): analog. Oral History Project: August 1, 1998 (05.9808250H) Interview conducted: 1998/07/09, 1998/08/25, B. Brown, Boston

David Walcutt. William Walcutt papers, 1852–1882. 0.4 linear fr. Washington, D.C. (04.980428G) Collected: 1998/04/28, L. Kirwin, Washington, D.C.

Carroll F. Wales. Carroll F. Wales papers, 1972–1998. 0.7 linear ft. (05.980092G) Collected: 1992/11/19, 1998/09/11, R. Brown, Boston Robert Warshaw. Hans Hofmann papers, 1911–1966. 37.0 linear fr. (02.971217G) Collected: 1997/12/17, S. Polcari, New York

Anita Weschler. Gift: Anita Weschler papers, 1938–1998. 1.6 linear ft. Gift 1974 through 1998 (02.940074G) Collected: 1998/09/13, 1994/12/21, 1992/02/28, S. Polcari; 1982/06/14, 1981/10/09, 1978/02/24, W. McNaught

Merry I. White. Reginald R. Isaacs papers, 1842–1991 (bulk 1928–1991). Addition: 1.0 f linear ft. Nov. 3, 1997 (05.971103G) Collected: 1997/10/27, R. Brown, Boston

William T. Wiley. Oral history interview with William T. Wiley, 1997
Oct. 8–Nov. 20. Sound recording: 8 sound cassettes (60 min. each) :
analog. Transcript: 221 pp. Oral
History Project (08.9710080H)
Interview conducted: 1997/11/20, 1997/11/20, 1997/11/20, 1997/11/20, 1997/10/20, 1997/10/8 P.
Karlstrom, Los Angeles, Jewish Communal Fund/Rena Branston
(transcription)

Anne Winslow. Gretchen W. Rogers papers, 1901–1986. 0.5 linear ft. (05.970094G) Collected: 1997/11/25, 1995/02/20, 1994/10/30, 1994/05/04, R. Brown, Boston

Margret Craver Withers. Margret Craver Withers papers, 1926–1992. 8.3 linear ft. (partially microfilmed on 1 reel) Addition: 1.8 linear ft. Gift 1971 through 1998 (05.980071G) Collected: 1971/03/00, 1974/02/08, 1975/02/17, 1983/05/06, 1989/04/28, 1991/08/01, 1993/02/10, 1993/05/27, 1993/06/14, 1998/05/27, 1998/07/07, R. Brown, Boston

Maudelle Hoy Woodruff. C.B. (Clara Belle) Owen letters, 1880–1881. 1 v.

(08.980410G) Collected: 1998/04/10, P. Karlstrom, Los Angeles

Richard P. Wunder. Richard Wunder research material on Harrier Blackstone, 1940–1986. 2.0 linear feet (02.960126G) Collected: 1998/01/26, S. Polcari, New York

Bobbie Sioux Xuereb. Area X Gallery records, 1984–1987. 2.0 linear ft. March 26, 1998 (02.980326G) Collected: 1998/03/24, S. Polcari, New York Center for Folklife Programs and Cultural Studies

Donors of Financial Support

\$100,000 or more

Philippine Centennial Foundation USA

\$ 50,000 or more

State of Wisconsin

\$10,000 or more

SBC Foundation

\$1,000 or more

Broadcast Music, Inc. Dartmouth College Folk Alliance Folklore Society of Greater Washington Sonia Lewenberg Mysdyscs Inc. Rock and Roll Hall of Fame and Museum

\$ 500 or more

Shirley Gould

Donors to the Collection

- Diana Davies. Photographs, contact sheets, prints, and slides of the Newport Folk Festival, the Philadelphia Folk Festival, the Poor People's March, and miscellaneous personalities of the American folk revival.
- Fast Folk Musical Magazine Board of Trustees. The Fast Folk Musical Magazine. Formed in New York in 1982 as a songwriter/performer cooperative, Fast Folk was an outlet for singer/songwriters to release their first recordings. The collection includes the master recording tapes, magazines and paper records of the organization.

Rose Rubin and Michael Stillman.

Monitor Records collection. Begun in 1956 in New York City, the collection contains more than 250 folk and classical music recordings in its catalogue, which includes music primarily from the then-Sovier Union, the Eastern Bloc, and other parts of Europe. The collection includes the original master tapes, graphics, and business records of the company.

Donors of In-Kind Support

Allied Resinous Products, Inc. Six plastic cutting boards for foodways demonstrations at the Smithsonian Folklife Festival.

The Bagelry. Three dozen bagels for the Smithsonian Folklife Festival.

Bardo Rodeo. Kegs of beer for the staff of the Smithsonian Folklife Festival.

Ben & Jerry's. 200 peace pops for staff of the Smithsonian Folklife Festival.

Breads Unlimited. Ten dozen bagels for volunteer orientation, Smithsonian Folklife Festival.

Brick Oven Bakery. 50 muffins for volunteer orientation, Smithsonian Folklife Festival.

Circuit City Foundation. Gift certificates for items for the Smithsonian Folklife Festival.

Cloister. Two boxes of water bottles for the Smithsonian Folklife Festival.

Costco Wholesale. Gift certificate for items for the Smithsonian Folklife Festival.

Ekco Houseware. Product for foodways demonstrations at the Smithsonian Folklife Festival.

EmberGlo. Two steamers for foodways demonstrations at the Smithsonian Folklife Festival.

Fresh Fields. Five cases of fruit and 60 loaves of bread for the Smithsonian Folklife Festival.

Frito-Lay. 10 cases of chips for the Smithsonian Folklife Festival.

Goodmark Foods, Inc. 15 cases of Andy Capp's fries and two cases of Slim Jims for the Smithsonian Folklife Festival. Heartland Mills. Several loaves of bread for the Smithsonian Folklife Festival.

Libby Inc. Case of glasses for the Smithsonian Folklife Festival.

McCormick & Company, Inc. Spice rack for use in foodways demonstrations at the Smithsonian Folklife Festival.

Michelle's Family Bakery. 70 danishes for the Smithsonian Folklife Festival.

Ocean Spray Cranberries, Inc. 25 cases of produce for the Smithsonian Folklife Festival.

Ortenberg's Bakers, Inc. Breads used at the Smithsonian Folklife Festival.

Papa John's International, Inc. Gift certificate for the Smithsonian Folklife Festival.

- Recording Industries Music Performance Trust Funds. Honoraria for U.S. musicians at the Smithsonian Folklife Festival.
- Red Sage Bakery and General Store. 50 muffins and bread for the Smithsonian Folklife Festival.

Reeves Restaurant and Bakery. Five dozen donuts for the Smithsonian Folklife Festival.

Reily Foods Company. 24 pounds of Luzianne coffee for the Smithsonian Folklife Festival.

- Ricola. Several cans of Ricola cough drops for the Smithsonian Folklife Festival.
- Shoppers Food Warehouse. Gift certificates for items for the Smithsonian Folklife Festival.

Subway. Six-foot sub for the staff of the Smithsonian Folklife Festival.

The Sugar Association, Inc. 400 pounds of granulated sugar for the Smithsonian Folklife Festival.

Superfresh Food Market. Gift certificate for the Smithsonian Folklife Festival.

Tysons Bagel Market. 50 dozen bagels and 30 pounds of cream cheese for the Smithsonian Folklife Festival.

Utz Quality Foods, Inc. Five cases of cheese curls for the Smithsonian Folklife Festival.

 Walmart-Carroll. Gift certificates for the Smithsonian Folklife Festival.
 Westwood-Squibb Pharmaceuticals Inc. 24 cartridge samples for the Smithsonian Folklife Festival. Whatsa Bagel. Several dozen bagels for the Smithsonian Folklife Festival.

Wilkins Coffee, Inc. 24 pounds of coffee for the Smithsonian Folklife Festival.

Wisconsin Milk Marketing Board. Office supply samples for the Smithsonian Folklife Festival.

Wm. Wrigley Jr. Company. Six boxes (120 packages) of Wrigley's Doublemint chewing gum for the Smithsonian Folklife Festival.

Hirshhorn Museum and Sculpture Garden

Donors of Financial Support

\$100,000 or more

Howard and Roberta Ahmanson, Fieldstead and Company Robert Lehrman

\$10,000 or more

Anonymous Ansley I. Graham Trust Greenberg Traurig Lannan Foundation Aaron and Barbara Levine

\$1,000 or more

Anonymous British Embassy Samuel J. Heyman Daniel R. Lewis Dr. Marvin and Elayne Mordes Anthony T. Podesta Elliott and Vivian Pollock

Donors of In-Kind Support

Berlinnale (Berlin International Film Festival) Christie's, New York Festivale dei Giovani, Turin, Italy Festivale dei Popoli, Florence, Italy Jerusalem International Film Festival, Israel Robert Lehrman Rotterdam International Film Festival, The Netherlands San Sebastian/Donestia Film Festival, Spain Sotheby's, New York Taormina Arte International Film Festival, Italy Morad and Pascale Tavallali

Donors to the Collection

The Rachel Bas-Cohain Estate, *Rubber Nickel Grid*, 1973, ink printed on latex, by Rachel Bas-Cohain (97.31).

The Rachel Bas-Cohain Estate, *Rubber* Nickel Grid Distorted, 1973, ink printed on latex, by Rachel Bas-Cohain (97.32).

Bequest of Roger Brown through the School of the Art Institute of Chicago, *Canter*, 1984, oil on canvas, by Roger Brown (98.8).

John Buck and Shark's, Inc., *Capetoum*, 1987, color woodcut on handmade Suzuki paper, by John Buck (97.24).

Frank and Jeanette Eyerley, *The Dead Line*, 1923, lithograph on paper, by George Bellows (97.23).

Frank and Jeanette Eyerley, *Sculpture in Washington Square*, 1925, etching on paper, by John Sloan (97.26).

Mr. and Mrs. Allan Frumkin, *Untitled*, 1969, charcoal on paper, by Jean Ipousteguy (97.37).

Mr. and Mrs. Allan Frumkin, *Untitled*, 1969, charcoal on paper, by Jean Ipousteguy (97.38).

Mr. and Mrs. Allan Frumkin, *Untitled*, 1969, charcoal on paper, by Jean Ipousteguy (97.39).

Museum Purchase with Funds Donated by the Ansley I. Graham Trust, Untitled (Hyperion Series), 1964–65, oil on canvas, by John Altoon (98.5).

Samuel M. Greenbaum, *History*, 1968– 77, oil on canvas, by Eugène Leroy (97.25).

Ronald A. Kuchta, *Ezra—with Love II*, 1991, gouache on paper, by Basil Alkazzi (97.30).

Purchased through the Helen and Joseph Lewis Fund of the Jewish Community Federation of Cleveland, Stepped Double Extended Pyramid, 1974, pen and ink on graph paper, by Jackie Ferrara (98.6).

Purchased through the Jan R. and Daniel R. Lewis Philanthropic Fund of the Jewish Community Federation of Cleveland, *6-P Pyramid*, 1974, pen and ink on graph paper, by Jackie Ferrara (98.7).

Tom and Remi Messer, Untitled Abstraction, 1963, ink on paper, by Julius Heinrich Bissier (97.43).

Tom and Remi Messer, *Head*, c. 1985, grisaille wash on paper, by Arnulf Rainer (97.44).

Anthony T. Podesta, *I Love Liberty*, 1982, color serigraph on paper, by Roy Lichtenstein (97.42).

Burton and Anita Reiner, *Rainbow*, 1983, oil on canvas, by Ross Bleckner (97-41).

Dr. Jerry Sherman, Untitled (Figure in Landscape), 1968, ink on paper, by Mary Frank (97.36).

Dr. and Mrs. Bernard R. Shochet, For Brass, 1973, acrylic on canvas, by Sam Gilliam (97.34).

George and Lila Snow, Untitled, 1972, wood, by Robert Stackhouse (97.35).

Vivian Florig Torrence, The Periodic Table, 1991, photomechanical reproductions and watercolor mounted on paperboard, by Vivian Torrence (97.40).

Mary Ann Unger, Symbiosis, 1989, ink wash on paper, by Mary Ann Unger (97.33).

National Air and Space Museum

Donors of Financial Support

\$100,000 or more

The Boeing Company Cessna Aircraft Company Conrad Hilton Foundation FDX Corporation Honda North America, Inc. Lockheed Martin Corporation National Business Aviation Association Trimble Navigation Ltd. \$ 50,000 or more

Seiko Epson Corporation The Gertrude E. Skelly Foundation

\$10,000 or more

Dean S. Edmonds Foundation GE Aircraft Engines Hughes Aircraft Company Mr. Samuel C. Johnson Estate of H. Sterling Kleiser Mr. and Mrs. Philip A. Lathrap Mr. and Mrs. John Mars Mr. John Morss National Transportation Safety Board Orbital Sciences Corporation Pratt & Whitney

\$ 5,000 or more

United Technologies Corporation The Florence Gould Foundation

\$1,000 or more

AXA Space Mr. and Mrs. Alan Goldberg Richard H. Graham William D. & Betty Houser Fund James A. Taylor Family Foundation Tetsunkuni Watanabe Raymond John Wean Foundation Wright Machine Tool Company

\$500 or more

W. E. Cooper Harry and Marilyn Cagin Philanthropic Fund Helen J. McCray Mr. and Mrs. Carl W. Vogt

Donors of In-Kind Support

American Airlines Continental Airlines Delta Airlines Midwest Express Airlines Southwest Airlines Thomson Consumer Electronics USA Direct US Airways

National Museum of African Art

Donors of Financial Support

\$1,000 or more

Professor David C. Driskell Joseph and Barbara Goldenberg Mr. and Mrs. Milton Rosenthal Doran Ross Lucien Van de Velde

\$ 500 or more

Donald Morris Gallery, Inc. Thomas W. Lentz Marquand Books, Inc. Noah-Sadie Wachtel Foundation, Inc. Susan J. Ryerson

Donors to the Collection

Oliver E. and Pamela F. Cobb. Mask from the Grassfields peoples of Cameroon, given in memory of Philip Ravenhill (97-26-1). Dennis Duerden. Three paintings by Jimo Akolo: The Desired, The Middle man, Religion as a time occupier? (98-5-1 to 98-5-3). Mary Garland. Ethiopian Orthodox icon, given in memory of Robert Lewis Garland (98-2-1). Marc and Denyse Ginzberg. Shield from the Dinka peoples of Sudan (97-24-1). Marc and Denvse Ginzberg. Shield of the Manbila peoples of Nigeria and Cameroon (97-24-2). Ephrem Kouakou. Painting: Komien bian, by Ephrem Kouakou (98-6-1). Brian and Diane Leyden. Drum from the Dan peoples of Côte d'Ivoire and Liberia, given in memory of Philip Ravenhill (97-27-1). Brian and Diane Leyden. Painting: Three Initiates, 1996, by Ephrem Kouakou, given in memory of Philip Ravenhill (97-27-2). Lee Lorenz and William Wright, Painting: Untitled, 1996, by Garth Erasmus (97-23-1).

Lee Lorenz and William Wright. Series of six paintings titled *Mantis Praise*, 1996, by Garth Erasmus (97-23-2 to 97-23-7).

- Roy and Sophia Sieber. Mirror case from the Igbo peoples of Nigeria (97-28-1). Ciro Taddeo. Ethiopian Orthodox icon (08-3-2).
- Textile Arts Foundation, Robert Barton and Nancy Hemenway. Textile from the Kuba peoples of the Democratic Republic of the Congo (97-25-1).
- Estera Votaw. Helmet mask from the Mende peoples of Sierre Leone, given in memory of Albert Votaw (98-4-1).
- Estera Votaw. Pendant from the Lobi peoples of Burkina Faso, given in memory of Richard Horovitz (98-4-2).
- Winston Saoli Art Foundation. Two paintings: *Coming Home* and *Sbroud of Darkness*, by Winston Saoli (98-7-1 to 98-7-2).

National Museum of American Art

Donors of Financial Support

\$100,000 or more

Ruth J. Chase in Memory of Dr. William Chase James Renwick Alliance

\$ 50,000 or more

Dr. and Mrs. Helen Bing Consolidated Natural Gas Company Fidelity Foundation Horace W. Goldsmith Foundation

\$ 10,000 or more

Anonymous Bankers Trust Company Mr. Marcus Cohn Mr. David Davies Mr. Barney Ebsworth Embassy of Korea ENCAD, Inc. The Freed Foundation The Gold Institute Gulf States Paper Mr. Ken Hakuta Mr. Hugh Halff, Jr. Mr. and Mrs. William Kerr Mr. and Mrs. John F. Klein Mr. and Mrs. Melvin Lenkin Mr. and Mrs. John Liebes Mr. and Mrs. Peter Lunder Mrs. Nan Tucker McEvoy Monsanto Company The Morris and Gwendolyn Cafritz Foundation Novus Services, Inc. Mr. Gerald Pearson Mr. Samuel Rose and Ms. Julie Walters Mr. and Mrs. Samuel Rosenfeld Samsung Americas Sara Roby Foundation Mr. Richard Schwartz Mr. and Mrs. Ferdinand T. Stent Unico Banking Group Windgate Charitable Foundation Mrs. Estelle Wolf

\$ 5,000 or more

Mr. and Mrs. Andrew Anderson Ms. Jeanne Anderson Anonymous Mrs. Ann Cousins Mr. Robert Krueger Pitney Bowes Mr. and Mrs. Harvey Rambach

\$ 2,000 or more

Mr. and Mrs. Ronald Abramson Mr. and Mrs. Arthur G. Altschul The Barra Foundation Dr. John Barrett Mr. and Mrs. Thomas Barwick Ms. Fleur Bresler Mr. and Mrs. Dale Dorn Mr. and Mrs. Donald J. Douglass Mr. and Mrs. Daniel Fraad Mr. and Mrs. Morton Funger Ms. Barbara Guggenheim and Mr. Bertram Fields Hallmark Cards, Inc. Mr. and Mrs. John Hechinger Mr. and Mrs. Frederick Hill Mr. and Mrs. John Horn Mr. and Mrs. Raymond Horowitz Mr. and Mrs. Robert Kogod

Mr. and Mrs. Jon Landau
Mr. Paul Mellon
Mr. and Mrs. Michael Mennello
Mr. and Mrs. John McGuigan
Mr. and Mrs. Arnold McKinnon
Mr. and Mrs. Charles Moore
National Foundation for the Advancement in the Arts
Norfolk Southern Foundation
Mr. and Mrs. Gerald Peters
Ms. Rira Pynoos
Mr. and Mrs. James Sams
Mr. and Mrs. Dominic F. Shortino
Mr. Ira Spanierman
Mr. Eli Wilner and Ms. Barbara Brennan

Donors of In-Kind Support

Anonymous. Design and printing of 3,000 Daniel Brush exhibition press kits.
Cartier. Paper and printing for Daniel Brush reception invitations.
Continental-Anchor, Ltd. Paper and printing for DC/AAF programs.
Ironstone Vineyards. 8 cases of CA wine for the Gold Rush reception.
Kinko's. Paper and printing for mem-

bership program.

National Museum of American History

Donors of Financial Support

\$ 500,000 or more

Dr. Herbert R. Axelrod The Lemelson Foundation National Association of Music Merchants The Pew Charitable Trusts Dr. Ivan Selin

\$ 100,000 or more

The Brown Foundation, Inc. Hewlett Packard Company Intel Corporation John S. & James L. Knight Foundation Merck Company Foundation

Monsanto Fund Timex Corporation

\$ 50,000 or more

American Academy of Allergy, Asthma & Immunology Choice Hotels International Eugene & Agnes E. Meyer Foundation Rockefeller Foundation

\$10,000 or more

Abbott Laboratories Fund Alyeska Pipeline Service Company American Federation of Teachers Applied Energy Services, Inc. AT&T Foundation Banco Popular de Puerto Rico Mr. Peter Claussen Mr. Lester Colbert Computerworld Information Technology Awards Electric Power Research Institute George M. Ferris Foundation Ella Fitzgerald Charitable Foundation Fleetwood Enterprises, Inc. Government Development Bank for Puerto Rico Greening America Hair Research Society HBO & Company Mr. Robert F. Hemphill, Jr. **Kmart** Corporation KOLBUS America Inc. Levi Strauss & Company Museo de Arte, San Juan, Puerto Rico NAMSB Foundation, Inc. National Education Association National Postal Forum National Retail Federation El Nuevo Dia PaineWebber Group Inc. Prentice Hall Computer Publishing The Rice Family Foundation Edward Rice Gift Fund Susan & Elihu Rose Foundation Searle Nina & Ivan Selin Family Foundation Sequent Computer Systems, Inc. Showtime The Movie Channel Unite! The Vantive Corporation Zurich Kemper Investments

under \$10,000

A&H Sportswear Company, Inc. Mr. Carlos M. Ablanedo Mr. Neale Ainsfield All Peoples Synagogue American Legion Auxiliary Mr. Thomas A. Anastasio Mr. Andrew S. Appel Atlantic Apparel Contractors Ms. Titian Austin Ms. Dena Axelrod Ms. Maria J. Baba Mr. John F. Baker Katharine G. Baker Trust Mrs. Jean Banner Wilson Barry & Company Mr. Steven D. Bartz Harry Bass Foundation Mrs. Claire M. Bennett Dr. Rose A. Bergeron Mr. William P. Binder Mrs. Gertrude Bloch Ms. Carol Bogash Ms. Dorothy J. Booth Ms. Elfreda O. Bourne Ms. Carole Bouthilet Mr. Charles M. Bredehoft Ms. Claire K. Brock Mrs. Jane K. Brooks Mrs. Joyce Brown Ms. Maila T. Brown Mrs. Elizabeth H. Brunsman Ms. Mary Burnett The Calvin Klein Foundation Mr. James W. Cameron Mr. Hugh J. Campbell Mr. Bernard H. Cantor Joseph L. Carley Foundation Cembaloworks of Washington Chasen Spero Foundation Dr. Timothy W. Childs Ms. Jay McLin Clayberg Mrs. Harriet M. Clem Mr. John L. Cline Cline-Lofftus Foundation Ms. Louisa C. Clinskcales Coat & Suit Industry Trust Fund Mr. Richard H. Cohen Mrs. Mary L. Cole Mr. C. Perry Colwell Comerford Tooling & Access. Company Ms. Virginia S. Comfort Mr. Seth M. Corwin Dr. Ronald M. Costell

Council For Excellence In Government Lieutenant Colonel Robert D. Crea Dart Industries, Inc. Mrs. Michele C. Degan Ms. Laura Hardy Deglomine Ms. Ruth E. DeLynn Mr. James C. Dieffenderfer Ms. Ann M. Dillon Mr. John O. Doerge Mr. James F. Doherty Donnelly Display Inc. Mrs. Lucinda N. Dudley Ms. Patricia C. Duros Elizabeth Crockett Chapter, Daughters of the American Revolution Mr. John F. Else Mrs. Claudia M. Falk Ms. Brigitte Fargetton Mr. Arthur W. Farr Federal National Mortgage Association Ms. Madelyn J. Flammia Fort Nashborough Chapter, Daughters of the American Revolution Mrs. Joan S. Fuchs Mrs. Ann Gaylord Mr. Jacob B. Gilstein Ms. Naomi Glass Global Communications Network Miriam & Alan Goldberg Foundation Ms. Renee Veron Golden Goldman Sachs & Company Mr. Edwin M. Good The Gottesman Fund Mr. Edward F. Gould Ms. Geraldine B. Goumas Ms. Lourdes Grabinski Mr. William R. Granik Mr. Roger B. Granum Earl G. Graves Publishing Company Mr. Paul L. Grimaldi Ms. Melanie Grishman Mr. James E. Hardy Mr. Timothy B. Harwood Ms. Karen M. Hassmer Mr. Mones E. Hawley Ms. Mildred Henninger Louis J. Hoffman Mr. Duncan Holaday Mrs. Cynthia A. Hoover Mr. Roland A. Hoover Mr. David T. Hopper Mr. Paul F. Hudrlik Mr. Nason Arthur Hurowitz Ms. M. Jean Hurwitz International Sourcing Inc.

Mrs. Caryn M. Israel Mr. Howard Jaffe Mr. David S. Jernigan Mrs. Barbara A. Johnson Ms. Margaret Johnson Mr. Russell D. Johnson Juan R. Requena & Associates Mrs. Adele Cover Juzi Mrs. Lynn L. Kahan Mr. Nathan R. Kane Ms. Carol A. Kare Mrs. Page J. Karling Mr. Tadeo L. Kasprzak Mr. Richard J. Kaufman Ms. Gale D. Kaufmann Mr. John A. Kay Ms. Helen A. Kelleher Mrs. Judy Keller Mrs. Mary E. Kephart Ms. Bernie C. Kesslen Ms. Elisabeth S. Kiersarsky Herbert A. King Ms. Lynne Myers Klimmer Lucille Kuehn Trust Ladies Auxilliary to the Veterans of Foreign Wars of the United States Mr. Edward L. Lammerding Mrs. Helen Peters Landau Leica Inc. Mrs. Sarah Lewis Mrs. Vivienne W. Lindsay Lipman Hearne, Inc. Mr. Howard M. Lipsey Mr. William W. Lipsitt Ms. Elizabeth S. Little Mrs. Cleda J. Locev Lockheed Martin Corporation Mrs. Lucille Lotko Lunacom, Inc. Mrs. Dawn K. Lund Mr. Thomas MacCracken The Elizabeth M. MacInnes Family Trust Mr. John Thomas Mahoney Ms. Irene L. Malbin Malden Mills Industries Mr. and Mrs. John M. Malone Ms. Joanne W. Marlowe Mr. and Mrs. Winton E. Matthews Ms. Bernice I. Mayer Ms. Nancy M. McCabe Ms. Marjorie C. McCleery Mrs. Susan S. McConnell Mr. Paul H. McNear Mrs. Gay Meals

Estate of Constance L. Mellen Metzgar Conveyor Company Mrs. Elizabeth R. Metzger Dr and Mrs. Eugene R. Mindell Karla A. Moore Mrs. Eadith B. Morales I.P. Morgan & Company, Inc. Morse Family Foundation Ms. Bernice J. Mueller Mr. George P. Mueller Mrs. Anne W. Murray National Society of Colonial Dames XVII Century National Society of the Children of the American Revloution Mrs. Helen Nelson Neuberger & Berman Ms. Jo-Ann Neuhaus Mr. Joseph K. Newman Mr. and Mrs. George D. Niva Ms. L. Peat O'Neil Ms. Shirley Perlman Mr. Robert D. Pinsker James Mr. James Pipkin J.D. Plating Company, Inc. Mr. Sidney J. Pollack Mr. Peter G. Powers Mr. Edward Prince Puerto Rico Federal Affairs Administration Mrs. Eleanor Quandt Radon Construction Corporation Dr. Elizabeth R. Rahdert Mr. Keith Scott Reas Redondo Construction Corporation Mrs. Patricia D. Reuther Ms. Alice E. Robbins Mrs. Jean Adams Robbins Ms. Cynthia R. Roberts The Honorable Thomas M. Roberts Ms. Janice E. Rodgers Rodrock Development Rogich Communications Group Maria Rose Fashions, Inc. Mrs. Berry K. Ross Mrs. Susan Rothlein Rudvold Trucking Rural Retreat Elementary School Mr. Frank C. Ruzzin San Francisco Foundation Vashon Sarkisian Ms. Joyce J. Schroeder Ms. Eleanor L. Schwartz Shandwick Sigmund&Barbara Shapiro Family Fund Mr. Sardari L. Sharma Mrs. Ava M. Shields Ms. K. Samantha Shugrue Mr. Arthur T. Silver Mrs. Linda Fuller Silver Ms. Dorothy M. Sinclair Constance Hoyt Smith Fund Mr. Chad Matthew Smith Ms. Deborah A. Smith Smithsonian Women's Committee Mr. Richard C. Snelbaker Mrs. Ellen R. Snyder Society of the War of 1812 Ms. Marion L. Sonderegger Mr. Vale H. Sorensen Ms. Susan Spellman Mrs. Colletta F. Sperling Sportswear Industry Trust Fund Stag's Leap Wine Cellars Ms. Helen J. Starling Mr. Henry Steinway Ms. Jean Williams Storch Mr. Gary K. Sturm Mrs. Nancy M. Sullivan Dr. R. Gerald Suskind Mrs. Catherine G. Sweeney Ms. Jeanne J. Tabb Mr. John A. Thompson Mr. and Mrs. Len Tischler Ms. Judith L. Tokel Miss Laura Wolcott Triest Mrs. Mary Louise Tweedy Mr. Henry S.M. Uhl Mr. Steven Umin Mr. Paul Van Fossen Vassallo Inc. Mr. Egon Verheyen Veterans of Foreign Wars of the United States Ms. Terese M. Volk Mr. Raymond O. Von Saunder Vulcan Iron Works, Inc. Ms. Dorothy S. Wagner Mr. Peter C. Warner Warner-Lambert Company The Washington Post Company Mrs. Berry Greene Wegener Louis Weinstein Mr. James E. Wesner Mr. Barry White Mr. George A. Whitehouse Ms. Yolande Whitmore Mrs. Frances P. Wilkinson Ms. Maude Anderson Williams Mrs. Wilma Bond Winkler

Wise Recycling, LLC Ms. Marilyn M. Wolf Mr. Douglas R. Wolters Mr. S. Roy Woodall The Woodland Genesis Elder Care Network

Donors of In-Kind Support

Hewlett Packard. Computer equipment. Rodrock Development. Recycling cans for grass-roots fund-raising. United Solar Systems. 8 solar shingles. Wise Recycling, LLC. Recycling cans for grass-roots fund-raising.

Donors to the Collections

- David M. Abelow: M&M-Mars candy box with the Presidential Seal, given to volunteer workers at the White House, 1998 (1998.0135).
- Ita Aber: cloth Sabbath bread cover of an American flag with a map of Israel superimposed in beadwork and glass stars (1997.0047).
- Acuson Corporation (through Samuel H. Maslak): Acuson 128 sonography system, 1983, and a Sequoia 512 sonography system, 1996, both used in diagnostic ultrasound examinations (1996.0332).
- Rita J. Adrosko: pair of woman's white cotton gloves, 1965–70 (1997.3156).
- Advanced Bionics Corporation (through Jeffrey H. Greiner): 5-piece Clarion Multi-System cochlear inner ear implant hearing aid system (1997.0317).
- Richard E. Ahlborn: 3 comic books devoted to Catholic Bible lessons, 1960–61 (1997.0223); day book from a general store in West Virginia, 1879– 80 (1997.3138); "Sacred Heart of Jesus" calendar from Kerala, India, 1997 (1998.0082).
- American Dentronics Incorporated (through Melody A. and Ronald K. Murayama): Cybersonic plaque disintegrator system set including a handle, toothbrush, flosser, charger, and a box, patented by Dr. Murayama in 1997 (1997.0370).
- Wally Amos: 2 shoes and a necktie hand-painted with watermelon, palm tree, and celestial motifs by Christine

Harris-Amos for her husband, Wally, "Famous Amos" (1998.0152).

- Alan Androuais: 2 adjustable monkey wrenches with wood insert handles (1997.0251).
- Anonymous: 2 side chairs and a coffee table of molded plywood designed by Charles and Ray Eames in 1946 and made by the Herman Miller Furniture Company about 1947 (1998.0145); plastic bride-and-groom wedding cake ornament, 1970–80 (1998.3063).
- Mary G.N. and Col. Whitney Ashbridge: 40 pieces of U.S. military uniform items, insignia, and equipment (1992.3091).
- Asian Pacific American Legal Center of Southern California (through Julie A. Su): 3 shirts, 2 pairs of shorts, and a banner, all relating to the garment industry in southern California (1997.0377).
- Associated Builders, Incorporated (through Michael Buck): "Georgia Buggy" heavy-duty wheelbarrow used to mix and deliver concrete and haul away debris, and a shovel, both made in the late 1940s and used during renovations at the National Museum of American History in the 1980s (1996.0073).
- Charles Atlas, Ltd. (through Jeffrey C. Hogue): 15 objects used by Charles Atlas to demonstrate his personal physical fitness and used in his business to encourage other people to pursue a healthy lifestyle (1998.0150); 2 cubic feet of documents, photographs, booklets, news clippings, and original text related to Charles Atlas and his career as a body builder and physical fitness enthusiast (1998.3038).
- Reserve Bank of Australia (through J. K. Colditz): Australian specimen \$50 bank note made with polymer technology and special security features, 1995 (1996.0369).
- David F. and Jane F. Babson: wedding dress and veil made and worn by Emma Rikert Babson in 1922, the McCall's dress pattern she used, 5 brooches, 5 photographs, and a tie bar (1997.0211).

Gary P. and Sandra G. Baden: 2.5 cubic feet of print advertisements featuring celebrity endorsements, late 19th and 20th centuries (1997.3144).

Teri Bailey in memory of Irwin George Burgenhiem and Helen Burgenhiem Foote Jenkins: 19 cameras collected by Ms. Bailey's grandfather, Mr. Burgenhiem, 1960–80s (1997.0321).

Frances S. Baker: 0.5 cubic foot of product cookbooks, canning labels, and newspaper clippings of recipes (1997.3102).

Michael Baker Corporation, Michael Baker, Jr., Inc. (through John Mc-Naughton): 4 Kern tripods, 2 sets of Kern traverse targets, 2 geodimeters, a Kern theodolite, tellurometer, and a Rhodes arc (1997.0290); (through J. Robert White): surveyor's level model Ni2 made by Carl Zeiss, ca. 1961 (1997.0289).

Baldwin Piano & Organ Company (through Steven Brock): 13 cubic feet of corporate records of the Wurlitzer Piano Company, 1966–89 (1997.3154).

The Baltimore & Ohio Railroad Company (through Lawrence W. Sagle): 0.6 cubic foot of archival material relating to the Baltimore & Ohio Railroad, 1850–80 (1997.3124).

Baxter Healthcare Corporation, Biotech Group, Immunotherapy Division (through Dr. Alan Hardwick): prototype bone marrow stem cell isolator designed by Dr. Hardwick, 1989 (1997.0076).

Bruce S. Bazelon: 76 letters, a telegram, and an envelope, all related to the U.S. Naval career of Grant W. Leedy of Pencannon, Pennsylvania, 1943–45 (1992.0290); binder of War Production Board Requirements, WW II (1997.3169).

Jeannie E. Troll Becraft: Fuller's spiral slide rule, 1898 (1998.0046).

Amy A. Begg: Franklin day planner, ca. 1993 (1996.0191).

Ruth W. Begun in memory of Dr. Semi Joseph Begun: 15 objects reflecting the career of Dr. Begun, a pioneer in magnetic recording technology (1995.0316); 8 objects of magnetic recording technology (1995.3101). Susan D. Beller and Myron J. Liberman in memory of Esther and Gilbert Liberman: rattan hamper with a canvas cover marked as belonging to Lt. Col. George Armstrong Custer, 1870s (1997.0358).

John A. Benaglia: Perkins Junior portable twin-arc lamp for photographic location lighting, ca. 1920, and a set of arc lamp carbons, ca. 1950 (1997.0188).

Jeanne Benas: toy with figures of Dole and Clinton that fight when squeezed (1997.0372).

Bradley F. and Virginia W. Bennett: 211 ancient Greek and Roman coins (1997.0267); 83 ancient Greek coins of Phrygia (1998.0093).

Alice B. Bent: U.S. flag with 39 stars arranged in a star-shaped pattern (1997.0139).

Florence S. Berryman (through Jerrold Scoutt, Jr.): sampler embroidered with the statement "Susanna Ursula Penelope Graur de la Bruyere finished this Sampler August the 22 1794 in the Seventh Year of her Age" (1996.0056).

Bethlehem Steel Corporation (through Stephen G. Donches): safety sign (1997.0225).

Urban R. Billmeier in memory of Urban F. Billmeier: 10 goldbeater's and goldcutter's handtools and a Warren & Billmeier trademark printer's block (1997.0298).

Binney & Smith Inc. (through Tracy Muldoon Moran): 17.5 cubic feet of archival records documenting the company's business including such products as Silly Putty, Crayola crayons, Magic Marker, and various paint, chalk, and craft accessories (1998.3028); (through Patrick E. Morris III): 8 cubic feet of company records of Binney & Smith, manufacturers of chalk, erasers, slate pencils, Crayola brand crayons, art supplies, and educational materials, 1895–1995 (1997.3164).

Bio-Rad Laboratories, Molecular Bio-Science Group, Genetic Systems Division (through John A. Tagliamonte): Gene Pulser transfection electroporator apparatus, capacitance extender, pulse controller, and a cuvette holder with 15 cuvettes, 1986–95 (1998.0018).

William L. Bird: container of Johnson's Baby Powder of WW II and a 1960s tin of Yardley After Shower powder (1997.0282).

David B. Board: brass Nik-O-Lok restroom token (1998.0065).

Prof. John O'M. Bockris: 2 cold fusion electrolytic cells used by Prof. Bockris in his laboratory at Texas A&M University to produce tritium at the electrodes (1994.0097).

Betty J. Coleman Bogardus: Boy Scout Hike-O-Meter sponsored by the radio program "Jack Armstrong, The All-American Boy" and its instruction sheet, late 1930s (1998.0083).

Fredericka H. Bond: veteran's badge of 1861, copy of military orders, and a State Department pass of 1908 (1997.3080).

Albert M. Borkin in memory of Morris Borkin: blue pennant with white letters, "We are the Reserve Army, U.S., 16 Men," indicating that in 1915 the U.S. Army Reserve consisted of 16 men, one of whom was Morris Borkin (1997.0111).

Virgil E. Bottom, Ph.D.: 0.33 cubic foot of archival material about the quartz crystal industry (1997.3137).

Bowdoin College, Department of Physics (through Prof. Elroy O. La-Case): constant deviation wavelength spectrometer and 4 accessories, all made by Adam Hilger, 1913–26 (1998.0007).

Thomas W. Bower: 7 bottles of man's perfume, 1968-83 (1997.0201).

Helen King Boyer: 6 engraved plates and 3 prints made by Ms. Boyer (1997.0155).

Elaine D. Bronez: 2 leaftets related to civil rights issues (1997.0303).

Julia Yates Brunet, Georgia Yates Stevens, Janet Yates Wermel, and JoAnn Yates in memory of George L. and Marian McNiece Yates: 2 artificial hands and 14 tools and accessories used with the hands, all used by George L. Yates who lost his hands in a cannon misfire at college in 1933 (1996.0010). Barbara Gates Burwell and Deborah Gates Senft in memory of Dorothy Olcott Elsmith: 8 pieces of miscellaneous photographic apparatus, 4 still cameras, and a motion picture camera and projector (1992.0384).

Richard S. Buswell, M.D.: silver-gelatin photograph of an "Icehouse" on a pond with reflection, photographed by Dr. Buswell in 1983 (1997.0406).

Andrew Butler: 3 plumb bobs with human figure motifs, 2 level rails for SmartLevels, and 2 sensor module prototypes for WedgeLevels (1996.0285); 6.5 cubic feet of archival records relating to the SmartLevel and Wedge Innovations, Inc. (1996.3067).

State of California, Department of Industrial Relations, Division of Labor Standards Enforcement (through Jose Millan): 43 objects from the El Monte garment sweatshop including 2 sewing machine workstations, clothing in various stages of manufacture, supplies, and documentation, all seized on August 2, 1995 (1996.0292); baseball cap with "Labor Commissioner" emblem (1997.0383); "Labor Commissioner" badge, identification card, and a Spanish booklet about worker's rights (1997.3113).

Rose M. and Richard M. Cernak: silk handkerchief printed "For the Flag and You," WW I (1998.0028).

Robert G. Chamberlain: ashtray milled in 1955, aluminum block with the initials "IBM," and a set of 3 icosahedron dice, all milled by Mr. Chamberlain with numerical control machinery technology (1995.0022).

Rick Chandler: Timex electric wristwatch, 1950s, and a mercury quartz wristwatch, 1970s (1998.0009).

Mary Chaney: 8 original courtroom sketches by Ms. Chaney depicting the El Monte sweatshop trial, done for KTTV Fox News in Los Angeles, California, 1995–96 (1997.0345).

Chicago Bulls (through Stephen M. Schanwald): basketball used during the 1996 NBA finals series and a jersey worn by Michael Jordan during the 1996–97 season (1997.0364). University of Chicago, Ryerson Physical Laboratory: 21 electrical meters and measuring instruments (1995.0230).

Curt I. Civin, M.D.: Adams cell counter used by Dr. Civin in his cancer research (1998.0062).

Cochlear Corporation (through Douglas W. House): 4-piece C124M cochlear inner ear implant hearing aid system (1997.0206).

Cinthea T. Coleman: 26 videotape cassettes of "The Bluestime Power Hour" television programs and 23 videotape cassettes of the original field recordings, all created and produced by Ms. Coleman (1998.3065).

Colt's Manufacturing Company, Inc. (through Ronald L. Stewart): M4 carbine machine gun with M203 grenade launcher attached (1998.0128).

David F. and Harriert M. Condon: arrow gun patented by William H. Arnold in 1859 and manufactured as an experimental piece at the Harper's Ferry Arsenal in 1860 (1997.0281).

Cooley Dickinson Hospital, Inc. (through Gerard M. Federici): 9 bottles of pharmaceuticals (1997.0189).

Reseda Corrigan: envelope of literature related to the Apostoloff automatic telephone system (1997.0048).

George A. and Lily K. Coury: 12stringed oud with cloth carrying case (1998.0015).

Karen D. Cramond and Brad W. and Judy L. Harris: precision regulator wall clock made by Eli Terry late in his life after he retired from clock manufacturing, ca. 1850 (1997.0323).

Marlene Crosby: 4 cubic feet of documentation of a study done by Ms. Crosby on the long-term health of WW II women factory workers (1997.3136).

Dr. John C. Cutler: box of Mapharsen, a drug containing arsenic used to treat syphilis developed by Dr. Cliff S. Hamilton (1997.0287).

Thomas J. Damigella: 2 Ultra 21 Tupperware covered serving dishes and a set of orchid-colored polyethylene pellets used by Tupperware in the 1970s (1998.0070); 6 Tupperware containers and an award medal, plaque, and a pin given to successful Tupperware dealers, 1970s–96 (1998.0220).

- Kenneth L. Darby: 9 documents and 8 drawings relating to the Darby windsurfing boards, 1964–65 (1997.3173).
- Naomi Darby: 0.5 cubic foot of archival material consisting of 80 photographs, 1961–97, and an 8mm film, 1965, relating to the invention of the sailboard by S. Newman Darby (1998.3015).
- S. Newman Darby: 2 cubic feet of archival material documenting the invention of the sailboard by Mr. Darby, 1946–805 (1998.3014).
- Jeanne V. Davis: 8 pieces of woman's clothing including 4 dresses, a combination, petricoar, blouse, and a skirt, 1905–25 (1998.0115).
- Ruth H. Davis: hand-held refracting telescope marked "G. Bracher, London, for E. A. Kutz, New York," ca. 1850 (1998.0088).
- The Deep River Historical Society, Inc. (through Edith M. DeForest): 2 copies of newspaper articles concerned with Pratt, Read Company and an employee time book from the company's West Factory, 1887–1900 (1998.0377).
- Michelle Delaney: Image Tech 3-dimensional Magic single-use camera (1997.0229).
- Delphi Delco Electronic Systems (through Gilbert W. Porter): Radio Data System demonstration receiver with accessories (1998.0073).
- Franco DeNicola: Euclid computer consisting of a core storage system, control panel, and a power supply, 1957 (1997.0369); 3 reports, a label, and a set of spare connectors for the Euclid computer (1997.3171).
- Susan A. Dennis: 30 garment labels from various clothing manufacturers and made in various countries (1997.3150).
- Thomas E. Dermody: Speedy Touch Typer Keyboard Guide invented and patented by Mr. Dermody, 1989 (1998.0101).
- Evelyn DeStafano: Mrs. Vrooman's patented iron sink strainer, dated 1895 and 1909 (1998.3066).

The Dial Corporation (through Jane E. Owens): 30 cubic feet of advertising art, including women's portraits, and 3 cubic feet of archival material documenting the "Breck Girl" advertising campaign, 1936–95 (1998.3067).

Freda Diamond: 1.5 cubic feet of archival material documenting Ms. Diamond's career as a designer of glass products for the Libby Glass Company and a furniture design consultant, 1930–90 (1997.3143).

Paul Timothy Diaz: 3 posters advertising Mr. Diaz's AIDS awareness dance performances, 1996–97 (1997.3118).

Discover Financial Services Card (through Benedicta Lawrence): 25 objects including posters, playbills, costume items, props, and documents from 11 Broadway shows, ca. 1996 (1998.0048).

Rosemary W. Dodd: 6 phonograph recordings of radio interviews with Ed Dodd, creator of the "Mark Trail" comic strip (1992.3045).

Mark Doerrier: ticket to the Holyfield-Tyson Rematch boxing championship held in Las Vegas, Nevada, on June 28, 1997 (1998.0042).

Cherolyn Rein Dunn and Rose Rein: green Kodak Petite camera with matching case, 1929–33, and a Kodak Jiffy camera, 1933–37 (1996.0280).

Jacqueline Orsini Dunnington, Ph.D.: painted pine panel of St. James the Greater defeating an enemy, made by Nicholas Herrera of El Rito, New Mexico, 1996 (1997.0343).

Eastman Chemical Company (through Larry Smith): 2 work incentive posters, "The Eastman Way" and "Quality Policy," 1992 (1995.0293).

M. Alexandra Eddy: Roland PC-100 MIDI electronic keyboard controller (1998.0039).

Carolyn H. Edwards (through Daniel S. Hall and Robert N. Haskell): 2 vibrators, 2 hearing aids, and a Spencer microscope (296611).

Elsa J. and Robert A. Edwards: bookmark advertising the Acco paper punch and paper clamp made by the American Clip Company of Long Island City, New York (1998.0110). Nanci K. Edwards: postcard depicting a woman and a pump on a low teetertotter (1993.0461).

Albert S. Eggerton, Jr.: 4 pocket weekly planners, 1984–87, 2 appointment calendars, 1963–64, and a GI wristwatch, 1945 (1997.0324).

Jon Eklund: 10 Mohr pipettes, 8 transfer pipettes, 2 measuring pipettes, 2 rubber filters, and a stand (1998.0020).

Elekta Instruments, Inc. (through Stanford W. Miller): "Gamma Knife" collimator helmet used to target cancerous brain tumors in radiation therapy, 1968 (1997.0134).

E.L.F. Publications (through Judith D. Lane and Ronald R. Quam): oakframed stained glass sun-catcher with a mortar-and-pestle design, 1996 (1997.3019).

Charles Ellis Ellicott III, M.D.: surveyor's spirit level made by Benjamin Rittenhouse, ca. 1785 (1997.0353).

Enable Magazine, Inc., American Association of People with Disabilities (through Sandy Watson): premiere issue of Enable Magazine, 1997 (1997.0334).

Epicenter Communications (through Peter Goggin): 2 copies of the presidential inaugural commemorative book An American Journey, Building a Bridge to the 2Bt Century, 1997 (1997.0307).

Joanna L. Estep: 16 pieces of sample fabrics, WW II (1997.0009).

Virginia H. Ezell in memory of Dr. Edward C. Ezell: 5 automatic assaulttype rifles and a submachine gun made in Europe and Indo-China during the Cold War and immediate post-Cold War period (1996.0205).

Sharon L. Faina in memory of H.E. Burton: tenor banjo made by the Vega Instrument Company of Boston, 1962–64 (1998.0074).

Mary Jane and Nathan Fay: 2 grapepicking knives and a budding knife used in grafting grape plants, all used by Mr. Fay as a grape farmer in California (1997.0304); bottle of Cabernet Sauvignon wine from Mr. Fay's private reserve, 1974 (1997.3129). Rick Feffer: polycarbonate SmartLevel, transparent sensor module, and a tote bag (1996.0289).

Ruth and Theodore Feinstone, D.D.S.: 22 documents, photographs, and blueprints relating to the Feinstone's purchase of a house in Levittown, New York, 1946–72 (1998.0113).

John T. Fesperman, Jr.: 4 bowls of assorted glazes and a lamp base-vase and covered tureen of tobacco spit glaze, all made by Ben Owen of North Carolina, mid-20th century (1996.0347); Selmer sterling silver flute, ca. 1946 (1997.0261).

Bernard F. Fetter, M.D.: Eveready 4¹/2volt dry cell battery, ca. 1932 (1997.3007); cornet made by J.W. York & Sons of Grand Rapids, Michigan, ca. 1903, played by Dr. Fetter's father when a member of the Curbstone Band in Baltimore, Maryland, ca. 1910 (1998.0131).

Mary B. Field in memory of the Field Family: cotton and wool overshot coverlet (1997.0226).

James R. Fisher: Nishika model N8000 3-dimensional camera and a flash unit (1998.0022).

Larry Fishman and Ken Parker: Parker Fly concert model electric guitar (1997.0299).

John A. Fleckner: badge #12475 and a finisher's certificate from Mr. Fleckner's participation in the Marine Corps Marathon of 1997 (1998.0109).

Shelly J. Foote: woman's clothing including 2 dresses, 2 T-shirts, a sweatshirt, blouse, jumpsuit, shorts outfit, skirt, pair of leg warmers, and a pair of boots, and 2 pairs of child's sunglasses, 1965–97 (1997.0395).

Thomas S. Foust: Washington Steel Corporation annual report for 1955 (1998.0171).

Beatrice and Jacques Francais: violin bearing the maker's label of John Simpson of London, England, ca. 1790 (1998.0210).

Joseph V. Frey: prototype dispenser, preproduction model, final product, packaged product, and a tool-and-die model, all for the Grab-It hair endpaper wrap dispenser used by professional beauticians, invented and manufactured by Mr. Frey, 1980–96 (1996.0380).

- Elmer G. Fridrich: 832 experimental lamps and lamp parts developed by Mr. Fridrich at General Electric's NELA Park facility after WW II (1996.0147); 345 experimental lamps and lamp parts developed by Mr. Fridrich (1996.3042).
- Kraig M. Fulton: 2 uniform shirts from the Sioux City Ghosts barnstorming softball team (1997.0022).
- Fusion Lighting, Inc. (through Michael G. Ury): 6 microwave-powered light bulbs, 2 electromagnetic interference shields, a microwave cavity, and an optical reflective film sample, all parts used with the first sulfur light bulb, 1990 (1996.0359); microwave-powered light bulb and a set of optical reflective film samples (1996.3075).
- Maxwell J. Gainer: Tinkerpins game patented in 1916 and a Bob-A-Loop toy copyrighted in 1958 (1997.0359).
- Edward A. Gallagher: Synchronome electric wall clock used at the Western Union station in Miami, Florida, ca. 1921 (1996.0165); 2 engineer's reports, 1875 and 1880, regarding submarine telegraph cable laying (1996.3048).
- Gateway Coin Club of Merced County (through Theresa M. Lund): 3 bronze medals commemorating places and events in Merced County, California, 1996–98 (1998.0195).
- Geonix Corporation (through Karen M. Mortham): Auto-Surveyor II inertial survey system made by Litton Guidance & Control Systems, used to mark boundaries in Alaska, ca. 1975 (1997.0284).
- H. Joseph Gerber: Gerber variable ⁶ scale, 1940s (1994.3104).
- Daniel B. Gilbreth: 6 glass plate negatives of Maj. Frank B. Gilbreth in uniform, WW I (1998.0097).
- Jeff Gillies: Will C. Rood's "Dress Maker's Magic Scale" drafting tool, 1879–92, and Curran's skirt and bodice drafting system, ca. 1901 (1997.0247).
- Dorothy T. Globus: black enameled light bulb with an orange dot made

by the DomSave Electric Corporation of Toledo, Ohio (1997.3108).

- Felicia F. Gomes: lace flounce that was originally on the dress worn by Lucretia R. Garfield at the inaugural ball of her husband, President James A. Garfield, 1881 (1997.0292).
- Martha Goodway: daguerreotype union case made by Lirtlefield, Parsons & Company, ca. 1857 (1997.0230).
- John Gorby: "Decision Making Dart Board" adapted by Mr. Gorby for his workstation at Delphi Interior's Grand Rapids, Michigan, plant (1996.0322).
- Glen Grazier: portable reed organ made by the Estey Organ Company of Brattleboro, Vermont, 1935–40 (1998.0031).
- Dr. Mary Eloise Green: 2 toy banks, a toy rifle, toy sword, and a set of Dolly Dumpling tenpins, all used by Dr. Green and her brother, Earle M. Green, when children, 1905–10 (1997.0277).
- Dianne B. Gregg: portrait bust glass paperweight of Michael J. Owens, inventor of the Owens bottle machine, 1923, and an opaque orange glass vase encased within a metal basket commemorating the 150th anniversary of U.S. independence, made in Germany, ca. 1926 (1997.0220).
- Becky and John W. Grigsby: stardesign crazy-patch quilt with elaborately embroidered 3-dimensional plant and animal motifs, made by Lydia Pearl Finneill Allin of Harrodsburg, Kentucky, 1884 (1996.0381).
- Roy Gussow: 3 screw clamps used during welding and a triangular plate of stainless steel with test welding and test polishing, all used by Mr. Gussow when helping artist Jose de Rivera create his sculpture, *Infinity*, 1966 (1997.3057).
- Clara S. Haas (through George C. Haas, Jr.): Chippendale-style mahogany card table with a fold-over top, possibly made in Salem, Massachusetts, ca. 1775 (1998.0072).
- Clifford Hamilton: 63 buttons related to the American Agricultural Movement (1993.0188).

- Elaine Harmon: black crepe dress with a decorative design patented by Daniel Novick of Chicago in 1941 (1998.0116).
- Caroline A. and Kerry J. Hatfield: quilt with 158 pieces of insignia sewn on in woven blocks, made by Frances H. Warren reflecting her WW II military career, 8 ribbons awarded to the quilt, 3 military ribbon bars, and 2 medals (1997.0210).
- Roland C. Hawes: 20 cubic feet of archival material of Mr. Hawes's career at Cary Instruments as vice president and designer of many of their most successful scientific instruments, especially spectrophotometers (1997.3139).
- Senator Howell Heflin: coach Paul W. "Bear" Bryant's 315th-win football (1997.0337).
- Richard C. Helmstetter: 2-piece cuestick titled "Chantilly" custom-made by Richard Black of rock maple wood inlaid with various woods and ivory, 1996–97, and a cue case (1998.0163).
- Paul E. Herda: Osborne Executive I portable microcomputer (1997.0026).
- Lawrence I. Hewes III and Mary D. Hewes: feathered and beaded Native American headdress presented to Adlai E. Stevenson, Jr., and an autographed photograph of him wearing the headdress, 1950s (1997.0397).
- The House of Ra Ka Ba in memory of Jean Dora Alice Johnson and Lillian Morris (through Minister Ra Ka Ba and Minister Abdus Saabor Muhammad): Million Man March commemorative silver ring designed by Minister Ra Ka Ba, dated Ocrober 16, 1995 (1998.0134).
- Houston Museum of Natural Science (through Lisa I. Rebori): sleeping bag used on the 1969 voyage of the SS *Manbattan* through the Northwest Passage (1997.0333).
- Ellen Roney Hughes: woman's athletic suit consisting of a sleeveless wool jersey, pair of bloomers, and a pair of stockings, ca. 1917 (1997.0400).
- Henry C. Huglin: tapered stoneware vase with luster glaze made by Beatrice Wood of Ojai, California, ca. 1990 (1997.0402).

- Steven E. Huntley: oval wooden cutting board with a red-stenciled slogan on one side, "Vote For Hoover and Your Board Will Never Lack a Loaf," ca. 1928 (1997.0262).
- William G. Hutt: 2 pairs of eyeglasses with double-bifocal lenses that allow vision in confined spaces with minimal head movement, worn by Mr. Hutt as an electronics technician, 1970s–80s (1997.0169).
- Forrest Hyde: optometer made by the Self-Test Optical Company in Chicago, 1928, used in the mountains of northern Georgia by Mr. Hyde's grandparents into the 1930s (1996.0083).
- INTEL Corporation (through Rachel Stewart): irridescent gold metallic "Bunny People" suit used to advertise the fun being manufactured into INTEL's microprocessors, 1997 (1997.0275).
- Marta Jean Ishmael: reading ratometer used to improve reading skills (1997.0222).
- M. Lois Jackim: Panasonic Executive Partner FT-70 portable microcomputer (1997.0125).
- Richard N. Jarmon: Rockwell batterypowered drill and a Rockwell electric drill made to commemorate the U.S. bicentennial (1997.0072).
- Grace Jeffers: 97 pieces of Formica Corporation product samples, color samples, and promotional material, 1950–95 (1997.0319); 34 Formica Corporation promotional items (1997.3133); 7 videotape cassettes about Formica (1998.3032).
- John Paul Mitchell Systems (through John Paul DeJoria): 200 photographs by Lisa Law documenting counterculture life in America, 1965–75 (1998.0139).
- Sarah Johnson: Minut-Bun cookertoaster and a display box for Chiclets gum (1997.0102).
- Donald L. Kear: Navy Department manual for inspecting materials, 1946 (1996.0019).
- Gary Keck: 2 ceramic plates, one made for the Curtiss Flying Service Corporation and the other made for "Sloppy Joe's, Habana, Cuba," 1912– 50 (1997.0297).

Catherine M. Keen: 6 coins of the Czech Republic, 1993–97 (1998.0194).

- Emory L. Kemp: 17 photographic lantern slides (1997.3142).
- Ketchum Advertising (through Dianne Snedaker): 8 Safeway Food Store posters with slogans "I Work An Honest Day, I Want An Honest Deal" (1987.3101).
- Claudia Brush Kidwell: woman's blouse designed by Issey Miyake, 1994 (1998.0037); 3 man's shirts, 1970–75, man's slippers with travel case, 1930– 60, and a woman's Christmas sweatshirt, 1990–95 (1998.0057).
- Kiehl's Inc. (through Jami Morse von Heidegger): 231 Chinese medicines and medical devices (1989.0196).
- T.A. Kiersch, M.D.: Pawson & Brailsford's "Improved Patent Magneto-Electric Machine for Nervous Diseases" with its attachments, made in Sheffield, England, 1878–85 (1995.0288).
- King Research Inc. (through Bernard R. King): 6 collecting jars and 4 containers of Barbicide for the jars, used to disinfect hair styling combs and scissors (1997.0195).
- Jean Callen King: 5 silver-gelatin glass plate negatives of production and display of ceramic items, 1890–94 (1997.3141).
- Kirshenbaum Bond & Partners (through Scott Lahde): mock ballor for the 1996 presidential election used to educate children about voting (1997.0338).
- Manny Kladitis: red satin dress with fringe, sequins, and beading worn by Carol Channing in the musical *Hello Dolly!*, 1994 (1997.0232).
- Calvin Klein, Inc. (through Robert Triefus): 3 woman's dresses and 2 pants suits, all designed by Calvin Klein, 1994–96 (1997.0135).
- Jeffrey Kliman: 60 photographic contact sheets documenting the District Curators Jazz Arts Festivals from 1993 to 1997 (1997.3175); photographic contact sheet documenting the District Curators Jazz Arts Festival in 1996 (1998.3061).
- Robert C. Knievel, a.k.a. Evel Knievel: leather jumpsuit, cape, and pair of boots worn in the 1970s by

Mr. Knievel during motorcycle daredevil performances and a helmet worn in the 1990s for talks about his career (1995.0032).

- Max Kobre (through Sherrill L. Hykin and Robin E. Schmidt): 49 pieces of art glass by various American and European manufacturers, 2 art glass dresser jar sets, a cameo glass table lamp, and a miniature silver sewing kit (1995.0350).
- Eva Koubek: an evening bag of gold mesh set with diamonds, 1960–65, and 8 pieces of woman's jewelry of gold and gemstones including 2 family pieces brought out of Czechoslovakia at the end of WW II, 1895–1930, 5 pieces given to Mrs. Koubek by her husband, 1950–69, and a gold box chain, 1970–85 (1997.0405).
- James J. Koval: "Al's Original American Basswood Dartboard" and 5 darts with turkey feathers, 1997 (1998.0106).
- Joseph I. Krene: 46 pieces of photographic equipment (1993.0037).
- Krispy Kreme Doughnut Corporation (through Joseph A. McAleer, Jr.): Bradley washfountain, Ring King Junior doughnut-making machine, and small tools including 3 rolling pins, a doughnut cutter, and tongs for lifting doughnuts from the Ring King (1997.0179); 5 employee pins, 3 aprons, 2 shoulder patches, 2 caps, 2 coffee mugs, a smock, plaque, and a set of 20 doughnut flavor labels (1997.0185).
- Aveline and Michio Kushi: 19 cubic feet of archival records documenting the macrobiotic diet lifestyle and the central role played by Mr. and Mrs. Kushi in its development, 1960s–90s (1997.3165).
- Richard P. Laauser: Liberty Twin Caille outboard motor, 1924–28 (1997.0263).
- LaBelle Heritage Museum, Inc. (through Thomas R. Sargent): model II rotary steam engine designed, patented, and drawn by Edward C. Warren and J.H.A. Warren, 1928–29 (1997.0249).
- LaGuardia Community College, La-Guardia and Wagner Archives, The

City University of New York (through Richard K. Lieberman): 1 cubic foot of business records of the Sohmer Piano Company, 1934–46 (1997.3140).

- David L. Larson: etching, *The Veterans*, by Bernhard Uhle, 19th century (1997.0239).
- Lisa Law: 6 photographs of Lisa Law and her family, 1968–86, a photograph by Ms. Law of Bob Dylan, 1965, and a photograph by Ms. Law of her husband setting up a tepee at Woodstock, 1969 (1998.0138).
- Norman J. Lawrence: Lawrence of London water-repellent silk raincoat designed by Mr. Lawrence, 1952 (1997.0248).

Col. George E. Lear, USA (Ret.): renor saxophone made by Everte & Shaeffer/Buffet-Crampon & Cie of Paris, France, 1920s (1997.0404).

- John A. Lee: 8 pieces of winemaking equipment used by an Italian-American household in New Jersey and Pennsylvania, 1902–64 (1997.0154).
- Beth K. Lehman: quality campaign paperweight and an oil-drops timer given to employees upon completion of a successful and difficult project (1996.0099).
- Lt. Col. Benjamin R. Lemlich, USA (Ret.): United States Army Retired flag, 1994 (1997.0110).

Levi Strauss & Company Archives (through Lynn Downey): pair of Levi 501 blue jeans (1997.3115).

Peter Liebhold: work incentive poster titled "Teamwork" (1995.0344).

Camilla C. Lindsay, Diana Crosby Lindsay, Eric Lindsay, and Kelly G. Lindsay: handmade erasable whiteboard calendar with pens, used by the Lindsay family to keep track of their daily activities, record phone numbers, and to leave messages for each other (1998.0010).

Dr. Don M. Lipkin: General Electric ribbon-filament microscope illuminating lamp, ca. 1950 (1997.0221).

Mark D. Livaditis, O.D.: 7-piece Bausch & Lomb soft contact lens compliance pack (1997.0191). Andrew J. Livick: arc lamp, motion picture camera, and a Jenkins 35mm Home Phantoscope projector (1994.0173).

- Mr. and Mrs. Newton L. Lockwood: collection of wood removed from the Hopkins & Alfred clock factory building in Harwinton, Connecticut, built ca. 1830 (1998.3043).
- Carolyn Long: 3 model military vehicles made in Haiti of recycled materials and painted in olive drab camouflage colors, made for sale on the streets starting during U.S. military intervention in 1994 (1996.0145).
- J. Richard Ludgin, M.D., Esq.: unopened tin of Optus powdered brown mustard (1993.0353).
- Capt. Leonard R. and Sheila S. Mann in memory of Nathan Harris: uniform jacket, shirt, trousers, belt, hat, identification tags, and 12 pieces of insignia used by PFC Nathan Harris during his U.S. Army service in the Pacific during WW II (1997.0344).

Prof. Jonathan Marks: American Eugenics Society's Fitter Families Contest award medal (1997.0357).

William R. Marks: pamphlet of writings by Jane Addams about factory workers, 1920s (1997.0312).

Cornelia Lee Marr: miniature hydraulic jack made according to Richard Dudgeon's patent of 1851 (1997.0365).

William Marvy Company, Inc. (through Robert Marvy): barber pole model #55, the 75,000th pole made by the Marvy Company since 1950, and a bench-mounted barber pole with an insert stating "Hair Stylist," 1997 (1998.0036).

Massachusetts Institute of Technology, Department of Mechanical Engineering (through Prof. Ioannis V. Yannas, Ph.D.): sample of Integra membrane artificial skin developed at MIT by Dr. Yannas and coworkers in 1981 and FDA-approved in 1996 (1997.0167).

Nathaniel Mathis: 3 apron-vests designed and used by Mr. Mathis in his barbershop, 1960s–70s, and 2 trophies won by Mr. Mathis for hairstyling achievements in 1981 (1998.0114); 5 cubic feet of photographs, patent papers, correspondence, awards, and other business materials documenting Mr. Mathis's career as a barber-stylist in Washington, D.C. (1998.3031).

- Charlotte A. McCane: dagger with scabbard, flask, and a pipe/knife used by Lt. Beverly H. Perea during his service in the U.S. Army, 1871–1902, including the Battle of San Juan Hill in July 1898 (1997.0122).
- John McConnell: original design of the Earth flag, 1969, Earth flag of the 1980s, Earth Day button of 1970, and an "Earth People Proclamation," all designed or written by Mr. Mc-Connell, the founder of Earth Day (1997.0355).
- Jean P. McCormick: 30 pieces of U.S. Army insignia, uniform items, and accessories, 3 British flags, and a 48star U.S. flag, all used by Edward J. McCormick, 1941–50 (1986.3015).
- Gretchen H. McKinley and Jawn Mc-Kinley Neville: 15 instruments and accessories making up a Ludwig jazz drumset, 2 bandstands, and a khaki army uniform shirt, all used by drummer, singer, and bandleader Ray McKinley (1998.0075); 19.5 cubic feet of archival material and an oversized birthday card, all documenting the career of bandleader Ray McKinley (1998.3020).
- The George Meany Memorial Archives (through Lynda DeLoach): photograph of astronaut Buzz Aldrin on the Moon (1997.0314).
- Donald F. Mela: Midget circular calculating rule with instructions, 1936, and a Pickett linear calculating rule, 1962 (1998.0119).
- Stephanie D. Mendenhall: carved wooden and mother-of-pearl inlaid chair made in Damascus, Syria, about 1913 and used in America by an emigrant family (1997.0101).
- Merrimack Valley Textile Museum (through James C. Hippen): picture and sound reproducing apparatus invented by William H. Baker, patented in 1906 (1994-0174).
- Linda B. Miller: 4 posters with feminist slogans (1998.0143).

Mrs. Vincente Minnelli: fountain set model designed by Preston Ames, Vincente Minnelli, and Irene Sharaff and built by Henry Greutert in 1950 for the MGM film An American in Paris (1997.0231).

Mosby Great Performance (through Lynnda Sorensen): 4 work incentive posters (1996.0064).

Mount Kisco Public Library (through Jeanine Meyer and Phillip D. Summers): 4 color lithographs, 3 letters, a bust of Shakespeare, and a set of Madonna cards, all originally part of the Benjamin B. Comegys Library in Philadelphia (1997.0326).

Mrs. John H. Murray: Woodward & Lothrop hat box, 1980–89 (1997.0200).

Susan H. Myers: ceramic bread plate made by Edward Bennett's pottery in Baltimore, Maryland (1997.0270).

Dr. Thomas J. Naff for the Farris and Yamma Naff Family Arab American Collection: 20 cubic feet of photographs and published materials documenting the history of the Arab American community collected and created by Dr. Alixa Naff, 1962–84 (1985.3009).

The National Labor Committee (through Charles Kernaghan): pair of pajamas with a dalmation motif made by H.H. Cutler (1997.3127); brochure design layout for "Anatomy of Exploitation" (1997.3179).

National Westminster Bank Plc. (through Graham R.L. Higgins): 2 National Westminster Bank smart cards, a Mondex card reader, and a Mondex wallet (1996.0265).

Otto Natzler: potter's wheel and tools, scale and weight, clay mixer with steel barrel, clay screen, lamp, and a kiln heat baffle, all used by Mr. Natzler and his late wife, Gertrud Natzler, in creating studio art pottery in Europe and America, 1930s–93 (1995.0132).

New Mexico State University, College of Engineering (through J. Derald Morgan): Texas Instruments TI-4100 Navstar Navigator global positioning system receiver with antenna and power supply, ca. 1982 (1997.0354). New United Motor Manufacturing, Inc. (through Michael J. Damer): 3 work incentive posters (1995.0322).

Pataraporn Nhuneg: electric fan (1997.0381).

Virginia L. North: 11 uniform items and insignia worn by U.S. Army enlisted man William C. Dart, 1898–1901 (1992.0436).

Oliver Corporation (through Donald E. Kuska): Oliver chilled plow (1998.0235).

Raymond F. O'Reilly: 13 patent models (1997.0380).

ORMCO Corporation (through Daniel Even): 13 wire samples, including 11 archwires and 2 "O" modules, and 4 typodents (1997.0177).

Marie S. Pack: 5 pieces of lingerie bought by Mrs. Pack in 1937 for her wedding trousseau and a floral beaded bag used by her mother, 1900–30 (1997.0348).

Jack L. Packham: American ceramic ashtray with a bronze horse's head medallion in the center, mid-20th century (1997.0114).

Sid Paskowitz: Corvus 10-megabyte hard drive and a U.S. Robotics acoustic coupler modem (1997.0265); 2 components of a Dynabyte microcomputer, a Topaz power conditioner, Hazeltine video display terminal, and a NEC Spinwriter printer (1997.0294); 5 sets of computer software, a set of diskettes, set of printer ribbon cartridges, and a set of printer typeface thimbles (1997.3152).

Charles G. Pefinis: 5 sets of documentation relating to the Marchant Calculating Machine Company, 1927–60 (1997.3178).

Mary Anne Perkowski: silk dress designed by Flora Kung, 1988 (1997.0394).

Josephine Plahn: 19 pieces of film projector apparatus and accessories invented by August Plahn of Copenhagen, Denmark (1994-3059).

Rita M. Pleet: 2 lipstick cases made to resemble gun shell casings by Revlon and Max Factor, WW II (1997.0109).

Carla L. Popenfus: cone-shaped frosted glass perfume bottle designed by Issey Miyake, 1996 (1997.0350). Christina A. Popenfus: 8 pieces of woman's clothing and accessories including 2 dresses, 2 vests, 2 belts, a skirt, and a pair of trousers, 1985–96 (1997.0386).

Porter Cable Corporation (through James A. White): 11 power tools and accessories, 6 promotional and incentive objects and awards, a display cabinet, work apron, and an employee identification badge (1996.0324); 13 sets of documents, 3 sets of photographs, a set of stickers, pen, and a lighter, all related to the power tool industry (1996.3070).

Alan W. Postlethwaite: air-sea rescue transceiver, 1965–68, and 9 miscellaneous items of transistor technology, 1961–68 (1995.0118).

Alice M. Pracher: woman's navy blue silk satin 2-piece suit with beaded cuffs worn by Mrs. Pracher as her wedding going-away outfit, 1949 (1997.0328).

Anthony Priest: NCR desk clock, AT&T/NCR mission statement card, and an ISO 9000 poster (1997.0398); NCR shirt (1998.0098).

Lawrence N. Ravick (through Jeanne A. Nicholsen): cane with a carrot-shaped handle and a cane marked "Muskingum Livestock Sales Co., Zanesville, Ohio" (1994.0245).

Elizabeth Rawlinson: pair of woman's black patent leather shoes designed by Isaac Mizrahi, fall 1992 season (1997.0385).

Theo J. Rehak: metal braille slate distributed by the Perkins School for the Blind (1994.3047).

Reynolds Metals Company (through Randolph N. Reynolds): box of Reynolds Wrap aluminum foil from the 1950s (1997.0269).

Jose Reynoso: roll of razor wire (1996.0293).

Paul W. Rieser, D.D.S. (through Martin L. Gang and Dr. Gertrude Meinzer): 231 pieces of dental equipment, tools, medicines, certificates, and licenses, all used in the office of Dr. Rieser, 1930s– 92 (1993.0107); Air Raid Warden certificate issued to Dr. Rieser by the U.S. Citizens Defense Corps for New York City, January 1942 (1993.0253). Cherye Riggs: set of human anatomy flip charts contained in an oak easel with cover, made by the Central School Supply House of Chicago, ca. 1890 (1997.0152).

Franklin A. Robinson, Jr.: man's wool knit 2-piece bathing suit, 1890s (1997.0327); set of woman's hair clips and a measuring tape with an ad from a silk hosiery company, 1930–40 (1998.0038).

Rene Rondeau: original Hamilton Electric Watch advertising display card with battery, 1957 (1998.0069).

Siriluk Rongsak: ceramic coffee mug (1997.0273).

Larry Roosa: postcard, "Wreck of *Morro Castle* at Convention Hall, Asbury Park, N.J., September 8th, 1934" (1998.3039).

Jessica L. Roscio: purple and yellow Le Chic 110 camera (1997.3096).

Joseph A. Ruiz II and Marilyn F. Ruiz: 18 objects related to Jose de Rivera's creation of the sculpture *Infinity*, commissioned for the National Museum of History and Technology, 1965–67, including 17 hand tools and shop equipment and a scale model of the sculpture (1997.3068).

Norman Ruskin: sweatsuit pants and jacker embroidered on the back "1980 Olympics—Moscow" (1998.0105).

Saint Paul Baptist Church (through Rev. Dr. Joel Anthony Ward): 3 choir robes from the Echoes of Eden Choir (1997.0214).

Saint Stephen's Episcopal Church (through Pamela S.E. Higgins): sleeping bag and personal supplies kit consisting of 2 pairs of socks, a pair of mittens, knit cap, knit scarf, washcloth, towel, bag of toiletries, and a set of container bags, all made or assembled by volunteers for "My Brother's Keeper" for distribution to the homeless (1998.0049).

Sorbo Samuelsson: 2 tricket tools invented by Mr. Samuelsson in 1973, 2 squeegees, and a washerhead, all used in professional window washing (1997.0363).

Saturn Corporation (through William R. Betts and Lynn C. Nelson): 14 work incentive posters (1995.0292). Keith Schmidt: 2 half-sectioned experimental bowling pins used to aid Fred Schmidt in inventing a bowling pin sporting machine (1997.0306).

J. Schoeneman, Inc. (through Ron Palczynski): 2 industrial Singer sewing machines (1995-3067).

Rosa M. Segre: Emilio Segre's War Department identification card, jumpsuit, goggles, and a plate of dark glass, all used during the Trinity atomic bomb test, and a pocket compass, WW II (1993.0490).

Anne M. Serio: pair of printed cotton curtains (1998.0029).

David H. Shayt: 3 folk medicines and an ayurvedic decoder from Sri Lanka and 3 bottles of embalming fluid (1997.0283); 5 photographs of workers in a softball factory in Haiti and 3 documents related to business and investment in Haiti, 1980s (1997.3132).

Ruth Y. Sieg: Amana Radarange microwave oven and a glass browning skiller, 1974 (1998.3037).

Henry I. Siegel Company, Inc. (through Roland L. Kimberlin): U.S. flag on a stick placed on an employee's workstation when weekly production quotas were met and a clipboard printed with the mission statement of Chic by H.I.S. given during the quality campaign of 1995 (1996.0139).

Walter John Silva: manufactured "whale's tooth" scrimshaw made of molded plastic depicting Napoleon, 1970s–80s (1998.0004).

J. Gordon Smith: binoculars made by the Marchand Company of Paris, France, 1900–25 (1998.0238).

R.M. Smythe & Co., Inc. (through Douglas B. Ball): Southern Bank of Georgia \$2 note of 1858 (1998.0064).

The Southland Corporation (through Wendy Barth): rooster and owl cutouts used in displays at 7-Eleven stores (1998.0104).

Harriet and Mortimer Spiller: collapsible silver presentation cup made by the William B. Durgin Company of Concord, New Hampshire, inscribed with the date April 21, 1888 (1997.0325).

Harvey G. and Lawrence R. Stack: 2 silver business tokens (1997.0241).

Ernest R. Steele: sample of Aralac fiber (1998.0026).

Henry Z. Steinway: 18 photographs with captions and 3 documents relating to the Steinway piano factory, Steinway Hall, and Steinway family residences, 1860–1912 (1997.3167).

Carl A. Sten: union contract bookler of 1948 (1998.0172).

Steven Sternheimer: 27 Civil War documents concerned with stationery requisitions, horse and forage requests, and general quartermaster business (1997.3123).

Laurence Steve, M.P.A., M.A., A.T.C., P.T.: Technicon Cybex isokinetic dynamometer exercise machine with graph recorder and speed controller, 1968, used in the physical therapy of leg muscles (1996.0078).

Susan B. Strange: 3 handbags, a horse motif brooch, and a pair of wedding shoes, all used by Ms. Strange's mother, 1930s–40s, her mother's wedding photograph of 1945, a beaded purse used by Ms. Strange in the 1960s, and a family heirloom hair bracelet, 1840–60 (1997.0143); physician's automobile insignia used by Ms. Strange's grandfather, 1930s– 50s (1998.0198).

Melba K. Street: 2 hanging show globes (1994.0098).

Dr. Gary A. Strobel: combination hatand-collecting bag and a shirt worn by Dr. Strobel, a plant pathologist who discovered the anti-cancer drug Taxol while examining yew trees in the Himalayas (1997.0356).

Johanna B. Swart: woman's silk knit floral 3-piece dress designed by Diane Von Furstenberg, 1982 (1997.0351).

Symbol Technologies, Inc. (through J. Spaccarelli): hand-held laser data terminal (1997.0399).

Carlton R. Taft: faceted green glass bottle inscribed "Hayward's Hand Grenade Fire Extinguisher," made in New York, late 19th to early 20th century (1995.0319).

Talley Industries, Inc. (through Jack C. Crim and Joanne Shirley): 5 volumes of Seth Thomas Clock Company records, 1835–1928 (1997.3176). Frank J. Taylor: Japanese army signaling device recovered from the Admiralry Islands, WW II (1997.0018).

- Telephonetics International, Inc. (through Alan Kvares): 2 Algorhythm Narrowcaster remote digital units, 1994–95, for message and music-on-hold telephone systems (1995.0339).
- Richard B. Thomas: SEAC wire cartridge for a mainframe computer (1997.0259).
- William David Todd: pair of glasses with trifocal lenses (1997.0168).
- Jumnienien Tornsmee: Melamine plastic rice bowl made in Taiwan (1997.0272).
- Trengove Studios Inc. (through Thomas Trengove): 10 "splash" and "pour" actylic effects for use in commercial still photography and a plastic-andresin "banana split" (1998.0017).
- Ambrose and Karen Tricoli in memory of Ambrose and Maria Paldino: 19 artifacts used in street processions of the Society of Our Lady of Aspromonte in Jersey City, New Jersey, 1931–67, consisting of 14 sashes worn by society officers and a banner with cord, pole set, harness, and a case (1998.0003).
- Charles S. Tucek: apparatus built by Mr. Tucek in 1969 and used by him until 1989 in his private radiocarbon dating business (1992.0345).
- Mildred E. Brittingham Tucker: 4 U.S. Army buttons, 1920s (1988.3014).
- U.S. Department of Agriculture, Food and Consumer Service, Redemption Management Branch (through Suzanne Fecteau): 8 food stamp coupons (1997.0335).
- U.S. Department of Defense, Defense Information Systems Agency (through Lt. Col. David J. Kelley): Honeywell Tempest computer terminal used by the World Wide Military Command and Control System, a shopping cart used to deliver printouts around the Pentagon, and a 24-hour Zulu clock, 1970s–90s (1997.0184).

U.S. Department of Defense, Department of the Air Force, Rome Air Development Center: 33 computer components and 17 pieces of documentation, all related to the CDC 160 computer (1983.3004).

- U.S. Department of Defense, Department of the Army, Fort Benjamin Harrison Museum: 215 pieces of military uniforms, insignia, buttons, equipment, memorabilia, posters, and ordnance projectiles (1979.0219).
- U.S. Department of Defense, Department of the Army, Institute of Heraldry, Heraldic Services and Support Division (through Thomas B. Proffitt): 14 pieces of distinctive insignia and 4 pieces of shoulder sleeve insignia (1997.0296); 32 pieces of distinctive unit insignia (1998.0001).
- U.S. Department of Defense, Department of the Navy, Naval Electronic Systems Command: set of 63 pieces of equipment used to test submarine telegraph cable systems (1997.0407).
- U.S. Department of Energy, Conservation and Renewable Energy (through Dr. Lee R. Anderson): Fusion Lighting's prototype electrodeless sulphur lighting system in 3 parts operated at the National Air and Space Museum from August 1994 to September 1996 (1996.0314).
- U.S. Department of Health and Human Services, Public Health Service, Substance Abuse and Mental Health Services Administration (through Joseph T. Smith): writing desk presented to Saint Elizabeth's Hospital by Dorothea Dix in 1887 (1997.0339).
- U.S. Department of Justice, Immigration and Naturalization Service (through Patricia Y. Wesley): "Immigration Investigator" identification badge (1997.0255).
- U.S. Department of Labor: 5 posters in different languages about minimum wage, a federal officer's jacket, TIPP jacket and cap, clipboard, pad of personal interview statements, garment interview questionnaire, set of production ticket sheets, set of cutting sheets, set of photographic negative strips, and a timecard (1997.0279).
- U. S. Department of Labor, Women's Bureau (through Angela Twitty

Adams): 9 posters of the "Women's Work Counts" series commemorating the 75th anniversary of the Women's Bureau, 1920–95 (1998.0013).

- U.S. Department of the Treasury, Bureau of Engraving and Printing, Historical Resource Center (through Cecilia Wertheimer): 6 certified proof plate impressions of 4 Federal Reserve note faces and 2 uniform currency backs, 1977–85 (1996.0095).
- U.S. Department of the Treasury, U.S. Mint (through Maria R. Goodwin):
 2 uncirculated coins commemorating the Smithsonian Institution's 150th anniversary and a silver proof coin commemorating National Community Service, all 1996 (1996.0353);
 2 silver dollars and 2 \$5 gold coins, 1997 (1997.0242); 4 proof gold coins and a proof silver coin, 1998 (1998.0193).
- U.S. Department of the Treasury, U.S. Secret Service, Office of Government Liaison and Public Affairs (through Don A. Edwards): photograph album of persons arrested by the U.S. Secret Service, 1888–91 (1994.0017).
- U.S. Office of Personnel Management, Personnel Systems and Oversight Group (through Kenneth F. Rossman and Dr. Philip A.D. Schneider): 0.67 cubic foot of official personnel records of 12 federal employees who worked in the early days of radio technology (1997.3052).
- U.S. Senate, Commission on Art (through Diane K. Skvarla): 12 pieces of memorabilia from the Clinton presidential inaugural luncheon held in the U.S. Capitol on January 20, 1997 (1998.0025).
- Unknown: Chicago street guide distributed to servicemen with advice on avoiding and treating venereal disease, ca. 1948 (1997.0278); 4 presidential inaugural pamphlets from 1933, 1953, and 1961 (1998.0091).
- John E. Vawter: print of the steamboat *City of Norfolk* made by Mr. Vawter after his pen-and-ink drawing made in 1969 (1998.0067).
- Vishay Intertechnology, Inc. (through Dr. Felix Zandman): luncheon nap-

kin on which Mr. Zandman jotted his invention for a power metal strip resistor (1996.0063).

- Bert and Carol L. Vorchheimer: scrapbook documenting Frederick P. Wertheimer's advertising and marketing work for the jewelry firm of Finlay Straus Company, 1930–33 (1998.3078); 2 scrapbooks documenting Frederick P. Wertheimer's advertising and marketing work for the Doughnut Machine Company, ca. 1928 (1998.3079).
- Evelyn Wagman: block-printed cotton fabric sample of the Arts and Crafts Movement period (1997.0374).

Wayne E. Wakefield: 2 slide trays and a Project-O-Matic slide projector with case (1997.3097).

- Jean P. Warner: vaudeville costume dress worn by Mrs. Warner's greataunt, song-and-dance artist Nellie Burt (1998.0002).
- Washington Steele Corporation (through Joseph K. Kusic): booklet, "Ground Rules for the Team," 1947 (1998.0096).
- John Elfreth Warkins: 0.3 cubic foot of correspondence relating to Mr. Watkins and the Philadelphia Typewriter Company, 1886–1902 (1997, 3130).
- Elwin F. and J.C. West: 4 pieces of artificial display meat for use in a butcher's shop window consisting of 3 wax cuts of beef and a ceramic side of ham (1997.3060).
- White Consolidated Industries, Inc. (through Daniel N. Elliott and Sharon Schiller): 1,381 type matrices used by the American Type Founders Company, 19th and 20th centuries (1993.0486).

George W. and Nanette H. White: 6 Philippine pina cloth items with woven, embroidered, and appliqued decorations, 1920s-30s (1996.0269).

Norma P. Wieler: 7 rules, 2 sets of drafting machine rules, set of drawing instruments, planimeter, map measure, bow pencil, bow compass, electric eraser, and a stylus, all used by Robert H. Wieler, Jr. (1998.0032).

Dr. Ronald S. Wilkinson: Tesla coil and a glass acceleration tube used to shoot subatomic particles at speeds high enough to cause nuclear reactions, late 19205 (1993.0578); Sinclair ZX81 personal computer and a 16K RAM expansion pack (1994.0398).

Franklin Williams: softball, bat, and an equipment bag used by the Sioux City Ghosts barnstorming softball team (1997.0024).

- Stella Williams: 2 grape picking knives (1997.0305).
- Warren Winiarski: grape picking knife (1997.0379).
- Norma M. Witt: violin made by Marius Richelme of Marseilles, France, 1875 (1997.0300).
- Barbara Wolf: monthly wall calendar for 1997 (1998.0008).
- Allen M. Wolpe: 10 cubic feet of matchbook covers and supporting catalog materials (1994.3133).

Priscilla Q. Wood: 2 woman's dress patterns, 1940s (1998.3012).

Helena E. Wright: 8 cruise ship menus, 1989 (1998.3042).

- Jane Griffin Yeingst and William H. Yeingst: 13 posters with popular culture and musical themes, 1960s–70s (1996.0087).
- Adele Youdin: white stoneware mug with a raised depiction of the Smithsonian Institution Castle, made by Bennington Potters of Bennington, Vermont, 1980s (1997.3069).
- Orrey P. Young: bentwood slat-seat side chair possibly made by Samuel Gragg of Boston, ca. 1830 (1998.0190).

Karin Yount: woman's 2-piece suit made from 2 pairs of U.S. Army wool trousers by Mrs. Yount's mother, Maria Trenina, a silk handkerchief, and a cardboard suitcase, 1946 (1997.0349).

Victor Yuliano: GRiD Case 1530 portable microcomputer (1997.0124).

- Thomas G. Zimmerman: Kinko's neon sign, "Open 24 Hours" (1997.3120).
- Edward G. Zubler: 8 experimental tungsten-halogen light bulbs (1996.0082).

National Museum of the American Indian

Donors of Financial Support

\$ 500,000 or more

Mortis and Gwendolyn Cafritz Foundation The Kresge Foundation The John D. & Catherine T. MacArthur Foundation

\$ 100,000 or more

Mr. and Mrs. James A. Block The Chase Manhattan Bank Mr. and Mrs. Charles Diker (Valerie and Charles Diker Fund, Inc.) The Ford Foundation Mr. George Gund III and Iara Lee Ms. Ru Lang Lennox Mr. and Mrs. Eugene Mercy, Jr. Ms. Elizabeth Solomon Turner Foundation, Inc.

\$ 50,000 or more

Anonymous

The Bedminster Fund, Inc. Booth Ferris Foundation Clarence and Anne Dunwalke Trust Fannie Mae Foundation Mrs. Ruth Greenberg The Greenwich Workshop, Inc. Mr. and Mrs. Victor Kaufman Metropolitan Life Foundation Mr. and Mrs. Carroll O'Connor Margaret Knowles Schink

\$10,000 or more

Mr. Roger Abelson Allen & Company Incorporated Ms. Charmay B. Allred Anheuser-Busch Companies Mr. and Mrs. Robert Balzer Capital Re Castle Rock Entertainment Dr. John P. Comstock (Abigail Van Vleck Charitable Trust) Mr. and Mrs. Richard M. Danziger

Mr. Barry Diller (USA Networks Foundation, Inc.) Mr. and Mrs. William C. Dutton Mr. and Mrs. John Ernst (Richard C. & Susan B. Ernst Foundation Inc.) Forstmann Little & Company Mr. James S. Frank Mr. David W. Gengler Estate Lydia Heininger Mr. Brian C. McK. Henderson Mr. Gene A. Keluche (Communication Resources, Inc.) Mr. and Mrs. Robert Krissel Mrs. Emily Fisher Landau Mr. Thomas H. Lee Mr. and Mrs. Robert Linton Joe and Emily Lowe Foundation Andrew W. Mellon Foundation Merrill Lynch & Company Foundation, Inc. J.P. Morgan & Company, Inc. New York Community Trust New York Stock Exchange, Inc. Mrs. Paul M. Niebell, Sr. Ms. Virginia J. Ortega Ostrolenk, Faber, Berb & Soffen, LLP Mr. Gerald P. Peters (Gerald Peters Gallery Inc.) Polo Ralph Lauren Corporation Mr. and Mrs. William Potter (William A. & Ronnie N. Potter Philanthropic Fund) PricewaterhouseCoopers LLP Ms. Ann Roberts Mr. and Mrs. William D. Rollnick (William D. And Nancy Ellison Rollnick Foundation) The May and Samuel Rudin Family Foundation Ms. Helen G. Schneider Ms. Helen D'Olier Stowell Dr. and Mrs. Paul Tarver (Tarver Family Fund) Ms. Ann Tenenbaum Thacher Proffitt and Wood Time Warner, Inc. Ms. Rita Tishman (Norman-Rita Tishman Fund, Inc.) Troop Steuber Pasich Reddick & Tobey, TIP U.S.-Mexico Fund for Culture Wachtell, Lipton, Rosen & Katz Mr. and Mrs. John T. Walton Estate of Ferne R. Warren Mrs. Eileen Wells

Mr. James D. Wolfensohn (Wolfensohn Family Foundation)

\$5,000 or more

Ms. Ann Simmons Alspaugh Bell Atlantic Foundation Mr. and Mrs. Robert H. Bloom Bloomberg Financial Markets, Commodities and News The Chase Manhattan Foundation Alfred and Harriet Feinman Foundation Ms. Anne Forbes Grey Advertising, Inc. Masco Corporation MCI Foundation Mary A.H. Rumsey Foundation San Francisco Foundation Estate of Merriam P. Sargent Mr. Richard E. Whalen

\$2,000 or more

Mrs. Teresa Bressler Central Pacific Bank Mrs. Dorothy S. Davidson Educational Broadcasting Corporation Fulbright & Jaworski Mr. Sam Kito, Jr. (Kito Inc.) Mr. and Mrs. James D. Krissel Mrs. Priscilla McDougal Mexican Government Tourism Office Ms. Antoinette Peskoff Philip Morris Companies, Inc. Mr. and Mrs. David Saity Dr. Mark J. Sublette Hannoch Weisman

Donors of In-Kind Support

Alaska on Madison Mr. Nathan Scott Begay Ms. Juanita Growing Thunder Fogarty Ms. Rhonda Holy Bear Mr. Delbridge Honanie Mr. Yazzie Johnson Ms. Jan Loco Ms. Angie Reano Owen Twin Rocks Trading Post and Blue Mountain Trading Post

National Museum of Natural History

Donors of Financial Support

\$1,000,000 or more

The Kenneth E. Behring Family Herbert and Evelyn Axelrod Nippon Foundation Nordic Council of Ministers

\$100,000 or more

Shell Prospecting & Development (Peru) B.V. Shell Oil Company Foundation Estate of Annie B. Wetmore Estate of Helen Katchmar Smithsonian Women's Committee Alumax, Inc. The Philip L. Graham Fund Jewelers of America Alfred C. Munger Foundation

\$ 50,000 or more

AT&T Foundation Conoco Inc. Mr. Jeffrey W. Meyer Pennzoil Company Shell International Petroleum Co. Ltd.

\$10,000 or more

Anonymous Wallis Foundation The Freed Foundation American Business for Environmental Leadership AT&T Alascom The Homeland Foundation Woohak Cultural Foundation Missouri Botanical Garden Autodesk Inc. Drs. William H. and Isabella M.C. Cunningham Mr. and Mrs. Robert W. Fri The Link Foundation Merck & Co., Inc. The Saint Paul Foundation Museum Loan Nerwork

Conservation, Food & Health Foundation, Inc. Bell Atlantic Corporation Mr. and Mrs. Alfred C. Glassell, Jr. Volker Hollmann-Schirrmacher Mr. Rampa R. Hormel National Association of Secondary School Principals Pioneer Hi-Bred International Siemens Hearing Instruments

\$ 5,000 or more

Asian Cultural Council, Inc. Laura Boulton Foundation, Inc. Chevron Corporation Mr. and Mrs. Robert H. Malort The Embassy of Spain King and Jean Cummings Charitable Trust Drs. W. Ronald and Miriam Heyer Wenner-Gren Foundation for Anthropological Research Mr. and Mrs. Michael Baly III Mr. and Mrs. Ben Hammett Mrs. Olga Hirshhorn Reed Foundation Mrs. Beatrice A. von Gontard

\$2,000 or more

Jose Cuatrecasas Botanical Fund Dr. F. Christian Thompson Dr. Wayne N. Mathis The Aleut Corporation Aleutian Pribilof Islands Association Anne Corporation Dr. Oliver S. Flint, Jr. Embassy of Korea American Hospital Association Mr. and Mrs. Barry Bergman First National Bank of Anchorage The Honorable James A. McClure Ounalashka Corporation Bushnell Sports Optics Worldwide David and Pat Jernigan Ms. Berry Anne Schreiber and Mr. Gary Schenk

\$1,000 or more

National Capital Shell Club Mrs. Gloria Shaw Hamilton Ms. Jean Beekhuis Ms. Tiane C. Benson

Dr. Cesar A. Caceres Mr. and Mrs. Richard W. Carr Mrs. Tatiana Dominick Mr. and Mrs. Robert K. Edson Ms. Gladys H. Fuller Ann & Gordon Getty Foundation Sam W. Huddleston, M.D. Ms. Dane A. Nichols Mr. and Mrs. David A. Olive Ms. Judy Lynn Prince Mr. Hans Pulpan Mr. Edward Hart Rice Richardson Foundation, Inc. Miss Marguerite V. Schneeberger Mrs. Jocelyn A. Sladen Dr. Dwight Smith and Mrs Marillyn Suzuki-Day Mr. and Mrs. William C. Storey Warner-Lambert Company Dr. Kerstin Wasson Harold and Alma White Memorial Fund Estate of Eugene A. Wilde YSI Foundation, Inc. Mr. and Mrs. Gregory Zemenick

\$ 500 or more

Ms. Helen Cracraft Agdaagux Tribal Council Akutan Corporation Aleutian Pribilof Island Community Development Association Association of Reptilian & Amphibian Veterinarians Atka Ira Council Clyde Peeling's Reptiland Columbus Zoological Park Association Ms. Jeanne M. Lemmer Lion and Hare Fund Neiman Marcus Dr. F.H. Plough Mrs. Thomas Malcolm Price Qawalangin Tribe of Unalaska Mr. John J. Trelawney The Tuckahoe Woman's Club Dr. David B. Wake Dr. Austin B. Williams Zoological Society of Philadelphia

National Portrait Gallery

Donors of Financial Support

\$ 50,000 or more

Time, Inc.

\$10,000 or more

Siemens Corporation Citibank Marpat Foundation Nations Bank The Washington Post Company

\$5,000 or more

The Max & Victoria Dreyfus Foundation, Inc. Catherine Gidlow David V. Capes Strauss Charitable Fund (Fidelity Investments Charitable) Mary O'Brien Gibson The Clarence & Jack Himmel Foundation Robert Krueger Theodore Roosevelt Association

\$1,000 or more

The Community Foundation for the National Capital Region Chester Lasell Mr. and Mrs. Alan Fern The Kiplinger Foundation Leslie Goldberg Charity Fund Morgan Stanley Dean Witter The Barra Foundation Rosemary Frankeberger

\$ 500 or more

Phillip Morris

Donors to the Collection—Department of Painting and Sculpture

Eugene V. Epperly. *Percy Julian*, 1952, oil on canvas, by Richard Epperly (NPG.97.233). Everett Raymond Kinstler. *Elizabeth*

"Betty" Ford, 1996, oil on canvas, by

Everett Raymond Kinstler (T/NPG.97.155). Dr. and Mrs. Ariel Mengarini. George Eastman, 1930, bronze head, by Fausta Vittoria Mengarini (NPG.97.156). Joan D. Tolley. Catherine Shouse, 1974, plaster, by Elaine Pear Cohen (T/NPG.98.005.04). Estare of Mrs. John Hay Whitney. Daniel Webster, 1835, oil on canvas, by Francis Alexander (NPG.98.71). Dr. Richard Wunder. Amos Lawrence, c.

1839, plaster bust, by Shobal Vail Clevenger (NPG.97.157).

Donors to the Collection— Department of Photographs

- Mrs. William Harrison Feldman. *Todd* Duncan, 1954, gelatin silvet print by William H. Feldman (NPG.98.65).
- John and Susan Edwards Harvith. *Bebe Daniels*, 1921, silver bromide print by Karl Struss (S/NPG.97.174).
- Bardyl Tirana. George Gershwin, c. 1930, gelatin silver print by Nicholas Haz (NPG.98.69).
- Rosamond Walling Tirana. George Gershwin, c. 1928, gelatin silver print by Edward Steichen (NPG.98.66). George Gershwin, 1931, gelatin silver print by Unidentified (NPG.98.67). George Gershwin, gelatin silver print by Unidentified (NPG.98.68).
- Enid Noland Warner. Portrait album, c. 1865, tintypes by Unidentified (S/NPG.97.172). Miniature portrait album, c. 1870, tintypes by Unidentified (S/NPG.97.173).
- Virginia M. Zabriskie. Willem de Kooning (and others) at Port Said Restaurant, c. 1954, gelatin silver print by Hans Namuth (S/NPG.97.234). Horace Traubel, c. 1916, gelatin silver print by Arnold Genthe (NPG.97.235). Horace Traubel, c. 1917, gelatin silver print by Arnold Genthe (S/NPG.97.236).

Donors to the Collection— Department of Prints and Drawings

- Mrs. William Rockwood. John Thurman, pastel, 1797, by Thomas Bluget de Valdenuit.
- Seyffert, Robert. James Michener, charcoal, 1979, by Robert Seyffert.
- Shikler, Aaron. Mike Mansfield, oil on paper, 1977, by Aaron Shikler
- Milton Rose. 8 lithographic portraits, 19th century.
- Mr. Paul Grayson. *Harlem as Seen By Hirschfeld*, book, 1941, by Al Hirschfeld.
- Les Schreyer. 29 theater, propaganda, advertising, and World War II posters, 20th century.

Donors to the Collection— National Museum of American Art/National Portrait Gallery Library

- Richard Ahlborn. A small collection of exhibition catalogs and vertical file materials on Hispanic and Spanish colonial art and crafts.
- James M. Goode. Twelve file boxes of his "contemporary self-portraits" files, which includes photographs, biographies, correspondence, newspaper and magazine clippings on artists represented in his personal collection of artist's self-portraits.
- Lynn Igoe. Thirteen boxes of vertical files material on African-American art and artists.
- National Endowment for the Arts. Thirteen boxes of exhibition catalogs, as well as some auction catalogs and periodical issues.
- Jan and Chuck Rosenak. Two hundred thirty-three items (vertical files materials, auction catalogs, periodicals, monographs) on folk art and twentieth-century art.
- Joan Stahl. Twenty-five books on the arts.
- Innumerable vertical file items, periodicals, auction catalogs, monographs and exhibition catalogs from NMAA and NPG curatorial staff: Sidney Hart, Lynda Hartigan,

Merle Moore, Mary Panzer, and Harry Rand, plus 41 monographs, exhibition catalogs, and auction catalogs from various SI fellows, public and private institutions, and Library researchers.

National Postal Museum

Donors of Financial Support

\$ 50,000 or more

United States Postal Service Guido Craveri and Tito Gaimporcaro

\$25,000 or more

Avery Dennison Foundation The Gold Institute

\$10,000 or more

Ashton Potter Security Printers Securities Industry Association

\$ 5,000 or more

The Reader's Digest Association The Estate of Leo August Mystic Stamp Company Littleton Coin Company James E. Pehta Foundation J.C. Penney Company, Inc.

\$1,000 or more

Joan Berkley Book-of-the-Month Club Bell & Howell National Association of Postmasters of the United States

Donors of In-Kind Support

United States Postal Service

Donors to the Collection

- Margaret Ann and Lewis Jackson Adkins. Ca. 1900 handmade RFD mailbox (NPM 1997.2011).
- Keith A. and Alison Harmer. Double stamp vending machine, Schermack Model 45 and 310, ca. mid-20th century (NPM 1997.2009).
- Hong Kong Post, People's Republic of China (through S.Y. Wan). Twentieth-Century ERII pillar-style mailbox used in the former British colony of Hong Kong (NPM 1997.2010).
- Ivy & Mader Philatelic Auctions, Inc. (vendor) and New Acquisitions
 Fund. 211 U.S. plate proof singles (1847–1893), 19 original presentation envelopes, accompanying 1893 U.S.
 Post Office Department letter presenting this set of proofs to Alexander Barclay courtesy of Vice President Stevenson (NPM 1998.2005).
- Alvin R. and Marjorie S. Kantor. 1928 letter from Franklin D. Roosevelt to Eugene Klein, stamp dealer (NPM 1998.2009).
- Edwin M. Schmidt. British post card with military censor/civil mails cancellation sent to British Zone, Germany in 1947 (NPM 1998.2003).
- U.S. Department of the Interior, Fish and Wildlife Service, Federal Duck Stamp Program (through Teresa M. Bell). 1997–98 Junior Duck Stamp, 3 essays of 1997–98 Migratory Bird Hunting and Conservation stamp, 1998–99 Migratory Bird Hunting and Conservation stamp single, imperforate sheet of 120, imperforate self-adhesive single, self-adhesive imperforate sheet of 24, souvenir program (NPM 1998.2007).
- U.S. Postal Service, Melvin, Michigan, Post Office (through Patricia L. Mc-Clain). Duplex handstamp and set key (NPM 1997.2012).
- U.S. Postal Service, Stamp Services (through Azeezaly Jaffer). 946 postage stamps, 14 souvenir sheets, 56 covers, 62 commemorative panels, 2 maximum cards, 44 souvenir programs and inserts (NPM 1998.2001).

- U.S. Postal Service, (through Stephen M. Kearney). Verifone integrated payment system credit/debit keypad, microprocessor with magnetic card reader, printer, stand (NPM 1998.2004).
- U.S. Postal Service, Postal Square Station (vendor) and Collection Department Fund. 1,164 U.S. mint postage stamps (NPM 1998.2008).
- U.S. Postal Service, Stamp Services (through Azeezaly Jaffer). 40,064 postage stamps, 16 covers, 2 souvenir sheets, 8 commemorative panels, 12 postal cards, 28 souvenir programs (NPM 1998.2010).
- U.S. Postal Service, (through Megaera Ausman). 2 rolls of precancel test coil stamps, I catcher-arm style mailbag (NPM 1998.2011).

National Zoological Park

Donors of Financial Support

\$ 500,000 or more

Friends of the National Zoo

\$100,000 or more

Shirley P. Sichel Estate of Janet Johnson

\$50,000 or more

Estate of Miriam K. Schreiter

\$30,000 or more

Caroline Gabel George J. Sisley Endowment Sichel Family Endowment Franchon & Gloria Smithson

20,000 or more

M.A. Healy Foundation Mars Inc.

\$10,000 or more

Max and Victoria Dreyfus Foundation Mr. and Mrs. John F. Mars National Geographic Society Price Waterhouse Ralston Purina Harezo Shimizu

\$ 5,000 or more

Bayer Corporation Albert Beekhuis Foundation Elaine Broadhead Dorothy Jordan Chadwick Fund Eldon Crowell Dielle Fleischman and Richard Viets Clinton and Missy Kelly Sandy Lerner The Little River Fund The Mars Foundation Mr. and Mrs. George Ohrstrom Purina Mills Philip D. Reed, Jr. Benjamin Rosenthal Foundation The Sacharuna Fund Sprint Corporation The Summit Foundation Beatrix von Hoffman

\$2,500 or more

Robert A. Bartlett, Jr. Esther S. Bondareff Conservation Treaty Support Fund Harriet M. Crosby Joan E. Hekimian Adrienne B. Mars William P. McClure C.B. Ramsay Foundation Jeffrey R. Short Henry Strong The Sulzberger Foundation, Inc. Virginia Ullman Mr. and Mrs. Paul Wolk

\$1,000 or more

AWA Family Foundation Austin W. Bach Brane-Strom Management Donald H. and Ann Brown George A. Didden III Karen L. Didion Mr. and Mrs. William Dietel JunAnn Holmes Klein Family Foundation Claire Lamborne Raymond E. Mason Foundation Estate of Helen L. Parker Linda Powers Rein Fielding, Wiley Allen & Susan Snyder Fund Paul G. and Heather Sturt Haaga

Donors of In-Kind Support

British Airways. Airline tickets.
Marriott Ranch. Lodging and refreshments for special events.
Met Life. Printing of Zoo map and brochure.
The Scale People. Scales for Tiger Tracks exhibit.
Sunset Hills Foliage. Plants.
TransBrasil Airlines. Airline tickets.

Smithsonian Center for Materials Research and Education

Donors of Financial Support

\$ 5,000 or more

Samuel H. Kress Foundation (Archaeological Conservation Program)

\$1,000 or more

La Compañia de Fomento Industrial— Oficina de Desarrollo Artesanal, Puerto Rico (for simultaneous translation during the "Preservation of *Santos*" workshop in Puerto Rico)

\$ 500 or more

Cable TV of Greater San Juan, Puerto Rico (support of the "Preservation of *Santas*" workshop in Puerto Rico)

La Compañia de Turismo—Oficina de Asuntos Culturales, Puerto Rico (for a reception during the "Preservation of *Santos*" workshop in Puerto Rico)

\$100 or more

Castle Book bookstore, Puerto Rico (support of the "Preservation of Santos" workshop in Puerto Rico) Museo de las Américas (support of the "Preservation of Santos" workshop in Puerto Rico)

Donors of In-Kind Support

Universidad del Sagrado Corazón, Puerto Rico. Lecture, office, and laboratory facilities, office supplies and copying, transportation, videotaping, receptions, and staff support during the "Preservation of Santor" workshop in Puerto Rico.

- Leica Microsystems. Staff time and expertise and the use of 10 teaching microscopes for the five days of the Applied Optical Microscopy course during September 1998.
- The Museo de Arte de Ponce, Puerto Rico. Facilities and staff support as host of a one-day symposium about *santos* for collectors, artists, historians, and curators.
- Harvard University. Supplies, staff travel, and room/board on site for the Harappa and Copán Archaeological Research Projects.
- The University of Wisconsin. Supplies, staff travel, and room/board on site for the Harappa Archaeological Research Project.
- Yale University. Supplies, staff travel, and room/board on site for the Aguateca Archaeological Research Project.
- The University of Pennsylvania. Supplies, staff travel, and room/board on site for the Early Copán Acropolis Project.
- Cable TV of San Juan, Puerto Rico. Advertisements for the "Preservation of *Santos*" workshop in Puerto Rico.
- Museo de Arte Contemporáneo, Puerto Rico. Facilities for the "Preservation of *Santos*" workshop in Puerto Rico. Puerto Rico Convention Bureau. Publi-
- cations for the "Preservation of Santos" workshop in Puerto Rico. Instituto de Cultura Puertorriguena.
- Publications for the "Preservation of Santos" workshop in Puerto Rico.

Smithsonian Environmental Research Center

Donors of Financial Support

\$10,000 or more

The Walt Disney Company Regional Citizens Adv. Council American Petroleum Institute Warren Wilson College

\$100 or more

Bishop Museum Eugene S. Morton

National Science Resources Center

Donors of Financial Support

\$ 500,000 or more

National Science Foundation

\$100,000 or more

Kellogg Fund of the National Academy of Sciences/National Research Council Robert Wood Johnson Foundation Dow Chemical Company Foundation DuPont Company

\$ 75,000 or more

Carolina Biological Supply Company Delta Education

\$ 50,000 or more

Smithsonian Institution Educational Outreach Fund Hewlett-Packard Company

\$30,000 or more

The Bayer Foundation, Inc. Technical Association of the Pulp and Paper Industry

\$24,000 or more

Merck Institute for Science Education Smithsonian Women's Committee VWR Scientific Products

\$ 18,000 or more

Hewlett-Packard Company

Smithsonian Institution Archives

Donors of Financial Support

\$115,000 or more

Richard Lounsbery Foundation to the Joseph Henry Papers Project

\$35,000 or more

Research Resources Grant Program (Office of Fellowships and Grants)

\$2,500 or more

Smithsonian Women's Committee

Donors to the Collection

American Ornithologists' Union. Records of the Union.
Animal Behavior Society. Records of the Society.
Association of Field Ornithologists. Records of the Association.
Association of Systematics Collections. Records of the Association.
David Challinor. Oral history with David Challinor.
Roy S. Clarke, Jr. Papers of Roy S. Clarke, Jr.

Colonial Waterbird Society. Records of the Society. Charles Whitney Dall. Portrait (cased miniature) of George Brown Goode. Paul E. Garber. Oral history with Paul E. Garber. History of Science Society. Records of the Society. Museum Computer Network. Records of the Network. Suzanne Ripley. Papers of Suzanne Ripley. Ross Simons. Oral history with Ross Simons. Michael Smith. Oral history with Michael Smith. Society for Marine Mammalogy. Records of the Society. United States Geological Survey. Portrait of Isaac Lea; Note by Mary Jane Rathbun. Margaret Wetmore. Papers of Alexander Wetmore. Woodrow Wilson International Center for Scholars. Records of the Center. Judith K. Zilczer. Papers of Judith K. Zilczer.

Smithsonian Institution Libraries

Donors of Financial Support

\$25,000 or more

Nancy Wineland Castle Joseph F. 3rd and Joan Cullman Mrs. Jefferson Patterson

\$ 5,000 or more

Anonymous The Edward S. Curtis Foundation The Dibner Fund (David and Frances Dibner) The Jaques Admiralty Law Firm

\$1,000 or more

Howard H. Baker, Jr. Christopher Cardozo The Curtis Centennial Project The Curtis Collection Robert J. Hurst Frank A. Weil Mr. and Mrs. Caspar W. Weinberger, Sr. Mrs. Lloyd Wineland

\$ 500 or more

James M. Kemper, Jr. Dudley and Lois Rochester David Spencer

\$250 or more

John and Lois Eberhard Bill Lambert Rosemary L. Ripley Rodris Roth Russell Train Bruce Wasserstein

\$100 or more

Tobin and Anne Armstrong Marion Oates Charles Charlottesville Camera Club Mary Lou Cowden Douglas Evelyn Alfred C. Glassell, Jr. Marc Goldberg Nancy E. Gwinn and John Y. Cole Richard McG. Helms James and Linda Hobbins John Jameson Keith A. Jones Thomas E. Lovejoy Roman Martinez IV Alan and Berry Miller Howard and Reba Oheim William A. Oliver Malcolm and Bettie Ripley Russell A. Rourke Ruth Selig Russell Shank Lawrence A. Skantze Barbara J. Smith Stanwyn Shetler William Mitchell Van Winkle Ulf Andreas Whist

Donors to the Collection

Ms. Rita Adrosko Mr. John-Tokpabere Agberia

Mr. Chinedu A. Agbodike Mr. and Mrs. John Aha Mr. Richard Ahlborn Dr. Harry A. Alden Mrs. John E. Armstrong Mr. Donald P. Avery Mr. Robert O. Bach Wang Ying Bai Dr. Douglas B. Ball Mrs. Mary W. Ballard Ms. Corrine Barsky Mr. Joseph Barth Mr. Silvio A. Bedini Ms. Amy A. Begg Mr. Abdallah Benanteur Dr. Ernst H. Berninger Mr. Richard E. Beteta Dr. Erna Beumers Mr. Kent Charles Boese Ms. Alaine Apap Bolgna Ms. Maxima M. Bond Mr. Eric S. Borsting Ms. Brigitte Bouret Ms. Mary Brandwein John Bratten, Ph.D. Dr. Michael K. Brett-Surman Mr. William H. Bunting Mr. Andrew Chaikin Mr. Eddie Chambers Dr. Elizabeth Chilver Mr. Wallace Cleland Dr. Anthony G. Coates Dr. Jorge Conte-Porras Dr. Richard Cooke Dr. Mireva D. Correa Mr. Guido Craveri Laudine and George Creighton Feng Dashun Ambassador Allen C. Davis Ms. Diane DeBlois Dr. Adolfo de Sostoa Ms. Ana Maria de Vasquez Mr. Warren W. Dexter Ms. Joan Giffen Donahue Mr. Laurence J. Dorr Mrs. Helen Dossche Mr. Richard Doty Mr. Robert Dowling Ms. Lynn Downey Mr. William S. Dudley Ms. Chris Dunn Mr. Chris Ebigbo Mr. Roger Edde Ms. Judith Eglington Ms. Annaleen Eins

Ms. Charlotte Elton Mr. David Erhardt Ms. Angele Etoundi Essamba Mr. Eduardo Esquivel Ms. Betty B. Faust Mr. Marc Leo Felix Mr. Larry Ferreiro Ms. Anne M. Franks Mr. Douglas Freund Dr. Kimball L. Garrett Dr. Anna Gradowska Ms. Renee Guerin Mr. Jorge Gumbe Ms. Laura Gutierrez Mr. Joseph P. Harahan Ms. Elizabeth Harris Dr. Robert D. Harris Mrs. Eleanor C. Harvey Mr. Stanley Heckadon Mr. Wayne Henderson Dr. Robert S. Hoffmann Dr. Paul House Mr. Ramon E. Howe Dr. Kuang-Nan Huang Mr. Andrei Dumitru Iacobas Ms. Funke C. Ifeta Mr. Krydz Ikwuemesi Dr. Pascal James Imperato Ms. Rose Issa Dr. Dele Jegede Dr. Veronika Jenke Mr. Grady E. Jensen Mr. Lars Christian Jenssen Mr. David W. Johnston Ms. Ann Juneau Mr. Martin R. Kalfatovic Mr. Roy Kausa Ms. Sherry Kelley Mr. David A. Kent Mr. Shuji Komatsu Mr. Karl J. Krapek Mr. Daniel C. Krummes Mr. Herbert Lachmayer Mr. Richard W. Leche, Jr. Ms. Gwendolen R. Leighty Mr. Richard A. Leyes, II Mr. John Liddell Dr. Olga Linares Dr. Glenn Loney Ms. Eleonora Louis Mr. Dennis M. Lyden Mr. Robert A. Malone Major R.K. Malott, Ret. Mr. Joe T. Marshall, Jr. Mr. Jean-Hubert Martin

Mr. Brian H. Mason Mr. Michael D. Matthews Ms. Pat McNees Mr. James G. Mead Mr. Charles Medearis Mrs. Rachel L. Mellon Ms. Louise Meyers Ms. Virginia Minton Dr. Max Mohl Mr. Owen D. Mort, Jr. Mrs. Lettie S. Multhauf Mr. O. Odimayo Mr. Ricardo Ojeda Mr. Storrs L. Olson Mr. Jack Padalino Mr. J.B. Parker Dr. Louis Perrois Professor John Picton Mr. Richard A. Postman Dr. Robin Poynor Dr. Maynard S. Raasch Mr. Randy Rach Mr. William Rand Mr. Clayton E. Ray Mrs. Nicholas C. Read Mr. Robert K. Robbins Mrs. Daphne Ross Dr. Ira Rubinoff Ms. Carmen T. Ruiz-Fischler Ms. Elizabeth M. Sanchez Mr. Angel D. Santiago Dr. George B. Saunders Mr. Alfredo Schael Mr. Sven Scheiderbauer Prof. Dr. Katesa Schlosser Mr. Keith Fred Schmidt Dr. Klaus Schneider Mr. Carsten Schulz Ms. Ruth Sexton Mr. Andy Shanken Mr. Joshua Shapiro Ms. Courtney Shaw Mr. David Shavt Mr. Ky Siriki Dr. Neal G. Smith Mr. I. Gregory Sohn Ms. Kate Southey Mr. Roger Staiger, Jr. Mr. David R. Stivers Mr. Joseph Suarez Mr. Paul M. Taylor Ms. Jan Thies Mr. Dale Thomas Mrs. Mary Augusta Thomas Mr. Dante Martins Tiexeira

Mr. Herbert A. Trenchard Dr. Ing. Umberto Ucelli Mr. Richard Vari Ms. Mary Ellen Vehlow Mrs. Jane Villa-Lobos Mr. Alexander von Vegesack Mr. Melvin J. Wachowiak Dr. Roslyn A. Walker Dr. Deborah J. Warner Ms. Mary Jane West-Eberhard Mr. John H. White Ms. Lavonia Green Wiggins Mr. Vince Wilcox Dr. Ronald S. Wilkinson Ms. Jeri Bernadette Williams Dr. Elizabeth A. Willis Mr. Frank H. Winter Mr. Rainer Wirth Dr. Norman E. Woodley Mr. George Xanthakis Ms. Diane T. Zinn Mr. George R. Zug

Corporate Donations to the Collection

The Africa Museum Foundation. The Netherlands Agencia Espanola de Cooperacion, International, Republic of Panama American Institute of the History of Pharmacy, Madison, Wis. Associacion Nacional Para La Conservacion de La Naruraleza, Republic of Panama The Attic Studio, Clinton Corners, N.Y. Bibliothek, Staatliches Museum fur Volkerkunde, Munich, Germany Binney & Smith, Inc., Easton, Penn. CEASPA (Smithsonian Tropical Research Institute), Republic of Panama Centre d'Art Contemporain, Brussels, Belgium Consortium for International Development, Washington, D.C. El Loko, Duisburg, Germany Etnografisch Museum, Antwerp, Belgium FAO-Departamento de Pesca, Rome, Italy Food and Agriculture Organization of the United Nations, Rome, Italy Forschungsinstitut und Natur-museum Senckenbergische, Frankfurt, Germany

Fundacao Calouste Gulbenkian, Lisbon, Portugal Hawaiian Philatelic Society, Honolulu, Hawaii Instituto Frances de Estudios Andinos. Santa Fe de Bogota, Colombia Instituto Nacional de Pesca y Acuicultura, Santa Fe de Bogota, Colombia International Plant Genetic Resource Institute, Rome, Italy Ministerio de Salud, Republic of Panama Ministerio de Sanidad y Asistencia Social, Aragua, Venezuela Museo, Casa de la Moneda, Madrid, Spain National Imagery & Mapping Agency, Bethesda, Md. National Museum of American Jewish History, Philadelphia, Penn. Oak Spring Garden Foundation, Upperville, Va. Organizacion Panamerican de la Salud, Washington, D.C. Overseas Development Institute, United Kingdom President of the Republic of Colombia, Colombia S.M.A. Fathers, Tenafly, N.J. Smithsonian Tropical Research Institute Bookstore, Panama City, Republic of Panama Staatliches Museum fur Volkerkune Bibliothek, Munich, Germany Taiwan Forestry Research Institute, Taipei, Taiwan UNESCO/Panama, Panama City and Paris United States Department of Agriculture, Washington, D.C. United States Department of the Interior, Washington, D.C.

Universitat de Barcelona, Barcelona, Spain

Smithsonian Institution Traveling Exhibition Service, SITES

Donors of Financial Support

\$ 500,000 or more

Lila Wallace-Reader's Digest Fund Lockheed Martin Corporation Nissan North America Pfizer Inc

\$ 100,000 or more

Time Warner Inc. Turner Classic Movies

\$ 50,000 or more

Banco Popular de Puerto Rico United States Golf Association

\$ 10,000 or more

Academy of Model Aeronautics BP Amoco Farmers Insurance Group The Hearst Foundation John S. and James L. Knight Foundation Lalique North America, Inc. Silver Dollar City, Inc.

Donors of In-Kind Support

Tamiya America, Inc. for On Miniature Wings: Model Aircraft from the National Air and Space Museum: model aircraft for educational programming.

Office of Physical Plant

Donors of Financial Support

\$ 100,000 or more

Lee Folger

\$10,000 or more

Nina Keith

Contributing Members of the Smithsonian Institution in Fiscal Year 1998

The Contributing Membership supports the Institution through generous annual donations and special giving opportunities. Members' participation enables the Smithsonian to pursue specific projects and broader research, acquisition, preservation, and education efforts than might otherwise be possible. The Smithsonian Institution therefore gratefully acknowledges the loyal and thoughtful assistance of the Contributing Members, including Patron Members (\$1,400 annual contribution), Sustaining Members (\$700 annual contribution), and Sponsoring Members (\$350 annual contribution), listed below.

Joe L. and Barbara B.

Arthur G. Altschul

William S. Anderson

Gaylord⁺ and Dorothy

Robert C. and Julie Graham Jr.

Herbert Waide Hemphill Jr.;

William A. † and Patricia W.

Marvin Breckinridge Parterson

Mary Griggs Burke

Joan K. Davidson

Donnelley

Hewitt?

Ikuo Hiravama

Olga Hirshhorn

Ruth S. Holmberg

Samuel C. Johnson

Thomas M. Evanst

Katharine Graham

Allbritton

The Smithsonian Benefactors Circle

The Smithsonian Benefactors Circle recognizes and honors those whose generous gifts of \$100,000 or more have preserved the traditions of the Smithsonian and furthered its vision.

Honorary Founder Enid A. Haupt

Founders

Russell B. Aitken⁺

Laura E. Phillips† S. Dillon and Mary L. Ripley† Aπhur Ross Mrs. Arthur M. Sackler Else Sackler W. Mason and Jean D. Shehan T.T. Tsui Glenn O. Tupper

Patrons

Ronald D. and Anne Abramson Ann Simmons Alspaugh Peter C. and Joan Andrews Marjorie Arundel Herbert and Evelyn Axelrod Edward P. Bass Patricia and Kenneth E. Behring Randy and Nancy Best Peter and Helen Bing James and Barbara Block Winton and Carolyn Blount Agnes C. Bourne and James Luebbers Michael J. Brophy Hildegard Bruck Joan Bull George E. Burch III Vivian G. Burch Michael W. Cassidy Scott Chinery Marcus Cohn Barber B. Conable Jr. and Charlotte Conable Guido Craveri Joseph F. Cullman III Peggy and Richard M. Danziger David L. Davies Evelyn Y. Davis David and Frances Dibner Charles M. and Valerie T. Diker Joseph Di Palma Anne G. Earhart Barney A. Ebsworth Robert H. Ellsworth John L. and Margot P. Ernst Kitty Fassert Nancy Fessenden Kathrine, Juliet, and Lee Folger

Rita Fraad John A. Friede Phillip and Patricia Frost Tito Giamporcaro Daniel D. and Alice P. Gilbert George J. and Eileen D. Gillespie F. Warrington Gillet Ir. and Elesabeth I. Gillet Alfred C. Glassell Jr. Alvin L. Grav Jerome L. Greene Barrick W. Groom Agnes S. Gund George Gund III Karl H. Hagen Joan D. Haig Evelyn A.J. Hall Gloria Shaw Hamilton Marguerite J. Harbert Martha A. Healy Drue M. Heinz John Hendricks Llovd Herman Henry L. and Elsie H. Hillman Frank W. and Lisina M. Hoch Janet Annenberg Hookert Sir Joseph Hotung John R. Huggard Mrs. Jaquelin H. Hume Gilbert S. Kahn Jacob and Ruth C. Kainen Victor and Loretta Kaufman Gene A. and Freita F. Keluche James M. Kemper Jr. R. Crosby Kemper Jr. James W. and Mary T. Kinnear Ann and Gilbert Kinney Ethel Niki Kominik[†] William K. and Alice S. Konze Karl V. Krombein Harvey M. and Connie Krueger Robert E. and Elizabeth Krueger Robert and Helen Kuhn Rogerio S. Lam Ru Lennox Lang+ Robert and Carrie Lehrman

†Deceased

Jeromet and Dorothy Lemelson Barbara and Gerald Levin Sydney and Frances Lewis John Livermore Putnam Livermore Henry Luce III Frank J. Lukowski Barbara A. Mandel Harry and Beverly Mandil Edwin S. and Nancy A. Marks John F. and Adrienne B. Mars Brooks and Hope B.† McCormick Nan Tucker McEvoy Katherine Medlinger and Ervin Himmelfarb Antony M. Merck Eugene and Sue Mercy Jr. Jeffery W. and Janet Meyer James and Lolly Mitchell Lester S. Morse Jr. and Enid W. Morse The Hon. Daniel Patrick Moynihan and Elizabeth Moynihan Charles T. and Nancy Munger Eleanor Smallwood Niebell Jean Niemeier Robert H. and Nancy Nooter Marta G. Norman Carroll and Nancy Fields O'Connor Charles Rand Penney Al and Cecilia Podell Winifred and Norman Portenov Lewis and Margaret Ranieri Philip D. Reed Jr. and Elizabeth Reed Douglas F. and Sanae I. Reeves Frank K. Ribelin Carlyn Ring David Rockefeller Sr. Elihu Rose and Susan Rose Anton H. Rosenthal and Ruth E. Ganister Milton E and Frieda Rosenthal Wilbur L. Ross Jr. Jeanette Cantrell Rudy Cecile Salomon

Joseph H. Samuel Jr. Mrs. Stanley P. Sax Llovd G. and Betty L. Schermer Margaret Knowles Schink Richard J. and Sheila Schwartz Catherine F. Scott Ivan and Nina Selin Shirley P. Sichel Emma M. Sims James C. Slaughter George L. Small Kathy Daubert Smith Bernie E. Stadiem Mrs. Sydney Stein Jr. E. Hadley Stuart Jr. and Marion Stuart A. Alfred Taubman Vernon F. Taylor Jr. Eugene V. and Clare E. Thaw Jeffrey and Diane Tobin R.E. Turner and Jane Fonda Ladislaus and Beatrix von Hoffmann John Weeden Daniel Weinstein Nancy Brown Wellin Anthony and Beatrice W. Welters Jerry R.† and Carolyn L. White **Julius** Wile Warren and Barbara Winiarski Ronald H. Winston and Heidi Jensen-Winston Elizabeth B. Wood Gay F. Wray Nancy B. Zirkle Donors of Financial

Support

\$ 1,000,000 or more

Anonymous Herbert and Evelyn Axelrod The Kenneth E. Behring Family The Boeing Company

†Deceased

The Emil Buehler Trust Discover Card Services, Inc. FDX Corporation Mrs. Katherine M. Graham The Conrad N. Hilton Foundation Polo Ralph Lauren Corporation Lemelson Family Foundation* Lockheed Martin Corporation Mashantucket Pequot Tribal Nation of Connecticut National Association of Music Merchants Nippon Foundation Nordic Council of Ministers The Pew Charitable Trusts Scortsdale Cultural Council \$ 500,000 or more Anonymous The Art Research Foundation Morris & Gwendolyn Cafritz Foundation E. Rhodes & Leona B. Carpenter Foundation Mr. and Mrs. Richard M. Danziger Discovery Communications, Inc Friends of the National Zoo Hewlett-Packard Company The Robert Wood Johnson

The Robert Wood Johnson Foundation The Kresge Foundation Mr. and Mrs. Gerald M. Levin The John D. & Catherine T. MacArthur Foundation Nissan Motor Corporation U.S.A. Susan and Elihu Rose Foundation Dr. and Mrs. Ivan Selin Shell Prospecting & Development (Peru) B.V.

\$ 100,000 or more

Anonymous Mr. and Mrs. Joe L. Allbritton (Allbritton Foundation) Alumax, Inc. American Express Company ASARCO Incorporated AT&T Corporation Avery Dennison Corporation Mr. and Mrs. James A. Block Agnes Bourne BP America Inc. Centro Alameda, Inc. Cessna Aircraft Company The Chase Manhattan Bank Mr. and Mrs. Charles M. Diker (Valerie and Charles Diker Fund) Dow Chemical Company DuPont Earthwatch Enron/Enron Oil & Gas International Fieldstead & Company The Ford Foundation The Freed Foundation The Philip L. Graham Fund Mr. Alvin Gray (Alvin, Lottie & Rachel Gray Fund) Mary Livingston Griggs and Mary Griggs Burke Foundation Mr. George Gund III Mrs. Gloria Shaw Hamilton* Mr. and Mrs. John S. Hendricks Frank and Lisina Hoch* Mr. and Mrs. A. William Holmberg* Honda of North America Intel Corporation Jewelers of America John S. and James L. Knight Foundation Lalique North America, Inc. Carrie and Robert Lehrman The Henry Luce Foundation, Inc. Maharam Mr. and Mrs. John F. Mars (Mars Incorporated) Andrew W. Mellon Foundation Merck Company Foundation Mr. and Mrs. Eugene Mercy Jr.

^{*}Denotes a gift to the Fund for the Future, a citizens' initiative to raise endowment funds, both unrestricted and special purpose.

Monsanto Fund Enid and Lester Morse (Morse Family Foundation) Mr. and Mrs. Charles T. Munger (Alfred C. Munger Foundation) National Business Aviation Association Pfizer Inc Philippine Centennial Foundation USA Regional Citizens Advisory Council, Inc. James Renwick Alliance Rockefeller Foundation Shaw Contract Group Shell Oil Company Mrs. Warren H. Sichel Smithsonian Women's Committee Ms. Elizabeth H. Solomon (Sweet Meadow Fund) The Starr Foundation The Sulzberger Foundation, Inc Time Warner Inc. Timex Corporation Trimble Navigation Limited Mr. Robert E. Turner III (Turner Foundation, Inc.) VWR Scientific Products Nancy Brown Wellin (The Brown Foundation) Warren and Barbara Winiarski Mr. John R. Young (Florence J. Gould Foundation) Zoologische Gesellschaft

\$50,000 or more

Anonymous Altman Foundation Anheuser-Busch Companies AT&T Foundation Banco Popular de Puerto Rico Mrs. Christine Allen and Ms. Anne Zetterberg (The Bedminster Fund, Inc.) Dr. and Mrs. Peter S. Bing Booth Ferris Foundation Brother International Corporation Carolina Biological Supply Company Case Corporation Champion International Corporation The Chase Manhattan Corporation Choice Hotels International, Inc Computerworld Information Technology Awards Foundation, Inc. Conoco Inc. Consolidated Natural Gas Company Council for Advancement & Support of Education Ms. Allison Stacey Cowles and Mr. Arthur Ochs Sulzberger (The Sulzberger Foundation)* Crate & Barrel Mr. and Mrs. Joseph F. Cullman III* Dayton Hudson Corporation Delta Education Clarence & Anne Dunwalke Trust Fannie Mae Foundation Mr. and Mrs. Hart Fessenden Fidelity Foundation George Mason University Goldman, Sachs and Company Mrs. Ruth C. Greenberg The Greenwich Workshop, Inc. Henry Foundation Herman Miller, Inc. Hughes Network Systems IBM Corporation Mr. and Mrs. Samuel C. Johnson Mr. and Mrs. Victor Kaufman Mr. Harvey M. Krueger Mr. Rogerio S. Lam Metropolitan Life Foundation Eugene and Agnes E. Meyer Foundation Mr. Jeffery W. Meyer Mobil Corporation The New York Community Trust-The Island Fund

Mr. Peter Norton (Peter Norton Foundation) Mr. and Mrs. Carroll O'Connor (Carroll and Nancy O'Connor Foundation) Pacific Life Foundation Mrs. Jefferson Patterson* Pennzoil Company Pratt and Whitney PricewaterhouseCoopers LLP Mr. Arthur Ross (Arthur Ross Foundation) Victoria P. and Roger W. Sant (The Summit Charitable Foundation, Inc.) Mr. B. Francis Saul II (Chevy Chase Bank) Margaret Knowles Schink Ms. Harriet L. Schwartz (Harriet Schwartz & Associates, Inc.) Seiko Epson Corporation Shell International Petroleum Company Ltd. The Gertrude E. Skelly Charitable Foundation Mr. Robert C. Tang, Q.C. Target Stores, the Department Store, Division and Mervyn's by the Dayton Hudson Corporation Time Inc. Mr. and Mrs. Anthony Welters* Xerox Corporation \$10,000 or more Anonymous

Abbort Laboratories Fund ABC, Inc. Sir Valentine Abdy Mr. Roger Abelson The Abington Foundation Academy of Model Aeronautics The Ahmanson Foundation Alascom Mrs. Kathleen B. Allaire Allen & Company Incorporated Ms. Charmay B. Allred Alveska Pipeline Service Company American Business for Environmental Leadership American Federation of Teachers The American Foundation for Textile Art, Inc. American Petroleum Institute The American University American Zoo & Aquarium Association Mr. Harold V. Andersen Mr. and Mrs. Andrew Anderson III Applied Energy Services, Inc. Arthur Andersen and Company LLP ASE Americas, Inc. Ashton-Potter Ltd. Association of Pakistani Physicians of North America Autodesk Inc. Mr. and Mrs. Robert Balzer Banco Popular Bankers Trust Company The Beinecke Foundation. Inc. Bell Atlantic Corporation The Hon. and Mrs. Max N. Berry Mr. and Mrs. Jack S. Blanton (Scurlock Foundation) Mr. and Mrs. John M. Bradley* Mr. and Mrs. Stephen F. Brauer (Stephen F. and Camilla T. Brauer Charitable Trust) Bristol-Myers Squibb Company BROAN a division of NORTEK Mr. Gerald E. Buck (Buck Investments) Ms. Joan Bull Bunge Corporation Charles E. Burchfield Foundation

*Denotes a gift to the Fund for the Furure, a citizens' initiative to raise endowment funds, both unrestricted and special purpose. Ms. Uschi Butler Capital Re Mr. and Mrs. James R. Cargill Mr. Oliver T. Carr Castle Rock Entertainment Mrs. Nancy Castle Caterpillar, Inc. The Hon, Henry E. Catto (Carto Foundation) Cisco Systems, Inc. Citibank N.A. Mr. and Mrs. Peter Claussen The Coca-Cola Company Harryette Cohn Fund The Colbert Foundation, Inc. Mr. Lester Colbert Jr. Dr. John P. Comstock (Abigail Van Vleck Charitable Trust) Mr. and Mrs. Peter R. Coneway (Coneway Family Foundation) Mr. and Mrs. Thomas E. Congdon Conservation, Food & Health Foundation, Inc. Coopers & Lybrand, LLP Mr. and Mrs. Thomas G. Cousins (Cousins Foundation, Inc.) Drs. William H. and Isabella C.M. Cunningham Cyprus Amax Minerals Company Dade Community Foundation Mr. and Mrs. Frank A. Daniels Jr. (Julia and Frank Daniels Fund) Mr. David L. Davies (Davies/Weeden Fund) Mr. and Mrs. Carl B. Davis S. Sydney DeYoung Foundation Mr. Joseph A. Di Palma Mr. and Mrs. David Dibner (The Dibner Fund, Inc.) Mr. Barry Diller (USA Networks Foundation, Inc.) Discover Financial Services, Inc. The Walt Disney Company Mr. Donald J. Douglass (The Douglass Foundation)

The Max and Victoria Dreyfus Foundation Inc. Duggal Color Projects, Inc. Mr. and Mrs. William C. Durron* Mrs. Anne C. Earhart (The Homeland Foundation) The Eberly Foundation and The Eberly Family Trust Ebrahimi Family Foundation Mr. Barney A. Ebsworth (The Ebsworth Foundation) Mr. Dean S. Edmonds III (Dean S. Edmonds Foundation) Electric Power Research Institute Empire State Development Corporation Encad, Inc. Mr. and Mrs. John Ernst (Richard C. & Susan B. Ernst Foundation Inc.) Exxon Corporation The Feinberg Foundation Mr. and Mrs. George M. Ferris Jr. (George M. Ferris Jr. Foundation) Elizabeth Firestone-Graham Foundation Ella Fitzgerald Charitable Foundation Reuben H. Fleet Foundation Fund Fleetwood Enterprises, Inc. Ms. Barbara G. Fleischman Mrs. Leslie S. Fogg III Mr. John Dulin Folger Juliet and Lee Folger (The Folger Fund)* Forstmann Little & Company Mrs. Joanne Foster Mrs. Daniel Fraad Mr. James S. Frank Mr. and Mrs. Robert W. Fri Fundación Smithsonian de Panama Ms. Caroline D. Gabel Mrs. Aileen Garrett Mr. William Gates III (William H. Gates Foundation) General Atlantic Partners, LLC General Electric Aircraft Engines

Mr. David W. Gengler Georgia Tech Foundation, Inc. Mr. Bert A. Getz (Globe Foundation) Mr. and Mrs. Alfred C. Glassell Jr. The Gold Institute Government Development Bank for Puerto Rico The Ansley I. Graham Trust Greening America Mr. and Mrs. Patrick W. Gross Mr. and Mrs. Peter E. Haas Sr. (Miriam & Peter Haas Fund) Hair Research Society Ms. Emiko Hakuta Mr. Hugh Halff Jr. Florence P. Hamilton Foundation Agency The Phil Hardin Foundation Mr. Alan Hartman HBO & Company Mrs. Patrick Healy III (M.A. Healy Family Foundation, Inc.) Mr. J. Roderick Heller III Mr. Robert F. Hemphill Jr. Mr. Brian C. McK. Henderson Mr. Alan J. Hirschfield Volker Hollmann-Schirrmacher Hong Kong Economic & Trade Office Mr. and Mrs. S. Roger Horchow Mr. Rampa R. Hormel Mr. and Mrs. Raymond J. Horowitz Hughes Aircraft Company ILA Foundation, Chicago Imperial Wallcoverings, Inc. Interface Inc. International Paper Company Johnson Matthey J.M. Kaplan Fund, Inc. Mr. Gene A. Keluche (Communication Resources, Inc.) Mr. and Mrs. Dwight M. Kendall Klein & Saks, Inc. Kmart Corporation

Mrs. Marie L. Knowles KOLBUS America Inc. KPMG Peat Marwick Mr. and Mrs. Robert Krissel Mr. and Mrs. Robert E. Krueger (Peter Krueger-Christie's Foundation) Ms. Elaine La Roche Mrs. Emily Fisher Landau Lannan Foundation Mr. and Mrs. Philip A. Lathrap Lee Enterprises, Inc. Mr. Thomas H. Lee Mr. Robert B. Lehrman (Jacob & Charlotte Lehrman Foundation, Inc.) Lemberg Foundation, Inc. Mr. and Mrs. Melvin Lenkin (Thelma & Melvin Lenkin Family Charitable Foundation Inc.) Levi Strauss & Company Mr. and Mrs. Aaron Levine (Law Offices-Aaron M. Levine) William & Nora Lichtenberg Foundation, Inc. Mrs. Gail K. Liebes The Link Foundation Mr. and Mrs. R. Robert Linowes (R. Robert Linowes and Ada H. Linowes Fund) Mr. and Mrs. Robert E. Linton Lockheed Martin Missiles & Space Joe and Emily Lowe Foundation Mr. and Mrs. Donald G. Lubin (The Barr Fund) Mr. & Mrs. Peter Lunder Mrs. Elizabeth S. MacMillan Ms. Holly Madigan (Madigan Family Foundation) Mr. and Mrs. Frank N. Magid (Frank N. Magid Associates, Inc.) Mr. and Mrs. Robert H. Malort Nancy and Edwin Marks (The Marks Family Foundation)

Marpat Foundation, Inc. Mr. Frank Martucci Masco Corporation Mr. Richard Meier (The Richard Meier Foundation) Merck & Co., Inc. Merck Institute for Science Education Merrill Lynch & Co. Foundation, Inc. LuEsther T. Merrz Fund Metropolitan Center for Eastern Art Studies The Robert & Bethany Millard Charitable Foundation Min Chiu Society Missouri Botanical Garden Monsanto Company J.P. Morgan & Company, Inc. Mrs. Yoshiko Mori Mr. Mario M. Morino (Mario Morino Fund) Mr. John M. Morss Mr. Rupert Murdoch Museo de Arte Museum Loan Network NAMSB Foundation, Inc. National Association of Secondary School Principals National Education Association National Geographic Society National Postal Forum National Retail Federation NationsBank Fund. Charitable Foundation Natural Heritage Trust New York Power Authority New York Stock Exchange, Inc. Newmont Mining Corporation Mrs. Paul M. Niebell Sr. El Nuevo Dia Oasis Clinic, a division of CMAC, Inc. Orbital Sciences Corporation Orkin Pest Control Ms. Virginia J. Ortega Mr. and Mrs. David M. Osnos Ostrolenk, Faber, Berb & Soffen, LLP

PaineWebber Group Incorporated Peabody Holding Company, Inc Mr. Gerald P. Peters (Gerald Peters Gallery Inc.) Mrs. Elizabeth H. Pfister Phillips Petroleum Company The Pinkerton Foundation Pioneer Hi-Bred International Mr. and Mrs. Abe Pollin Hazen Polsky Foundation, Inc. Dr. and Mrs. Meyer P. Poramkin Mr. and Mrs. William Potter (Wm. A. & Ronnie N. Potter Philanthropic Fund) Mr. and Mrs. Heinz C. Prechter (World Heritage Foundation) Prentice Hall Computer Publishing Mrs. Charles H. Price II Purina Mills Quantum Corporation Mr. and Mrs. Harvey W. Rambach **RCPI** Trust The Christopher Reynolds Foundation Mr. Edward Hart Rice (The Rice Family Foundation, Inc.) Ms. Ann R. Roberts Mr. John R. Robinson Sara Roby Foundation Mr. and Mrs. William D. Rollnick (William D. and Nancy Ellison Rollnick Foundation) Mr. Samuel G. Rose Mr. and Mrs. Samuel J. Rosenfeld Mrs. Polly Rubin The May and Samuel Rudin Family Foundation Mrs. Arthur M. Sackler The Saint Paul Foundation Samsung America, Inc. SBC Foundation Mr. and Mrs. Lloyd G. Schermer (Philip and Henrietta Adler Foundation)

Ms. Helen G. Schneider Mr. Richard J. Schwartz (David Schwartz Foundation, Inc.) Searle Securities Industry Association, Inc. Nina & Ivan Selin Family Foundation, Inc. Sequent Computer Systems, Inc. Mr. Harezo Shimizu Showtime The Movie Channel Siemens Hearing Instruments Mr. and Mrs. David M. Silfen (David & Lyn Silfen Foundation) Silver Dollar City Inc. Mr. Theodore J. Slavin Mr. and Mrs. Franchon M. Smithson Irene Sorrough Sprint Mr. and Mrs. Terry Stent Jennie Stoddard Charitable Trust Fund Ms. Helen D'Olier Stowell Mr. Kelso F. Sutton TAAPI Tamiya America, Inc. Dr. and Mrs. Paul Tarver (Tarver Family Fund) A. Alfred Taubman (Taubman Endowment for the Arts) Teknion, Inc. Ms. Ann Tenenbaum Texaco Thacher Proffitt and Wood Thaw-Collection-Fenimore House Museum Time Warner, Inc. Ms. Rita Tishman (Norman-Rita Tishman Fund, Inc.) Toyota Motor Sales, U.S.A., Inc **Troop Steuber Pasich** Reddick & Tobey, LLP Unico Banking Group Unite! U.S.-Mexico Fund for Culture The Vantive Corporation

Wachtell, Lipton, Rosen & Karz Wallis Foundation Mr. and Mrs. John T. Walton Mr. and Mrs. Milton H. Ward Warren Wilson College Washington Gas Light Co. The Washington Post Company Mr. John D. Weeden (Davies/Weeden Fund) Ellen Bayard Weedon Foundation Mrs. Eileen A. Wells WEM Foundation Herbert B. West Fund The Wildlife Conservation Fund of The Walt Disney Company Wisconsin Sesquicentennial Commission Ms. Estelle R. Wolf Mr. James D. Wolfensohn (Wolfensohn Family Foundation) Woohak Cultural Foundation World Wide Fund for Nature Malaysia World Wildlife Fund-UK Mrs. Gay F. Wray (Roger S. Firestone Foundation) Mr. Robert Zapart Mrs. Nancy Behrend Zirkle Zurich Kemper Investments

\$5,000 or more

Anonymous A&H Sportswear Co., Inc. Mr. and Mrs. Ronald D. Abramson Dr. and Mrs. Bruce M. Alberts Ms. Ann Simmons Alspaugh Mr. Arthur G. Altschul (Overbrook Foundation) American Investment Сотралу Amtrend Corporation J. Aron Charitable Foundation, Inc. Mr. Arthur W. Arundel (AWA Family Foundation) Asian Cultural Council, Inc.

Bajaj Family Foundation Mr. Michael Baly III Mr. and Mrs. Thomas W. Barwick Mr. Riley P. Bechtel (Bechtel Foundation) Mr. and Mrs. William Beierwaltes Bell Atlantic Foundation Mr. and Mrs. Robert H. Bloom Bloomberg Financial Markets, Commodities and News Laura Boulton Foundation Inc. Mrs. Fleur S. Bresler Mr. Eli Broad (The Eli Broad Family Foundation) Ms. Sheridan Brown (The Sheridan Brown Fund) Mr. and Mrs. John B. Bunker The Calvin Klein Foundation Mr. and Mrs. David V. Capes Ms. Elizabeth Catto Dorothy Jordan Chadwick Fund The Chase Manhattan Foundation Chevron Corporation Mr. and Mrs. Willard G. Clark The Hon. Barber B. Conable Jr. Ms. Nancy L. Connor The Council for Excellence in Government Cousins Foundation, Inc. Mr. and Mrs. Roger E. Covey Mr. Eldon Crowell Mr. H. King Cummings (King and Jean Cummings Charitable Trust) Edward S. Curtis Foundation Deloitte & Touche LLP Denver Zoological Foundation, Inc. Dewey Ballantine LLP Mr. and Mrs. Charles D. Dickey Jr. En Pointe Technologies J. Epstein Foundation Mr. and Mrs. George J. Fan (Katherine and George Fan Foundation) Federal National Mortgage Association

Alfred and Harriet Feinman Foundation Mr. Bertram Fields and Ms. Barbara Guggenheim Mrs. Dielle Fleischmann (The Monomoy Fund) Mr. Thomas G. Flynn (Bechtel Foundation) Ms. Anne Forbes Mrs. Daniel Fraad (Rita & Daniel Fraad Foundation. Inc.) Mr. and Mrs. Morton Funger Ms. Nely Galan (gaLAn entertainment) General Re Corporation Geo-Etka, Inc. The Hon, Sumner Gerard (Sumper Gerard Foundation) The German Marshall Fund of the United States Mr. and Mrs. Gordon P. Gerry (Ann & Gordon Getty Foundation) Mrs. John T. Gibson Ms. Catherine S. Gidlow Mr. George J. Gillespie III Dr. Margaret Goodman Ms. Elizabeth Gordon Grey Advertising, Inc. Mr. W.L. Hadley Griffin Ms. Agnes S. Gund (Agnes Gund Charitable Account) Mr. and Mrs. Robert D. Haas (San Francisco Foundation) Mr. and Mrs. Ben Hammett Harnischfeger Industries Inc. Hawthorn Corp. Mrs. Drue M. Heinz Mr. Paul Hertelendy (Gramp Foundation) Dr. W. Ronald Heyer Mr. Samuel J. Heyman Mr. and Mrs. Frederick Hill (Berry-Hill Galleries, Inc.) The Clarence and Jack Himmel Foundation Mrs. Joseph Hirshhorn (Olga & Joseph H. Hirshhorn Foundation, Inc.) Mr. and Mrs. Noriyoshi Horiuchi

Interchange Standards Corporation Mr. and Mrs. Robert L. James Mr. and Mrs. Bruce E. Karatz The Katzenberger Foundation, Inc. Mr. Walter Keating Mr. and Mrs. William G. Kerr (The Robert S. & Grayce B. Kerr Foundation, Inc.) Mr. and Mrs. James W. Kinnear Mr. and Mrs. Gilbert H. Kinney Mr. Werner H. Kramarsky (The Fifth Floor Foundation) Ladies Auxiliary to the VFW of U.S. Mr. and Mrs. James J. Lally Mr. and Mrs. Jon Landau Ms. Hilva Baillie Landsman (A.R. Landsman Foundation, Inc.) Alvin S. Lane, Esq. (The Alvin S. Lane Family Fund) The Lasa Foundation Dr. Thomas Lawton The Hon. and Mrs. Marc Leland (Marc E. Leland Foundation) Ms. Sandy Lerner Mrs. Howard W. Lipman (Howard & Jean Lipman Foundation, Inc.) Littleton Coin and Stamp Company Mrs. Jean Mahoney Malden Mills Industries Barbara and Morton Mandel (Morton and Barbara Mandel Family Foundation) Margery and Edgar Masinter (Margery and Edgar Masinter Fund) Mrs. Nan Tucker McEvov (Nan Tucker McEvoy Foundation, Inc.) Mr. and Mrs. John F. McGuigan MCI Foundation Mr. Robert L. McNeil Jr. (The Barra Foundation, Inc.)

Mr. and Mrs. Michael A. Mennello Dr. and Mrs. Samuel C. Miller Dr. Allen M. Mondzac Mr. and Mrs. Paul S. Morgan Mr. and Mrs. Thomas D. Mullins Mystic Stamp Company National Society of the Children of the American Revolution NationsBank, N.A. Neuberger & Berman Mr. and Mrs. Lucio A. Noto Ralph E. Ogden Foundation, Inc. Orange County Museum of Ап Orimono Interiors Mr. and Mrs. Gerald L. Pearson (Pearson Art Foundation, Inc.) Mr. James E. Pehta J.C. Penney Company, Inc. PEPCO Phelps Dodge Corporation Philip Morris Companies, Inc Mr. and Mrs. Frank N. Piasecki Podesta Associates, Inc. Mrs. John Alexander Pope Ms. Kathleen A. Preciado Puerto Rico Federal Affairs Administration Mr. and Mrs. Morris S. Pynoos The Henry & Henrietta Quade Foundation The Reader's Digest Association, Inc. Mr. and Mrs. Philip D. Reed Jr. (Reed Foundation) Sanae I. and Douglas F. Reeves Mary Livingston Ripley Charitable Lead Trust* Dr. and Mrs. Kenneth X. Robbins Karol Kirberger Rodriguez Mr. and Mrs. Richard Roob Theodore Roosevelt Association Mrs. Lucile Rosenbaum

Mr. Robert Rosenkranz and Ms. Alexandra Munroe (The Rosenkranz Foundation) Benjamin J. Rosenthal Foundation Mr. and Mrs. Milton F. Rosenthal Helena Rubinstein Foundation Mary A.H. Rumsey Foundation Mr. and Mrs. Clive Runnells Dr. Elizabeth Sackler Mrs. Else Sackler Mr. and Mrs. James Sams (The James & Berry Sams Family Foundation) Mrs. Diane Schafer Shandwick Kathy Daubert Smith Mr. Ira Spanierman Mrs. Ann M. Stack Stag's Leap Wine Cellars Mr. and Mrs. Michael H. Steinhardt (The Judy & Michael Steinhardt Foundation) Mr. Leon Strauss (Strauss Charitable Fund) Mrs. H. William Tanaka (H. William Tanaka and Lily Y. Tanaka Foundation) Trizechahn Centers Management, Inc. U.S. Airways Group Inc. Van-American Insurance Company Mr. Lucien Van de Velde Veterans of Foreign Wars of the U.S. Mrs. Beatrice A. von Gonrard The Hon, and Mrs. Frank A. Weil (Hickrill Foundation, Inc.) Wenner-Gren Foundation for Anthropological Research WGBH Educational Foundation Mr. Richard E. Whalen and Ms. Nancy Mattson Mr. William F. Whalen

Mr. Eli Wilner and Ms. Barbara Brennan (Eli Wilner & Company, Inc.) Winn Feline Foundation Robert H. Winn Foundation Mr. and Mrs. T. Evans Wyckoff (TEW Foundation)

\$2,000 or more

Anonymous Mr. and Mrs. Joseph Abeles (Joseph and Sophia Abeles Foundation) Mr. Davey L. Adams, Jr. Mr. Warren J. Adelson Alabama Zoological Society The Aleut Corporation Aleutian Pribilof Islands Association, Inc. ALEA American Express Foundation American Hospital Association Anne Corporation Applied Electronics (OEM) Ird ARCO Foundation, Inc. Arquitectonica International Corp. BankAmerica Foundation Ms. Donna Barnett Harry Bass Foundation Bell & Howell Phillipsburg Co. Mr. and Mrs. Berry Bergman (BJNB Foundation, Inc.) Bishop Museum BMW of North America, Inc Mrs. Esther S. Bondareff Book-of-the-Month Club. Inc. Mrs. Howard Booth Booz Allen & Hamilton Mrs. Ruth Bowman (Ruth Bowman Philanthropic Fund of the Jewish Communal Fund) Mrs. Teresa Bressler The British Embassy Broadcast Music, Inc. Dr. Irving F. Burton

Central Pacific Bank Mrs. Hope S. Childs Dr. and Mrs. Timothy W. Childs Citicoro Mr. and Mrs. Brice M. Clagett Coat & Suit Industry Trust Fund Coeur d'Alene Mines Corporation Mrs. Joan Lebold Cohen Mr. and Mrs. Edwin I. Colodny Conservation Treaty Support Fund Corning Inc. Ms. Harriett M. Crosby Dr. Worth B. Daniels Jr. (The Jane & Worth B. Daniels Jr. Fund) Dart Industries, Inc. Dartmouth College Mrs. Dorothy S. Davidson Mr. and Mrs. George C. Dillon Docent Council of Freer Gallery Ms. Mary F. Dominiak Mr. and Mrs. Dale F. Dorn (Joseph H. Thompson Fund) Educational Broadcasting Corporation Mr. and Mrs. James G. Evans Jr. Mrs. Myron S. Falk Jr. Ms. Patricia H. Falk Mrs. Norman Farquhar Mr. and Mrs. Arthur A. Feder Dr. and Mrs. Horace Feldman Dr. Alan Fern and Mrs. Lois Fern First National Bank of Anchorage Mr. Paul C. Fisher Dr. James Marston Fitch Dr. Oliver S. Flint Jr. Mary and Henry Flynt Folk Alliance Folklore Society of Greater Washington Ms. Rosemary L. Frankeberger Dr. and Mrs. Peter A. Freeman (The Hull Family Trust)

Ms. Ellen L. Frost and Mr. William F. Pedersen Fulbright & Jaworski General Electric Company Dr. Kurt A. Gitter and Ms. Alice Yelen Global Communications Network Mr. Leslie H. Goldberg (Leslie Goldberg Charity Fund) Mr. Robert C. Graham Jr. Mr. Victor Grahn Ms. Lumina Greenway Mrs. Heather Sturt Haaga Mr. John M. Haddow (Rita C. & John M. Haddow Family Foundation) Mr. and Mrs. George W. Haldeman Hannoch Weisman Mr. and Mrs. Erwin Harris The Hon. and Mrs. John W. Hechinger Sr. Mr. Norris Hekimian The Hon. and Mrs. Richard M. Helms Mr. and Mrs. William G. Herbster Mr. and Mrs. F.W. Herlitz Mr. and Mrs. David Hess Ms. Robyn Horn Sir Joseph E. Hotung Howard University Hospital Mr. John K. Howat Illinois Tool Works Foundation David and Par Jernigan Mr. and Mrs. Philip C. Jessup Jr. Johnson & Johnson Mr. and Mrs. Stanton Jue Mr. David Woods Kemper II, Mr. and Mrs. James M. Kemper Jr. (The David Woods Kemper Memorial Foundation) Ken Smith and Associates Ms. Marie-Louise Kennedy Kerr-McGee Corporation Mrs. Nighat A. Khan The Kiplinger Foundation Mr. Sam Kito Jr. (Kito Inc.) Mr. and Mrs. Robert P. Kogod

Lt. Col. William K. and Mrs. Alice S. Konze (Alice Stockton Konze Fund) Embassy of Korea Ms. Elizabeth P. Kosky (Skycraft, Inc.) Mr. and Mrs. James D. Krissel Mr. Jatinder Kurnar, trustee of APCA Mr. Albert G. Lauber Jr. and Mr. Craig W. Hoffman Dr. Timothy Lehmann Leica, Inc. Drs. Edmund and Julie Lewis Mr. and Mrs. Robert V. Lindsay Lippincott & Margulies Long Bow Group, Inc. Mr. and Mrs. Yo-Yo Ma Mars Foundation Mr. and Mrs. Tom Marsh Dr. Wayne N. Mathis The Hon. James A. McClure (McClure for U.S. Senator Committee) Mr. and Mrs. William P. McChure Mrs. Priscilla M. McDougal Mr. Terence McInerney Mr. and Mrs. Arnold B. McKinnon Mr. Paul Mellon Mr. and Mrs. John R. Menke Metropolitan Center for Far Eastern Art Studies Mexican Government Tourism Office Dianne and Kenneth Miller Mr. George Miller Mrs. Madge R. Minton Mitsui & Co. (U.S.A.) Mr. and Mrs. Peter Monrose Mr. and Mrs. Charles Moore Morgan Stanley Dean Witter & Co. Ms. Justine Simoni Mullet Mysdyscs Inc. National Association of Postmasters of the United States NEC America, Inc. Dr. Dan H. Nicolson Dr. and Mrs. Stanton P. Nolan

Norfolk Southern Corporation Northwest Mining Association Mr. Alvin F. Oien Ir. Ounalashka Corporation Ms. Machiko Oyama and Mr. Toshihiko Okoshi Pasadena Art Alliance Mr. and Mrs. Frank H. Pearl Mrs. Mary Pendleton Ms. Antoinette Peskoff Philip Morris Mr. Elliott I. Pollock Mrs. Lewis T. Preston Mr. Gregory Primm Ms. Judy Lynn Prince Dr. William C. Ramsay (C.B. Ramsay Foundation, Inc.) Dr. and Mrs. David Raphling Mr. Elmer Rasmuson Mrs. Carol Ray Mr. and Mrs. John Richards Ms. Carol S. Rodricks Mrs. Yvonne Roth Dr. Marietta Lutze Sackler Mr. and Mrs. David Saity Mr. Robert Schaeffer Mr. Gary Schenk and Ms. Betty Anne Schreiber Dr. and Mrs. Rolf G. Scherman Mr. and Mrs. Iwao Setsu (Setsu Gatodo Co., Ltd.) M. Sigmund & Barbara K. Shapiro Family Fund Mr. and Mrs. Paul Shatz Dr. and Mrs. Robert L. Sherman Mrs. Richard E. Sherwood Mr. and Mrs. James Shinn Mr. and Mrs. Jeffrey R. Short Ir. Mr. and Mrs. Dominic F. Shorting Mr. and Mrs. Manuel Silberstein Mrs. John Farr Simmons Mr. and Mrs. Walter A. Simmons Mr. and Mrs. H. Robert Slusser Mr. and Mrs. E. Maynard

Smith

Mr. and Mrs. Kenneth L. Smith Mr. Theodore R. Stanley (Theodore & Vada Stanley Foundation) Mr. Henry M. Strong Dr. J. Mark Sublette Riley K. Temple, Esq. Mr. B. Ray Thompson Jr. Dr. and Mrs. F. Christian Thompson Ms. Judith C. Thompson Lady Judith Ogden Thomson Mr. and Mrs. Clayton Timmons TRW. Inc. Tupperware Turner Broadcasting System Inc. Ms. Virginia Ullman Ms. Ellen Van Dernoot Mr. Jerry D. Vanier Beatrix and Ladislaus von Hoffmann Col. Harold Vorhies Mr. Steven C. Walske Walt Disney World Company Mr. and Mrs. Jeffrey N. Watanabe Mr. and Mrs. Guy Weill The Hon. Caspar W. Weinberger Mr. Edward A. Weinstein (Edward A. and Sandra R. Weinstein Philanthropic Fund) Mr. Julius Wile Mr. and Mrs. Norman C. Willcox Mr. and Mrs. Wallace S. Wilson Mr. Paul Wolk Wright Machine Tool Company Inc. Zoo Atlanta Mr. and Mrs. Benjamin Zucker (Lotty Zucker Foundation)

Smithsonian Corporate Membership Program

The Smithsonian Corporate Membership Program is a national initiative through which corporations provide unrestricted support to Smithsonian education, research, and exhibition initiatives.

Proud Partners of the 150th Anniversary Celebration

Discover® Card Intel Corporation MCI Communications Corporation Trans World Airlines, Inc.

Corporate Members

ABC, Inc. American Investments Holding USA Anheuser-Busch Companies ARCO AT&T Bayer Corporation BellSouth Corporation Booz, Allen & Hamilton, Inc. **BP** America Bristol-Myers Squibb Co. The Capital Group Companies, Inc. CH2M Hill Christie's, Inc. The Coca-Cola Company Concert Management Services, Inc. Daimler-Benz A.G. DataWorks The Walt Disney Company DuPont EQUANT Network Services, Inc. Exxon Corporation Ford Motor Company The Freeman Companies General Electric Company

Global One Goldman, Sachs & Co. Hitachi Limited Hoechst Marion Roussel, Inc. Hunter Engineering Company The Jaques Admiralty Law Firm S.C. Johnson & Son, Inc. Joseph E. Seagram & Sons, Inc. The Kansai Electric Power Company, Inc. KPMG Peat Marwick LLP Lee Enterprises, Inc. Litton Industries Liz Claiborne, Inc. Mars Incorporated Marubeni Corporation Met Life Mitsubishi Public Affairs Committee Mobil Corporation **NEC** Corporation Nestle Food Services New York Lawyers for the Public Interest Novartis Corporation Pfizer Inc The Phillips Group Pricewaterhouse Coopers Raytheon Company SBC Communications, Inc. Skadden, Arps, Slate, Meagher & Flom LLP Sony Corporation of America Southern Company Sprint Riggs Bank N.A. Texas Instruments The Tokyo Electric Power Company Toyota Motor Sales, U.S.A., Inc. U.S. Bank Xerox Corporation

James Smithson Society

James Smithson Society members share a deep commitment to the dynamic unfolding of James Smithson's vision. The society's dues and special gifts provide unrestricted support for the Smithsonian's research, exhibitions, and educational programs.

Endowed Life Members

Anonymous Pearl Bell and Col. Billie G. Matheson, USAF Ret. Karen and Edward Burka Ms. Ruth Boyer Compton Mr. and Mrs. Dean S. Edmonds Mr. Daniel D. Gilbert Mrs. Alton B. Grimes William Logan Hopkins Richard and Elaine Kaufman Lt. Col. and Mrs. William K. Konze Gilbert and Jaylee Mead Anton H. Rosenthal and Ruth E. Ganister Catherine F. Scott Shelby Shapiro Mr. J. Henry Sheffield Mrs. Virginia Sheffield Mrs. Shirley P. Sichel

Annual Members

\$10,000 or more

The Eberly Foundation Mr. Albert H. Gordon Ms. Lumina Greenway Mrs. Roy Johnson Meriam McNiel C. Wesley and Jacqueline Peebles

\$5,000 or more

Mrs. Robert Amory Jr. Ms. Nancy L. Connor Mr. and Mrs. James C. Day Therese and I. Michael Heyman Mr. Mark Miller Mr. and Mrs. Michael A. Moran Mr. and Mrs. Charles L. Poor Philip and Elizabeth Reed Mr. and Mrs. John Watts Roberts Mr. and Mrs. Paul M. Shatz Betty Rhoads Wright

\$2,000 or more

Mrs. August Ackel Mr. Terry L. Albertson Miss Barbara Anne Arnes Mr. and Mrs. Paul M. Anderson Mr. Leonard Andrews Mr. and Mrs. Rudolph Arkin Mr. William Arndt Mrs. Jack R. Aron Ms. Barb Audiss Mr. Robert J. Barker Mr. E. William Barnett J.F. Barre Rhoda and Jordan Baruch Jonathan Baum Albert Beekhuis Foundation Mr. and Mrs. Michael B. Beeman Mr. and Mrs. James M. Beggs Mr. Michael E. Bershaw Mr. Michael D. Bielucki The Hon. and Mrs. Robert O Blake Mr. John H. Blazek Mr. and Mrs. James A. Block Mr. and Mrs. William J.D. Bond I.A. Boorman Mrs. Howard M. Booth Mr. Bennett Boskey Ms. Margaret L. Bourgerie Col. Donald S. Bowman Ms. Rebecca A. Bowman Charles and Fleur Bresler Mr. Alfred Pope Brooks Mrs. Keith S. Brown Mr. J. Kevin Buchi and Dr. Kathleen Buchi George E. and Clare M. Burch Dr. Edwin W. Burnes Ms. Alice Green Burnerte The Hon. George H.W. Bush and Mrs. Bush Mrs. Helen Cabell and Christine Cabell Mr. Kenneth S. Cameron Phyllis H. Carey

Mr. Donald W. Carl Mr. William Carlebach Mae Casner Dr. Jonathan L. Chang Col. and Mrs. George E. Chapin Ir. Ms. Li Chu Mr. and Mrs. Ernest H. Cockrell Dr. and Mrs. David A. Cofrin Melvin and Ryna Cohen Mr. and Mrs. Richard Cooley Ms. Florence Corder-Witter Ms. Jean Coyne Mrs. Carole D. Crocker Gretchen Smith Crow Mrs. Joseph H. Davenport Jr. Mr. and Mrs. Barry and Nora Davis Mr. and Mrs. Charles Alfred Davis Anna M. Day Kathleen and Eugene De Falco Ms. Ann Demitruk Mrs. Deborah J. Denefrio Geert M. DePrest and Laura Travis-DePrest Mr. and Mrs. Desi DeSimone Mr. and Mrs. Charles J. DiBona Douglas Dillon Mr. and Mrs. Ralph Dixon Mr. and Mrs. Wesley M. Dixon Jr. Norbert and LaVerne Doligalski Dr. William H.L. Dornette Ms. Diane M. Dudley Mr. and Mrs. Charles W. Duncan Jr. Barton D. and Debra J. Eberwein Rear Adm. (Ret.) and Mrs. Edward H. Eckelmeyer Mr. and Mrs. Robert K. Edson Miss Babs Eisman Mr. and Mrs. James A. Elkins Jr. Mr. and Mrs. Richard England Col. Charles O. Eshelman Dorothy D. Eweson

Mr. and Mrs. Michael L. Favad Dr. and Mrs. James J. Ferguson Ir. Mr. Adrian E. Flatt, M.D., F.R.C.S. Mary and Henry Flynt Mr. Philip E. Forest Ms. B.J. French Mr. Cary J. Frieze and Mrs. Rose Frieze David Morgan Frost Virginia Sugg Furrow Mrs. L.J. Futchik Mrs. J. Gardiner Mr. Phil Gardner Michael and Susie Gelman Mary O'Brien Gibson Bonnie Gillespie Mr. and Mrs. David Ginkel Dr. and Mrs. Clarence Glenn Mr. Devon Graham George C. and Erna M. Graham Ms. Judith Grass Ms. Catharine Graton Mrs. John B. Greene Ms. Marion E. Greene Mrs. Ann Y. Grim Calvin and Marilyn B. Gross Mr. and Mrs. Patrick W. Gross Bruce Guthrie Mr. Corbin Gwaltney Leslee Hackenson and Roger Allers Adele and Donald Hall Stephen and Jocelin Hamblett Mrs. Gloria Shaw Hamilton Robert V. and Rita S. Hanle Mr. Niles Hanson Ms. Helen Leale Harper Jr. Mrs. Jane Hart Mr. and Mrs. Max E. Hartl Dr. and Mrs. Herbert A. Hartman Jr. Miss Nancy A. Haynes Philip and Maureen Heasley The Hon. and Mrs. John Hechinger Sr. Mr. and Mrs. David Heebner Robert M. and Gladys F. Henry Dr. and Mrs. David C. Hess

Mr. and Mrs. Stephen O. Hessler Mrs. Virginia L. Hickman Mrs. Gloria Hidalgo Clara Jane Hill Mr. James T. Hines Jr. Mr. and Mrs. Stephen A. Hopkins Mr. and Mrs. John Hrncir Mr. Tommy D. Hughes Mrs. Peter D. Humleker Jr. R. Bruce Hunter Mrs. Jane Hunter-MacMillan Mr. L.R. Ingels John B. Ippolito, Diane M. Laird-Ippolito Drs. Jay and Mary Anne Jackson David A. Jacques David and Pat Jernigan Mr. and Mrs. Arthur W. Tohnson Mr. and Mrs. Richard J.V. Johnson Mrs. Roy Johnson Mr. and Mrs. Samuel C. Johnson W. Johnson Mr. Robert A. Jones Mr. and Mrs. Stanley B. Jones Mr. Sheldon T. Katz Mr. and Mrs. Jack Kay Mr. Stephen C. Keeble Mr. Neil E. Kelley Ms. Jettie Kelly Anne B. Kennedy Dr. Rebecca Kenyon Mrs. Virginia W. Kettering Mr. Don Kiest Mr. and Mrs. Clark H. Kilhefner Dr. William M. King Mr. and Mrs. Norman V. Kinsey Mr. Edward J. Kirby Scott A. Kisting Mr. James M. Kline Ms. Elizabeth Gelman Kossow Robert E. and Elizabeth W. Krueger Mr. Bruce LaBoon Mrs. James S. Lacock Judge Marion Ladwig

Edward and Beverley Lammerding Dr. and Mrs. Emanuel Landau Mrs. Stephens J. Lange Mrs. Marge Langworthy Mrs. William Leonhart Mr. and Mrs. William B. Levin Jr. Mrs. Jean C. Lindsey Mr. Bud Lindstrand Mr. Carl A. Lohmer Charles E. Long, EVP and Secretary, Citicorp/Citibank Mr. Frank J. Lukowski Dr. Steven Lunzer Edmund C. Lynch Jr. Mr. and Mrs. Fred W. Lyons Jr. Mr. and Mrs. A. Bryan MacMillan Mr. and Mrs. Richard L. Mahfouz Mr. and Mrs. Forrest E. Mars Jr. Ms. Virginia C. Mars Mary Martell and Paul M. Johnson Mr. Frederick P. Mascioli Maj. Gen. Raymond E. Mason Jr. and Margaret E. Mason Dr. Wayne Mathews Mr. and Mrs. Edward J. Mathias Ms. Vivian McCrary Mr. Clayton McCuistion Mr. and Mrs. John D. McLean Mrs. G. Walter McReynolds Scott McVay Mr. Paul Mellon Sue B. and Eugene Mercy Jr. Mr. and Mrs. Richard M. Merriman His Excellency Sir Christopher Meyer Mr. and Mrs. Randall Meyer Mr. Ewing H. Miller and Ms. Donna Ari Mr. George H. Miller Mr. and Mrs. Herbert S. Miller Jerry M. Miller and Dorothy T. Miller

Mr. and Mrs. Olan Mills II Mr. Peter Monrose Mr. and Mrs. James Robert Montgomery Mr. Robert E. Mortensen Mr. and Mrs. Kenneth F. Mountcastle Dr. J. Andrew Mulholland Mr. and Mrs. Patrick Munroe Mr. and Mrs. John Murphy Mr. and Mrs. Raymond E. Murray Mr. H. Duarie Nelson Mrs. Frances Newman Mary L. Nucci and Abraham Abuchowski Mr. and Mrs. Charles O'Connell Dr. and Mrs. J. Dennis O'Connor James D. Oglevee and Susan Marie Halliday Beverly H. and William P. O'Hara William and Jean O'Neill Mr. and Mrs. Steven F. Paes Christine M. and Gregory J. Parseghian Mrs. Jefferson Patterson Mr. and Mrs. Henry M. Paulson Jr. Peacock Foundation, Inc. Mr. Scott D. Pearson and Ms. Diani Farrell Mrs. Mary V. Pendleton Mr. J. Liddon Pennock Jr. John L. and Carolyn J. Peterson Mr. and Mrs. Anthony G. Petrello George and Sally Pillsbury Mr. John Pitts Jane P. Plakias Ms. Carol Pochardt Mr. and Mrs. Leon B. Polsky/The Polsky Foundation Mr. and Mrs. Henry Posner Jr. The Rev. and Mrs. Charles Price Mr. and Mrs. Whayne S. Quin Claire and John Radway Mr. Elmer Rasmuson Mr. Dan Rather

Mrs. Carol H. Ray Mr. and Mrs. Michael F. Reagan Mr. and Mrs. Edward H. Rice Mr. Peter B. Ridder Mrs. Carlyn Ring Ms. Gay A. Roane Mrs. Dorothy Hyman Roberts Ms. Nancy J. Robertson and Mr. Mark N. Cookingham Mr. Arthur Rock Senator and Mrs. John D. Rockefeller IV Mrs. I. Alfred Rosenbaum Jr. Mrs. Yvonne W. Roth Marva Rowan Ms. Marcia Rubenstein Mr. and Mrs. Marcos Russek Mr. William R. Salomon Vicki and Roger Sant Mr. Fayez Sarofim Albert and Thelma Sbar Ambassador James H. Scheuer and Emily Malino Scheuer Mr. and Mrs. Douglas R. Scheumann Roger P. and Nancy L. Schlemmer Mr. and Mrs. Harold J. Schnitzer Elizabeth and Edwin Schreiber Frank and Emily Scott Mrs. Robert D. Scott Mr. and Mrs. S. Norman Seastedt Mr. and Mrs. David M. Shapiro Mr. and Mrs. Marc J. Shapiro Mr. Winslow T. Shearman Ms. Virginia B. Shimer Allan E. Shore Mr. and Mrs. Alan B. Showalter Mr. Frank Shrontz Mr. Charles Siegel Simpson PSB Fund Ms. Tammy Sisson Mrs. David E. Skinner Dr. and Mrs. Harvey C. Slocum Jr. Gretchen Smith Crow Dr. Frank O. Smith

Gen. and Mrs. William Y. Smith Mr. and Mrs. Michael R. Sonnenreich Mr. and Mrs. John L. Sparks Harriet and Edson Spencer Mr. and Mrs. John Stack Mr. Bernie Stadiem Mr. Sydney Staffin Mr. and Mrs. Malcolm T. Stamper Dr. Marjorie L. Stein Ann C. Stephens Mr. and Mrs. William C. Sterling Jr. Mr. and Mrs. Joseph T.J. Stewart Mr. and Mrs. Franz T. Stone Mr. Roy T. Strainge Mr. Ernest C. Swigert Mr. and Mrs. Charles W. Tate Ms. Marjorie E. Thomas Mr. Randell C. Thomas Mr. Glenn F. Tilton Mr. Stephen Tilton Mrs. Helen Brice Trenckmann Mrs. Alice Truland Mr. James F. Turner Mr. Mike Turner Ms. Evelyn Twigg-Smith Mr. M.S. Ursino Col. and Mrs. W.G. Van Allen Mr. and Mrs. L. Von Hoffmann Col. Harold W. Vorhies Mr. and Mrs. Robert Waidner Mr. and Mrs. Steve Wasserman Mr. James R. Webb Craig and Catherine Weston Miss Winifred E. Weter Mr. Lawrence J. Whelan and Dr. Deborah Black Mr. and Mrs. Ben White Ms. Beverly White Mr. and Mrs. Donald W. White Mr. John C. Whitehead Mr. and Mrs. Kenneth Wilkerson Mr. Wesley S. Williams Jr.

Mr. and Mrs. Michael T. Willis Mr. and Mrs. Herman T. Wilson Jr. Ms. Kirsten Wilson Dr. and Mrs. Ralph Wilson Mr. and Mrs. Wallace S. Wilson Joseph G. and Michael M. Wirth Mr. and Mrs. Robert W. Womble Mrs. Jane Ludwig Worley Mr. and Mrs. Richard E. Wright Ms. Alice Wrobleski Mrs. Charlotte S. Wyman Ellen and Bernard Young Mary L. Zicarelli Mrs. Nancy Behrend Zirkle Mr. and Mrs. Sidney S. Zlotnick

Life Members

Mr. and Mrs. Joe L. Allbritton David K. Anderson Mr. and Mrs. William S. Anderson Mr. Ronald P. Anselmo Mr. Scott R. Anselmo Dr. and Mrs. Herbert Avelrod Richard R. Bains Mr. and Mrs. F. John Barlow Mrs. Donald C. Beatty Mrs. Henry C. Beck Jr. Mrs. Ralph E. Becker Mrs. Clav P. Bedford Mrs. Edward B. Benjamin Mrs. John A. Benton Dr. and Mrs. William B. Berry Dr. and Mrs. B.N. Bhat Mr. Richard A. Bideaux Edwin W. Bitter Dr. and Mrs. William Beaty Boyd Lee Bronson Dr. Ruth D. Bruun Mrs. George E. Burch Mrs. Arthur J. Burstein Mrs. Hyman Burstein

Mr. and Mrs. Maxwell Burstein Dr. and Mrs. Benjamin H. Caldwell Jr. Lawson J. Cantrell Mr. Allan Caplan Mrs. George H. Capps Carol Chiu Mr. and Mrs. Thomas G. Cleveland Dr. and Mrs. George L. Compton Dr. and Mrs. Roger Cornell Dr. and Mrs. E.J. Cunningham Dr. Bruce E. Dahrling II M.D. Mr. Sam DeVincent Mrs. Peter N. Delanoy Mr. John R. Doss Mr. and Mrs. Willard D. Dover Edward R. Downe Jr. Dr. Dale B. Dubin Mr. and Mrs. Willis H. Dupont Mr. Joseph M. Erdelac Thomas M. Evans Dr. and Mrs. Dan Feriozi Mrs. Walter B. Ford II Dr. and Mrs. Phillip Frost Mrs. Edwin Fullinwider Dr. and Mrs. Lawrence Andrew Funt Mrs. George Garfield Dr. and Mrs. Lamont W. Gaston Mr. Kirkland H. Gibson C. Paul and Pat S. Gilson Mr. and Mrs. Stephen P. Gott Mrs. W.G. Gould Doris Stack Greene Jerome L. and Dawn Greene Mrs. Chaim Gross Mrs. Melville Hall Mr. and Mrs. Don C. Harrold Mrs. Lita Annenberg Hazen Mr. and Mrs. Wayne C. Hazen Edward L. Henning Mrs. Joseph Hirshhorn Mrs. James Stewart Hooker Mr. Paul Horgan Dr. and Mrs. Howard Ihrig Mr. and Mrs. George H. Jacobus

Mr. and Mrs. Jacob Kainen Mr. and Mrs. Donald E. Kastner Dr. Annette Kaufman Dr. and Mrs. Arthur A. Kirk Peter Merrill Klein Blanche M. Koffler Mrs. Lewis Kurt Land Mrs. David Landau Dr. Maury P. Leibovitz Mr. and Mrs. L.E. Leininger Harry E. and Jane F. Lennon Mrs. Sara L. Lepman and Mr. Joshua M. Lepman Mr. and Mrs. John Levey Mr. and Mrs. Robert Levey Mr. and Mrs. Sydney Lewis Mrs. Jack Lord Adele Lozowick Mrs. Robert Magowan Dr. and Mrs. Leo J. Malone Mr. and Mrs. Richard A. Manoogian John A. Masek Mrs. Vincent Melzac Mr. and Mrs. Jack L. Messman Mr. W.A. Moldermaker Dr. and Mrs. Walter A.H. Mosmann Mr. and Mrs. Joe H. Mullins Dr. and Mrs. Marvin Murray Mr. Mortimer L. Neinken Dr. Melanie Newbill Mrs. Henry K. Ostrow Mrs. Rudolf Pabst The Hon. and Mrs. G. Burton Pearson Mr. and Mrs. Wallace R. Persons Mr. and Mrs. Edward M. Pflueger Mrs. John Alexander Pope Mrs. Abraham Rattner Kare Rinzler The Hon. Thomas M. Roberts The Hon. Martin J. Roess Dr. and Mrs. Richard G. Rogers Jr. Mrs. Helen Goodwin Rose Mr. Arthur Ross Mr. and Mrs. Peter G. Sachs Mr. Harry I. Saul Mrs. Janos Scholz

Mr. and Mrs. Morton Silverman Mr. and Mrs. Edward J. Slatterv Mrs Helen F Sloan Mr. and Mrs. Robert H. Smith Mr. and Mrs. Sherwood Smith Mrs. Otto Spaeth Earl and Trudy Spangler Mr. Stuart M. Speiser Mr. and Mrs. Harvey G. Stack Mr. and Mrs. Norman Stack Mr. and Mrs. Norman H. Stavisky Dr. and Mrs. Leo F. Stornelli Mr. and Mrs. E. Hadley Stuart Jr. Mrs. Hans Syz Mrs. Katherine S. Sznycer Drs. Yen and Julia Tan The Ruth and Vernon Taylor Foundation Mrs. David J. Tepper Mr. Richard W. Thomssen Mr. Bardyl R. Tirana Mr. Glenn O. Tupper Lillian Scheffres Turner Dr. and Mrs. Adolfo Villalon Dr. and Mrs. Francis S. Walker Mr. and Mrs. C.C. Wang Dr. and Mrs. Thomas E. Whitelev Mr. Leonard John Wilkinson Mr. and Mrs. Thomas I. Williams Mr. Archibald M. Withers Mr. and Mrs. Laurence C. Witten II Mrs. David O. Woodbury Mr. Stanley Woodward Mr. and Mrs. James Wu Mr. and Mrs. Barry Yampol Bequests

We remember with appreciation the following generous donors whose gifts through bequests from their estates were received this year. Leo L. August Sidney Bates Franz H. and Luisita L. Denghausen Richard T. Evans Lydia Heiniger Ianet W. Johnson Helen Katchmar John Benton Kennedy Jr. Sterling H. Kleiser Theodore A. Krieg Ru Lennox Lang Dario A. Macchi Constance Loudon Mellen Henry Blackman Plumb Ellen Pulvermann Beatrice Rubenstein Merriam P. Sargent Miriam K. Schreiter Frances Schillinger Shaw George Sisley Albert Snyder Ellwood C. Stang Ferne R. Warren Annie B. Wetmore Smithsonian

Smithsonian Washington Council

The Smithsonian Washington Council, an initiative established last year by the Secretary and regional leaders, is dedicated to expanding the Smithsonian's relationship with the entire Washington region.

Mr. R. Robert Linowes, Chairman Ms. Jin-Hyun Weatherly Ahn Mr. Oliver T. Carr The Hon. Elaine Chao Mr. Emilio Fernandez Mr. Donald E. Graham Mr. J. Roderick Heller III Mrs. Kathleen Hough Mr. James V. Kimsey Mr. Mario M. Morino Mrs. Irene Pollin Mr. John R. Risher Jr. Mrs. Vicki Sant Mr. Ladislaus von Hoffmann

Smithsonian Legacy Society

The Smithsonian Legacy Society honors our friends who carry on James Smithson's tradition by making legacy gifts to the Smithsonian, such as bequests, charitable gift annuities, charitable remainder trusts, pooled income fund gifts, gifts of retirement and life insurance plans, and other giving vehicles.

Founding Chairman

Mrs. Gloria Shaw Hamilton

Founders

Anonymous

Mr. H.V. Andersen Mr. and Mrs. William S. Anderson Mrs. J. Paul Austin George and Bonnie Bogumill Mr. and Mrs. Mark Boone Mrs. Agnes M. Brown Mr. Michael W. Cassidy Fenner A. Chace Ir. Mr. Harry R. Charles Jr. Miss Jean M. Chisholm Mr. Earl Clayton Mr. Lawrence G. Clayton The Hon. Barber B. Conable Ir. and Mrs. Conable Ms. Patricia Daniels Mr. Dennis O. Dixon Mr. and Mrs. William C. Durton Mr. and Mrs. Arthur W. Gardner Mrs. Aileen Garrett Mr. Gilbert W. Glass Mr. Charles Goldsberry Mr. Llovd E. Herman Dr. and Mrs. David C. Hess Frank and Lisina Hoch Miss K.T. Hoffacker Mr. and Mrs. A. William Holmberg

Dr. and Mrs. Lee Houchins Mr. John R. Huggard Dr. and Mrs. James C. Hunt Mr. Joseph E. Johnson Miss Narinder K. Keith Miss Rajinder K. Keith Lt. Col. William K. and Mrs. Alice S. Konze Ms. Lee Kush Dr. Geraldine E. La Rocque Mrs. James Spencer Lacock Mr. and Mrs. Bruce Leighty Ms. Eleanor L. Linkous Mr. and Mrs. Burton Lowe Mr. Frank J. Lukowski Mr. Ronald W. McCain Mr. and Mrs. Richard B. McCrarv Ms. Lowen McKay Mr. and Mrs. Carl Mikuletzky Mrs. Jane R. Moore Mrs. Jefferson Patterson Mr. and Mrs. David S. Purvis Mr. and Mrs. Frank K. Rabbitt Mr. and Mrs. Galen B. Rathbun Sanae I. and Douglas F. Reeves Mr. and Mrs. Robert F. Rick George W. and Margaret P. Riesz Mr. Stuart W. Rosenbaum Lloyd G. and Betty A. Schermer

Allan E. and Carol T. Shore Mrs. Warren Sichel Mary F. Simons Dr. Barbara J. Smith Kathy Daubert Smith Mrs. Margaret Sokol Irene Sorrough Mr. Charles W. Speck Bernie Stadiem Mr. Kevin B. Stone Mr. and Mrs. Joseph T.N. Suarez George D. and Mary Augusta Thomas Dr. and Mrs. F. Christian Thompson John and Ellen Thompson Jeffrey and Diane Tobin Mr. David E. Todd Ms. Patty Wagstaff Miss Catherine M. Walsh Dr. and Mrs. Richard Ward Mr. and Mrs. Charles Watts Mrs. Harriet K. Westcott Mr. and Mrs. Donald W. White Mrs. Laurence I. Wood Mr. and Mrs. Robert Zapart Mr. and Mrs. Robert S. Zelenka Dr. P. Joseph Zharn Mrs. Michael N. Zirkle

Memorial and Commemorative Gifts

The following were so honored by their families and friends.

Mr. and Mrs. Isaac Behrend Mr. and Mrs. William I. Behrend Jose Cuatrecasas Laurence E. Fleischman Michael Kalinoski Frederick Krieg Jerome H. Lemelson Richard Louie James F. Lynch John T. Lyons Enid Morse Charlotte K. Ramsay Philip Ravenhill Frances Schillinger and Joseph and Elsa Snyder J.T. Vida William J. Woolfenden

Donors of In-Kind Support

Adobe East Gallery Air Jamaica B. Smith's Restaurant Nathan Scott Begay British Airways British West Indies Airways (BWIA) Embassy of Canada Cartier, Inc. CBS Radio Continental-Anchor, Ltd. Coors Brewing Company Delta Air Lines, Inc. Joyce Growing Thunder Fogarty Juanita Growing Thunder Fogarty Gallery 10, Inc. Glenn Green Galleries Hewlett-Packard Co. Rhonda Holy Bear Delbridge Honanie Yazzie Johnson Kinko's Corporate Jan Loco National Business Aviation Association Angie Reano Owen PIA (Pakistan International Airlines) Radio ONE The Recording Industries Music Performance Trust Funds The Scale People, Inc. Schieffelin & Somerset Co. Embassy of Spain Steelcase, Inc. Sunset Hills Foliage Tamiya America, Inc. The Embassy of Trinidad and Tobago Mark Tupper Twin Rocks Trading Post and Blue Mountain Trading Post United Airlines U.S. Airways Group Inc.

Financial Report

Rick Johnson, Chief Financial Officer

The Smithsonian Institution receives funding from both federal appropriations and nonappropriated trust sources. Nonappropriated trust funds include all funds received from sources other than direct federal appropriations. These other sources include gifts and grants from individuals, corporations, and foundations; grants and contracts from federal, state, or local government agencies; earnings from short- and long-term investments; revenue from membership programs; and revenue from sales activities, such as *Smithsonian* magazine, museum shops and restaurants, mail order catalogues, and licensed products.

Federal appropriations provide funding for the Institution's core functions: caring for and conserving the national collections, sustaining basic research on the collections and in selected areas of traditional and unique strength, and educaring the public about the collections and research findings through exhibitions and other public programs. Federal appropriations also fund a majority of the activities associated with maintaining and securing the facilities and with various administrative and support services.

Smithsonian trust funds allow the Institution to undertake new ventures and enrich existing programs in ways that would not otherwise be possible. These funds provide the critical margin of excellence for innovative research, building and strengthening the national collections, constructing and presenting effective and up-to-date exhibitions, and reaching out to new and underrepresented audiences. In recent years, the Smithsonian has also begun to rely in part on trust funds for the funding of major new construction projects.

The following sections describe the external environmental factors affecting the Institution's general financial condition, its financial status, and its planned response to changing conditions; financial results for fiscal year 1998; and organizational and financial measures being taken to ensure the continued fiscal health of the Institution.

Financial Status and Prospects

In fiscal year 1998, the Smithsonian took major steps to address the increasing financial needs of the Institution. Congress has been very supportive of the Institution in its provision of federal appropriations for core functions and the maintenance of facilities. This support, however generous, cannot be expected to sustain the growing costs of new exhibitions and programs that allow the Institution to continue as a world-class center for research and education. Consequently, in fiscal year 1998, the Institution focused on restoring and strengthening its revenue-generating activities, as well as on its fund-raising efforts.

Over the past several years, income from the Institution's business activities has remained relatively static. In response, the Institution made two critical decisions. The first was to discontinue the commercial activities of Smithsonian Press/Smithsonian Productions, transferring the profitable ventures to Smithsonian Retail and establishing the University Press division as a programmatic function of the Institution under the auspices of the Provost with the name Smithsonian Institution Press.

As an important step to promote the long-term growth of the Institution's business activities and ensure its financial health, the Board of Regents approved a new approach for managing those ventures. Major elements of this new approach include the creation of a separate organization within the Institution to increase the Smithsonian's major business activities, the creation of a separate board of directors to help guide the new organization, and the recruitment of a senior-level business executive to be the new organization's chief executive officer. The goal of the new approach is to double the annual level of business-generated trust dollars available for the Institution within the next five years.

Fund-raising received continuing attention as a critical element in the improvement of the Institution's financial position. Work was begun in earnest on the Smithsonian's capital campaign. An overarching strategy has been developed and a budget established to fund the campaign. Currently in its "quiet phase," the campaign has already achieved substantial results. In fiscal year 1998, donor and sponsor support was at its highest level in the Institution's history.

Fiscal Year 1998 Sources of Net Revenues

- Gov't Grants & Contracts (9.9%)
- Donor/Sponsor (15.1%)
- Federal Appropriations (68.1%)
- General Trust (6.9%)

Fiscal Year 1998 Results

Revenues received by the Institution in fiscal year 1998 from all sources totaled \$774.5 million. Revenue from federal appropriations accounted for \$393.0 million, and nonappropriated trust funds provided an additional \$381.5 million. When adjusted to remove auxiliary activity expenses of \$197.0 million, net revenues totaled \$577.5 million. The chart below reflects revenues by source and broad purpose of use.

Fiscal Year 1998 Sources of Gross/Net Revenues

	Gross Revenues (\$ thousands)	Net Revenues* (\$ thousands)	Percent Net Revenues (%)
Operations			
Federal Appropriations	393,032	393,032	68.
General Trust**	237,026	40,036	6.9
Donor/Sponsor**	87,081	87,081	15.1
Gov't Grants & Contracts	57,320	57,320	9.9
Total Sources for Operations	774,459	577,469	100.0

*Net of expenses related to revenue-generating activities, e.g., museum shops, restaurants, publications, etc.

**General trust is reduced from Table 1 by the Donor/Sponsored Contributions.

Operations (Tables 1 and 2)

Federal operating revenue of \$331.5 million provided the core funding for ongoing programs of the Institution. The fiscal year 1998 operating appropriation of \$333.4 million represented an increase of \$14.9 million from the fiscal year 1997 level. Total increases were \$15.7 million, with \$0.8 million in one-time funding being returned. Increases to cover certain uncontrollable costs included \$6.6 million to cover the cost of mandated pay and benefit increases, \$2.7 million for utility costs, and \$0.3 million for inflation for library materials. In addition, the following program increases were provided: \$1.2 million to fund operation of the Smithsonian Astrophysical Observatory Submillimeter Telescope Array, \$3.0 million for the National Museum of Natural History's East Court project, \$1.0 million for collections information systems, and \$0.9 million for other projects.

General trust revenue was \$270.6 million. Overall revenue levels in this category were up 3 percent over the prior year. Donor/sponsor revenue was up 8 percent, sales and membership revenue was up 5 percent, and other revenue was down 41 percent, primarily as a result of the closedown of 150th anniversary activities. Overall net revenue for auxiliary activities declined 9 percent. Major increases in net revenue for museum shops/mail order and concessions were offset by a loss for Smithsonian Press/Smithsonian Productions related to discontinuation of major portions of that operation.

Revenue from donor/sponsor designated funds totaled \$53.5 million. Donor/sponsor revenue in this category increased by 123 percent over the prior year as a result of intensified fundraising activities and the development of and focus on new strategies. In addition, 150th anniversary activities had a positive impact on overall giving. Major gifts and grants included \$20 million from the Kenneth E. Behring family to support exhibitions, public programs, and related activities at the National Museum of Natural History; \$5 million from the Pew Charitable Trusts to the National Museum of American History for the Star-Spangled Banner Preservation Project; and \$1.3 million from the Nippon Foundation to the National Museum of Natural History for the "Ainu: Spirit of a Northern People" project. The Smithsonian is especially grateful to its many friends in the private sector whose generosity contributed vitally to its work. The names of major donors are listed in the Benefactors section of this annual report.

In fiscal year 1998, the Institution recorded \$57.3 million in income from contracts and grants from government agencies, an increase of \$0.6 million over fiscal year 1997. Support from government agencies constitutes an important source of research monies for the Institution, while also providing the granting agencies access to Smithsonian expertise and resources. As in prior years, the majority of these funds were provided by the National Aeronautics and Space Administration for research programs at the Smithsonian Astrophysical Observatory. Other awards included \$1 million from the National Science Foundation for a program in science education developed by the National Science Resources Center and \$0.5 million from the Department of Energy for a study of carbon dioxide levels in selected ecosystems at the Smithsonian Tropical Research Institute.

Endowment (Tables 3, 4, and 5)

The Institution pools its endowment funds for investment purposes into a consolidated portfolio, with each endowment purchasing shares in a manner similar to shares purchased by an investor in a mutual fund.

The Investment Policy Committee of the Smithsonian's Board of Regents establishes investment policy and recommends the annual payout for the consolidated endowment. The Smithsonian's policies for managing the endowment are designed to achieve two objectives: to provide a stable, growing stream of payouts for current expenditures and to protect the value of the endowment against inflation and maintain its purchasing power. Current policy calls for an average payout of 4.5 percent of the average market value over the prior five years. The investment policy targets a real rate of return of 5 percent.

As depicted in the chart on page 279, the market value of the endowment decreased from \$600 million to \$580.9 million during fiscal year 1998, reflecting the market downturn in the last quarter of the fiscal year. New gifts and internal transfers totaled \$11.5 million, while the payout was \$19.7 million and fees were \$1.5 million.

The total return on the consolidated portfolio was (8.16) percent, reflecting the market downturn in the last quarter of the fiscal year. Returns rose again substantially as the market rebounded in the last months of calendar year 1998. At year's end, the Institution's portfolio was invested 64 percent in equities, 33 percent in bonds, and 3 percent in cash. The portfolio had 22 percent in foreign stocks and bonds and 78 percent in U.S. securities.

Construction and Plant Funds (Table 6)

In fiscal year 1998, the federal appropriations for construction were \$68.8 million. This amount included \$32.0 million for general repair, restoration, and code compliance projects throughout the Institution. With the support of Congress, the Institution continues to seek the \$50 million per year required to maintain systematic renewal of its physical plant. Funds earmarked for new construction, alterations, and modifications totaled \$36.8 million. Included in this amount is \$29.0 million for the Mall museum for the National Museum of the American Indian; \$3.8 million for renovations, repairs, and master plan projects at the National Zoological Park; and \$40 million for planning and design of the National Air and Space Museum Dulles Center.

Nonappropriated trust construction funds, also termed plant funds, totaled \$5.2 million. Approximately \$3.5 million supported construction of facilities for the National Museum of the American Indian; \$1.4 million supported renovation of the Cooper-Hewitt, National Design Museum; and \$0.3 million contributed to the reinstallarion of the Janet Annenberg Hooker Hall of Geology, Gems, and Minerals at the National Museum of Natural History.

Financial Position

The Smithsonian Institution's Statement of Financial Position presents the total assets, liabilities, and net assets of the Instirution. Total assets of \$1.5 billion far exceed total liabilities of \$394.0 million and are indicative of the financial strength of the Institution. During fiscal year 1998, the most significant change in the Institution's financial position was a \$41 million increase in debt to finance the Discovery Center at the National Museum of Natural History and a \$37 million increase in investments levels.

Financial Management

During the year, the Smithsonian's Office of Information Technology conducted an analysis of the Year 2000 software problem. That analysis indicated that for all major critical systems the Institution will be Year 2000 compliant. In one instance, software cannot be made compliant, but an alternative solution will be employed to solve the problem. At present, all major financial system software is warranted to be Year 2000 compliant. Nevertheless, the Institution will continue to conduct testing during fiscal year 1999 to confirm these findings.

Other financial management improvement initiatives undertaken in fiscal year 1998 included:

 A new database for sponsored project data that will increase the efficiency and effectiveness of managing sponsored projects. This database is also the source of critical financial measures for sponsored project activity that is distributed to senior management in weekly and monthly reports.

- Additional application modules for the Institution's Budget Management, Planning, and Policy System. This improvement has further automated the budget and planning process, eliminating duplication of data entry and reducing error rates.
- A system to facilitate use of a new travel credit card for employees. The system includes an enhanced ability for tracking and reporting activity. Use of the travel card will be greatly increased over use of the previous card.
- A new electronic fund transfer system for vendor payments and employee reimbursements. Most paychecks are already sent electronically. The system was scheduled to be launched on January 1, 1999.
- A major training effort for unit staff in procurement and contracting. This training is required to support the delegation of greater procurement and contracting authority to program units and to implement other changes to the procurement and contracting process.

Additional financial management improvement initiatives planned to start in fiscal year 1999 include the following:

- · Electronic routing of monthly financial reports
- Updating and streamlining of financial policies
- Automation of payroll data entry at the unit level
- Implementation of software to facilitate accurate preparation of travel authorization and voucher forms

Audit Activities

The Institution's financial statements are audited annually by KPMG LLP, an independent public accounting firm. The audit plan includes an in-depth review of the Institution's internal control structure. KPMG LLP Independent Auditor's Report for fiscal year 1998 and the accompanying financial statements are presented on the following pages. The Smithsonian's internal audit staff, part of the Office of Inspector General, assists the external auditors and regularly audits the Institution's various programs, activities, and internal control systems. The Audit and Review Committee of the Board of Regents provides an additional level of financial oversight and review.

In accordance with the government requirement for the use of coordinated audit teams, the Defense Contract Audit Agency, the Smithsonian Office of Inspector General, and KPMG LLP coordinate the audit of grants and contracts received from federal agencies.

Table 1. Source and Application of Institutional Resources for the Year Ended September 30, 1998 (in \$000s)

			Trust	Funds		
	Federal Funds	General Trust	Donor/ Sponsor Designated	Gove r nment Grants & Contracts	Total Trust Funds	Total FY 1998
REVENUE & GAINS: Federal Appropriations (see Note 1) Endowment Payout & Investment Income. Government Grants and Contracts Donor / Sponsor Sales and Membership Revenue Construction Other		15,582 33,570 213,109 8,335	6,524 46,987	57,320 	22,106 57,320 80,557 213,109 8,335	331,484 22,106 57,320 80,557 213,109 61,548 8,335
TOTAL REVENUE & GAINS	393,032	270,596	53,511	57,320	381,427	774,459
EXPENSES: Museums & Research Institutes: Anacostia Museum and Center for African American History and Culture Archives of American Art Arthur M. Sackler Gallery/Freer Gallery of Art Center for Folklife Programs & Cultural Studies Center for Materials Research and Education Cooper-Hewitt, National Design Museum. Hirshhorn Museum & Sculpture Garden National Air and Space Museum National Museum of African Art National Museum of American History — National Postal Museum. National Museum of Interican Indian. National Museum of Natural History — Museum Support Center National Portrait Gallery National Zoological Park Smithsonian Astrophysical Observatory Smithsonian Tropical Research Institute Total Museums & Research Institutes	4,318 7,339 18,654 512 13,313 38,324 3,170 4,592 18,914 24,352 3,123	702 123 5,664 1,080 111 2,795 1,827 2,742 520 1,699 2,154 93 1,494 6,391 452 1,349 6,439 359 2,152 38,146	$\begin{array}{r} 632\\ 677\\ 1,679\\ 548\\ 11\\ 992\\ 358\\ 2,843\\ 4\\ 1,439\\ 3,800\\ 4,972\\ 3,242\\ 2,509\\ 1\\ 396\\ 1,110\\ 1,599\\ 232\\ 1,112\\ 238,156\end{array}$		1,334 800 7,343 1,628 129 3,873 2,185 6,117 524 3,138 5,970 5,065 4,728 10,684 10,684 10,684 1 848 3,169 57,488 2,396 4,772 122,192	3,086 2,387 13,054 3,489 2,899 6,702 6,457 18,457 4,842 10,477 24,624 5,577 18,041 49,008 3,171 5,440 22,083 81,840 5,519 13,980 301,133
Education, Museum & Scholarly Services: Center for Museum Studies Education Exhibits Central Fellowships and Grants International Relations National Science Resources Center The Provost Smithsonian Institution Archives Smithsonian Institution Libraries Smithsonian Institution Traveling Exhibition Service Sponsored Projects	1,005 733 2,079	113 486 86 1,512 380 602 1,875 139 981 599 940	3 154 37 82 46 141 1,369 59 177 904	66 63 1,130 173 	116 706 123 1,594 489 1,873 3,417 198 1,158 1,503 940	$1,121 \\ 1,439 \\ 2,202 \\ 1,815 \\ 2,540 \\ 2,089 \\ 5,126 \\ 1,528 \\ 7,047 \\ 4,365 \\ 940 \\ 1,528 $
Total Education, Museum & Scholarly Services	18,095	7,713	2,972	1,432	12,117	30,212
Auxiliary Activities (Programmatic) America's Smithsonian Prior Year Annual Appropriations	1,564 10,647	101 1,611	171 708 —		272 2,319	1,836 2,319 10,647
Total Allocation of Facilities and Depreciation Expense		47,571 4,780	32,007	57,322	136,900 4,780	346,147 111,546
Total	316,013	52,351	32,007	57,322	141,680	457,693
Auxiliary Activities: Smithsonian Press / Smithsonian Productions. Smithsonian Magazines The Smithsonian Associates SI Retail Unit Auxiliary Activities		17,061 57,581 32,866 67,211 22,271			17,061 57,581 32,866 67,211 22,271	17,061 57,581 32,866 67,211 22,271
Total Auxiliary Activities (including Overhead)		196,990		_	196,990	196,990

Table 1. Source and Application of Institutional Resources for the Year Ended September 30, 1998 (in \$000s)-(continued)

			Trust	Funds		
	Federal Funds	General Trust	Donor/ Sponsor Designated	Gove r nment Grants & Contracts	Total Trust Funds	Total FY 1998
Administration: Membership and Development	31,085	2,494 5,748	16 239	(2)	2,510 5,985	2,510 37,070
Total Administration before Allocation of Facilities and Depreciation Expense	31,085	8,242	255	(2)	8,495	39,580
Allocation of Facilities and Depreciation Expense	15,855	360			360	16,215
Total Administration.	46,940	8,602	255	(2)	8,855	55,795
Facilities Services Depreciation Allocation of Facilities Services and Depreciation to Functions	31,191	841 4,299 (5,140)			841 4,299 (5,140)	92,271 35,490 (127,761)
Total Facilities Services and Depreciation			_		_	
TOTAL EXPENSES	362,953	257,943	32,262	57,320	347,525	710,478
Endowment Return Reinvested		(21,207) 737	(9,618)	_	(30,825) 737	(30,825) 737
Net increase (decrease) in net assets	30,079	(7,817)	11,631	_	3,814	33,893
Net assets, beginning of the year Net assets, end of the year	396,192 426,271		-		714,618 718,432	1,110,810 1,144,703

Note 1: Includes \$363 thousand revenue recognized as a permanent indefinite appropriation for the Canal Zone Biological Area Fund. Also, includes \$1,594 thousand revenue recognized in foreign currency for research projects in India.

Table 2. Auxiliary Activities, Fiscal Year 1998 (in \$000s)

	Sales and Membership Revenue	Gifts	Expenses	Net Revenue (Loss)
FY 1997	. 202,467	856	183,369	19,954
FY 1998: Central Auxiliary Activities Magazines The Smithsonian Associates Museum Shops/Mail Order* Concessions* Product Development and Licensing* Smithsonian Press/Smithsonian Productions	. 32,527 . 70,999 . 4,707 . 1,417	4	57,581 32,868 64,656 1,688 865 17,061	12,506 (341) 6,343 3,019 552 (7,327)
Unit Auxiliary Activities Air and Space Theater and Einstein Planetarium Cooper-Hewitt, National Design Museum Traveling Exhibition Service Other	. 1,229 . 722	42,037	3,302 776 727 17,466	1,858 457 (5) 1,102
TOTAL FY 1998	. 213,109	2,045	196,990	18,164

*The Business Management Office expenses were allocated to Museum Shops/Mail Order, Concessions, and Product Development and Licensing.

Table 3. Endowment and Similar Activities September 30, 1998 (in \$000s)

	Market Value
ASSETS: Pooled Consolidated Endowment: Cash and equivalents Other Receivable US Government and Quasi-Government Obligations Corporate Bonds and Other Obligations Common and Preferred Stocks Receivable for Securities Sold	5,270 836 55,731 169,779 373,146 15,902
Total Pooled Assets	620,664
Nonpooled Endowment and Similar Activities: Loan to U.S. Treasury in Perpetuity Promises to Give - Gifts Promises to Give - Charitable Trust Notes Receivable Gift Annuity Program Investments	1,050 7,387 2,565 245 447
Total Nonpooled Assets	11,694
Total Assets	632,358
LIABILITIES AND NET ASSETS:	
LIABILITIES: Payables for securities purchased Deferred Revenue—Charitable Trusts Annuity Payment Liability Total Liabilities	40,865 25 247 41,137
NET ASSETS Unrestricted Unrestricted Designated Temporarily Restricted Permanently Restricted	215,094 172,514 138,686 64,927
Total Net Assets	591,221
Total Liabilities and Net Assets	632,358

Table 4. Changes in Market Value of Endowment and Similar Activities September 30, 1998 (in \$000s)

	Unrestricted	Unrestricted Designated	Temporarily Restricted	Permanently Restricted	Total
Market Value Endowment - 10/1/97 Changes:	226,026	177,979	148,759	47,196	599,960
Gifts Internal Transfers Other		4,061	(1,929)	4,822 4,058	4,822 6,714
Interest and Dividends Market Value Depreciation Payout Manager's Fees	(10,093) (7,508)	4,568 (8,394) (5,700)	4,914 (8,477) (6,059)	459 (459)	17,555 (26,964) (19,726) (1,469)
Market Value Endowment - 9/30/98	215,094	172,514	137,208	56,076	580,892
Promises to Give . Charitable Trusts . Gift Annuities . Notes Receivable .			920 558 —	6,467 1,955 184 245	7,387 2,513 184 245
Market Value Endowment and Similar Activities - 9/30/98	215,094	172,514	138,686	64,927	591,221

Table 5. Endowment and Similar Activities September 30, 1998

			Market Values		
	Unrestricted	Unrestricted Designated	Temporarily Restricted	Permanently Restricted	Total Market Value
UNDESIGNATED PURPOSE - TRUE:					
Avery Fund (See Note 1)	450,207		_	49,334	499,541
Dodge, Patricia	218,246		_	960,518	1,178,764
Fund for the Future-Unrestricted (See Note 1)			_	931,677	1,101,360
Fund for the Future-Glass, Gilbert W. (See Note 1)			_	64,778	64,778
Fund for the Future-Schermer, Lloyd G. and Betty (See Note 1).		_	_	414,040	414,040
Fund for the Future-Holmberg, Ruth S. (See Note 1)	146,768		_	900,590 30,672	900,590 177,440
Hodgkins Fund (See Note 1)			_	202,927	596,944
Morgan, Gilbert B. and Betty J., Memorial	35,075			35.000	70.075
Мопоw, Dwight W.			_	100,000	925,823
Mussinan, Alfred				38,990	270,750
Olmsted, Helen A.			_	1,000	9,451
Poore, Lucy T. and George W. (See Note 1)	1,736,562	_		288,941	2,025,503
Porter, Henry Kirke, Memorial	3,128,562 10.051		_	290,162	3,418,724
Sanford, George H. (See Note 1) Smithson, James (See Note 1)			_	2,706 229,831	12,757 433.256
Smithson Society, James (See Note 1)			_	1,214,860	1,492,027
		_	_		
Subtotal	7,835,797	_	-	5,756,026	13,591,823
UNDESIGNATED PURPOSE - QUASI:					
Dodge, Patricia	282,583	-	_	_	282,583
Ettl, Charles H.			-	-	2,077,841
Ferguson, Frances B.		_	<u> </u>	_	1,014,681
Forrest, Robert Lee			20.000	_	10,302,634
Fund for the Future-Unrestricted (See Note 1) General Endowment (See Note 1)		_	20,000		840,537 181,752,962
Goddard, Robert H.		_			81,590
Habel, Dr. S. (See Note 1)	972		_		972
Hart, Gustavus E.					6.106
Henry, Caroline	15,059	-			15,059
Henry, Joseph and Harriet A.			—	_	602,309
Heys, Maude C.				_	1,002.501
Hinton, Carrie Susan		_	_	_	293,264 349,823
Koteen, Dorothy B Lambert, Paula C.			_		538.031
Medinus, Grace L.				_	9,978
O'Dea, Laura I.		_	_	_	342,568
Phillips, Roy R., Estate					1,473,414
Rhees, William Jones (See Note 1)	6,988	_	<u> </u>	_	6,988
Safford, Clara Louise			57.2(0	_	468,259
Smithsonian Bequest Fund (See Note 1) Sultner, Donald H.	4,317,371 1.277.331		57,368		4,374,739 1,277,331
Taggard, Ganson		_	_	_	5,706
Winterer, Alice I.		_	_	-	215,622
Subtotal	207,258,130	_	77,368		207,335,498
Total Undesignated Purpose	215,093,927	-	77,368	5,756,026	220,927,321
DONOR DESIGNATED PURPOSE - TRUE:					
Aitken, Annie Laurie		359,051		325,000	684,051
Arthur, James Axelrod, Dr. Herbert R.			409,128 49,124	54,587 120,000	463,715 169,124
Axelrod, Herbert R. & Evelyn, Music	_			950,000	950,000
Axelrod, Herbert R. & Evelyn, Revolving Chair			_	1,460,000	1,460,000
Baird, Spencer Fullerton		364,151	_	50,362	414,513
Barney, Alice Pike, Memorial (See Note 1)		317,301	202 720	828,445	1,145,746 343,729
Batchelor, Emma E Beauregard, Catherine, Memorial		_	283,729 412,832	60,000 141,227	554,059
Bergen, Charlotte V.		_	24,319	10.000	34,319
Brown, Roland W.		216,593	69,041	70,295	355,929
Burch, George E. Fellowship in Theoretic Medicine and			,		
Affiliated Theoretic Sciences		37,439	1,449,751 76	1,668,889 100,800	3,118,640 138,315
		r			

Table 5. Endowment and Similar Activities September 30, 1998 (continued)

			Market Values		
	Unrestricted	Unrestricted Designated	Temporarily Restricted	Permanently Restricted	Total Market Value
ONOR DESIGNATED PURPOSE - TRUE: (Continued)	<u> </u>				
Canfield, Fredrick A.		14,307	450,369	46,233	510.909
Casey, Thomas Lincoln	_	-	147,874	1,000	148,874
Chamberlain, Francis Lea	_	_	291,277	35,000	326,277
Chinese Art Research (See Note 1)		_	_	500,000	500,000
Cooper Fund for Paleobiology	_	332,494	13,574	247,580	593,648
Cuatrecasas, Jose, Botanical	-	33,000		72,124	105,124
Cullman, Joseph F. III (See Note 1) Davis Foundation	_	_	26 100	100,000	100,000
deSalle, Albert and Peggy	_	4,147	26,188 16,640	125,000 65,000	151,188 85,787
Deibel, Charles P.	_	45,288		100,000	145,288
Discovery Communications, Inc. (See Note 1)		235,278	_	2,402,262	2,637,540
Division of Mammals Curators Fund	_	21,661	_	8,901	30,562
Dodge, Gary and Rosalind, Memorial	_	_	2,845	25,000	27,845
Drake Foundation			1,586,475	448,355	2,034,830
Drouet, Francis and Louderback, Harold B.	_	_	412,243	254,072	666,315
Dykes, Charles, Bequest	_	_	599,925	131,978	731,903
Eaton, Harriet Phillips		49,425		64,403	113,828
Eickemeyer, Florence Brevoort	_		115,392	10,500	125,892
Eppley Memorial		23,187	_	30,214	53,401
Forbes, Edward Waldo	_	1,073,891		818,912	1,892,803
Freer, Charles L	—	7,468,936	84,318,008	1,958,591	93,745,535
Fund for the Future-Mary L. Ripley Garden		358,191 6,880	26,147	1,003,120 129,516	1,361,311
Fund for the Future-Ethel Niki Kominik	_	43,591	20,147	100,000	162,543 143.591
Fund for the Future-Vincent Wilkinson		5,557	14,212	144,526	164,295
Fund for the Future-Jerome and Dorothy Lemelson (See Note 1)	_		322,771	4,943,307	5,266,078
Fund for the Future-Smithsonian Luncheon Group (See Note 1)		25,942		128,751	154,693
Fund for the Future-Frank J. Lukowski (See Note 1)	_		_	134,868	134,868
Fund for the Future-National Postal Museum	_	_	2,358	25,000	27,358
Fund for the Future-Craveri/Giamporcaro (See Note 1)	—		475	500,000	500,475
Fund for the Future-Dutton, William C. (See Note 1)	_	_		10,013	10,013
Fund for the Future-Konze, Alice Stockton (See Note 1)	_		_	46,840	46,840
FSG Education Program Fund (See Note 1)	_			1,000,000	1,000,000
Global Environmental Endowment Fund	_	2,311	_	3,000	5,311
Grimm, Sergei N.		221,849		71,863	293,712
Groom, Barrick W Guggenheim, Daniel and Florence	—	195,659	948,380	100,000 251,108	295,659 1,199,488
Hamilton, James (See Note 1)		5,731	740,300	4,150	9,881
Haupt, Enid A. Garden		5,751	1,303,698	3,106,978	4,410,676
Henderson, Edward and Rebecca R., Meteorite Fund		-	206,186	257,256	463,442
Herman, Lloyd E. (See Note 1)		_		79,347	79,347
Hewitt, Eleanor G., Repair Fund	_	66,525		15,003	81,528
Hewitt, Sarah Cooper	Bilefford	377,230	_	88,633	465,863
Hillyer, Virgil	_	_	71,070	7,000	78,070
Hirayama Fund (See Note 1)	_		85,311	2,583,247	2,668,558
Hitchcock, Albert S.	_		17,376	1,200	18,576
Hodgkins Fund (See Note 1)	_	48,398	2.000	146,012	194,410
Hotung, Sir Joseph		204 225	3,982	100,000	103,982
Hrdlicka, Ales and Marie	_	394,325	111,982	71,000	577,307 222,036
Huntington Publication Fund (See Note 1)		205,345	212,684	9,352 508,960	714,305
Johnson, Seward, Trust Fund for Oceanography		203,343	35,574,549	3,415,606	38,990,155
Kellogg, Remington and Marguerite, Memorial		364,911	55,57 1,5 17	223,178	588.089
Kottler, Howard, Endowment for Ceramic Art	_	3,463	18,882	75,000	97,345
Kramar, Nada		21,030	7,974	12,103	41,107
Krombein, Karl V.	_	8,709	14,653	52,180	75,542
Lang, Hank and Ru			5,708	200,000	205,708
Lang, Hank and Ru, Educational		30,605	_	117,723	148,328
Lichtenberg, William R. & Nora H.				50,000	50,000
Mandil, Harry and Beverly	_	-	62,969	100,000	162,969
Mashantucket Pequot Nation	_	1(2,200	89,253	500,000	589,253
Maxwell, Mary E Mellon Foundation-Advanced Studies in Plant Science Research		163,368	44,128	20,000	227,496
	_	613,372	_	1,150,000 655,465	1,150,000 1,268,837
Mellon Foundation Challenge Grant/Endowment				000,400	1,200,03/
Mellon Foundation Challenge Grant/Endowment		,	285 022	900 000	1 474 088
Mellon Foundation Challenge Grant/Endowment		288,155	285,933	900,000 443	1,474,088 2.822
Mellon Foundation Challenge Grant/Endowment	former.	,	285,933 	900,000 443 179,008	1,474,088 2,822 1,023,842

Table 5. Endowment and Similar Activities September 30, 1998 (continued)

			Market Values		
	Unrestricted	Unrest r icted Designated	Temporarily Restricted	Permanently Restricted	Total Market Valu
DONOR DESIGNATED PURPOSE - TRUE: (Continued)					
Moynihan, Elizabeth Brennan	_		16,598	50,161	66,759
Museum of the American Indian-Heye Foundation	-	706,499	_	920,587	1,627,086
NMAI Educational Endowment Fund (See Note 1)		50,630	—	273,047	323,677
NMAI George Heye Center (See Note 1) Nelms, Henning		173,743	_	533,500	533,500
Nelson, Edward William		177,648	49.971	218,001 30,000	391,744 257.619
Nesbitt, Lowell			8,863	20,000	28,863
Petrocelli, Joseph, Memorial	_	_	76,291	10,000	86,291
Reid, Addison T. (See Note 1)	_	_	211,950	20,561	232,511
Ripley, S. Dillion and Mary Livingston	<u> </u>	223,044	63,491	197,080	483,615
Rollins, Miriam and William	_	2,401,213	1,241,647	150,000 691,493	1,391,647 3,092,706
Sackler, Else, Flower		2,701,215	37.146	398,237	435,383
Sackler Public Affairs			1,293,826	2,856,875	4,150,701
Schmitt, John J.	_	14,442		18,817	33,259
The Sichel Family, Endowment for Research at the NZP	_	8,334	33,749	400,000	442,083
Sims, George W.	_	193,515		110,000	303,515
Sisley, George J. Sprague Fund		22,782 13,539,840	154,980	926,650	1,104,412
Springer, Frank		13,339,840	40,281	4,949,996 30,000	18,489,836 207,664
Star Spangled Banner (See Note 1)		107,000	40,201	100,000	100,000
Stern, Harold P., Memorial	_	1,140,304	384,662	458,101	1,983,067
Stevenson, John A., Mycological Library		35,677	11,005	10,053	56,735
Stuart, Mary Horner	_		429,426	291,426	720,852
Tupper, Earl S. (See Note 1)	-	1,439,423		6,725,650	8,165,073
Walcott, Charles D.and Mary Vaux, Research		1,521,134 622,274	_	574,743	2,095,877 702,398
Wells, Dr. John W.	_	022,274	2,211	80,124 4,577	6,788
Wetmore, Alexander, Fund for Ornithology (See Note 1)			2,211	448,868	448,868
Williams, Blair and Elsie		30,408	_	39,622	70,030
Williston, Samuel Wendell, Diptera Research	_	26,887	12,895	32,942	72,724
Wineland Research Library	_		123	41,160	41,283
Woolfenden, William J. (See Note 1) Wood, Elizabeth B. and Laurence I. (See Note 1)	_		_	126,127	126,127
Zerbee, Frances Brinckle		7,801	2,118	209,685 1,000	209,685 10,919
Zirkle, Nancy Behrend	—	30,014		117,868	147,882
Subtotal		36,668,364	135,025,558	58,596,509	230,290,431
ONOR DESIGNATED PURPOSE - QUASI:					
Abbott, Marie Bohrn		282,895	_		282,895
Archives of American Art		505,552	_	_	505,552
Armstrong, Edwin James		52,651	_	—	52,651
Au Panier Fleuri Bacon, Virginia Purdy		199,797 964,435	_		199,797 964,435
Bateman, Robert		71,003	91,248	_	162,251
Becker, George F.	-	1,669,257			1.669.257
The Cafritz Foundation Fund (See Note 1)		494	500,000		500,494
Compton, Bertita E.	_	25,020	286,820		311,840
Compton, Bertita E., Memorial		3,642	32,000	<u> </u>	35,642
Cooper Hewitt Acquisition Endowment Fund		828,028	500.000	—	828,028
Daniziger, Richard (See Note 1)		411,322	500,000		500,000 411,322
Denghausen, Luisita L. and Franz H.		18,358,871	308,906		18,667,777
Desautels, Paul E.	_	30,642			30,642
Evans, Richard T.		(6,160)	68,137	—	61,977
Friends of Music Endowment Fund		200,490	_		200,490
Gaver, Gordon	_	27,543	26.200	_	27,543
Haas, Gloria, Fellowship Hachenbergh, George P. and Caroline	_	13,227	26,329	_	39,556 50,740
Hagen, Karl (See Note 1)		50,740	240,655		240,655
Hammond, John Performance Series Fund		536,993	2-10,000	_	536,993
Hanson, Martin Gustav and Caroline R.	_	105,530			105,530
Hirshhorn Collections Endowment Fund	_	14,029,723			14,029,723
Hirshhorn, Joseph H., Bequest Fund		2,683,656		—	2,683,656
The Holenia Trust Fund		8,964,344	—	_	8,964,344
The Holenia Trust Fund II	_	3,838,335	_		3,838,335

Table 5. Endowment and Similar Activities September 30, 1998 (continued)

	Market Values						
	Unrestricted	Unrestricted Designated	Temporarily Restricted	Permanently Restricted	Total Market Value		
DONOR DESIGNATED PURPOSE - QUASI: (Continued)							
The Holenia Trust Fund III		1,288,711	74.017	-	1,288,711		
Houchins, Lee and Chang-Su (See Note 1)		36,110,132	74,017	_	74,017 36,110,132		
Hunterdon Endowment Johnson, E.R. Fenimore		78,135	_	_	78,135		
Johnson, Janet W.		(9,847)	125,000		115,153		
Kevzer-Andre, Henri, Conservation Internship		4,477	144,893		149,370		
Krieg Drawings & Prints		714	25,000		25,714		
Lane, Robert and Mildred Katchmar		392,035			392,035		
Leob, Morris		1,046,621		-	1,046,621		
Long, Annette E. and Edith C. Louie, Richard Memorial		6,464 99,317		_	6,464 99,317		
McGovern, John P.		25,101	87,798	_	112,899		
McLaughlan, Thomas		137,855	0.,	_	137,855		
Merrell, Elinor		544,968	60,469		605,437		
Myer, Catherine Walden		239,871		_	239,871		
Noyes, Frank B		12,090		_	12,090		
Noyes, Pauline Riggs		98,066			98,066		
Orth, Edward J., Memorial		2,523	23,354		25,877		
Pell, Cornelia Livingston	_	88,553	_		88,553		
Plumb, Henry Ramsey, Adm. and Mrs. Dewitt Clinton	_	221,470 1,868,548	_	_	221,470 1,868,548		
Rathbun, Richard, Memorial		126,881			126,881		
Reeves, Douglas F. and Sanae Iida (See Note 1)		120,001	186,258		186,258		
Ripley, S. Dillon Library		243.788	168,218	_	412.006		
Roebling Solar Research	_	272,797		_	272,797		
Ross, Arthur Garden and Terrace		293,870	618,474	_	912,344		
Ruef, Bertha M.		304,493		_	304,493		
Schultz, Leonard P.		250,334		_	250,334		
Seidell, Atherton	_	6,594,930	15 (27		6,594,930		
Smithsonian Institution Libraries		520,421	15,627		536,048		
Strong, Julia D Witherspoon, Thomas A., Memorial		119,227 1,529,836	_		119,227 1,529,836		
Subtotal		106,360,411	3,583,203		109,943,614		
Total Donor Designated Purpose		143,028,775	138,608,761	58,596,509	340,234,045		
BOARD DESIGNATED PURPOSE - TRUE:							
Walcott, Charles D. and Mary Vaux, Research		4,753,991	-	574,182	5,328,173		
Subtotal	· · · · · · · · · · · · · · · · · · ·	4,753,991		574,182	5,328,173		
Subiotal		4,733,771		5/ 1,102	5,328,175		
BOARD DESIGNATED PURPOSE - QUASI:							
Abbott, William L.		1,415,752			1,415,752		
Barstow, Fredric D.		11,833	_		11.833		
Cooper Hewitt Masters Program for Education		238,118	_		238,118		
Heckscher, August, Exhibition		165,087	_		165,087		
Hirshhorn Museum Acquisition Fund	_	4,003,883	-	_	4,003,883		
Jackson, Charles Bremner Hogg	_	2,166,918			2,166,918		
Lindbergh Chair of Aerospace History	_	4,903,372		_	4,903,372		
Lindbergh, Charles A. Lyon, Marcus Ward, Jr.		78,944 53,703		_	78,944 53,703		
Martin Marietta Internship		352,345	_	_	352,345		
NMNH Research		232,662			232,662		
NZP Programs		4,619,930	-		4,619,930		
SAO Directors Endowment	_	247,236	_	_	247,236		
Smithsonian Institution Libraries General Support		29,158			29,158		
Smithsonian Press Scholarly Books Fund		3,436,092		—	3,436,092		
Webb, James E., Fellowship Women's Committee Fellowship		2,283,094	_		2,283,094		
women's Committee renowship		492,924			492,924		
Subtotal		24,731,051	_		24,731,051		
Total Board Designated Purpose		29,485,042		574,182	30,059,224		
TOTAL ENDOWMENT AND SIMILAR ACTIVITIES	215 093 927	172,513,817	138,686,129	64,926,717	591,220,590		

Note 1: Invested all or in part in nonpooled investments

Table 6. Construction and Plant Funds, Fiscal Years 1998 and 1997 (in \$000s)

	FY 1998	FY 1997
FUNDS PROVIDED		
Federal Construction Appropriations:		
National Zoological Park	3,850	3,850
Repair and Restoration of Buildings	32,000	39,000
Construction Planning and Minor Construction		3,000
National Museum of the American Indian	29,000	4,000
National Air and Space Museum Dulles Extension	4,000	3,000
Total Federal Construction Appropriations	68,850	52,850
- Nonappropriated Trust Plant Funds:		
Income - Gift and Other		
Cooper - Hewitt, National Design Museum	1,400	1,670
Cooper - Hewitt, National Design Museum National Museum of the American Indian	3,477	4,629
Cooper - Hewitt, National Design Museum National Museum of the American Indian National Museum of Natural History - Gem Hall	,	4,629 963
Cooper - Hewitt, National Design Museum National Museum of the American Indian National Museum of Natural History - Gem Hall National Air and Space Museum Dulles Extension.	3,477 359	4,629 963 500
National Museum of the American Indian National Museum of Natural History - Gem Hall	3,477	4,629 963
Cooper - Hewitt, National Design Museum National Museum of the American Indian National Museum of Natural History - Gem Hall National Air and Space Museum Dulles Extension.	3,477 359	4,629 963 500

Independent Auditors' Report

BOARD OF REGENTS SMITHSONIAN INSTITUTION:

We have audited the accompanying statement of financial position of the Smithsonian Institution (Smithsonian) as of September 30, 1998, and the related statements of financial activity and cash flows for the year then ended. These financial statements are the responsibility of the Smithsonian's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made

by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Smithsonian Institution as of September 30, 1998, and its changes in net assets and its cash flows for the year then ended, in conformity with generally accepted accounting principles.

Washington, D.C. January 13, 1999

KPMG LLP

SMITHSONIAN INSTITUTION

Statement of Financial Position September 30, 1998 (in thousands)

•	Truct	Federal Funds	Tota	al Funds
	Trust Funds		1998	1997
Assets: Cash and balances with the U.S. Treasury Receivables and advances (note 3) Prepaid and deferred expenses (note 2) Other assets (note 5) Inventory Investments (note 6) Property and equipment, net (note 9) Collections (note 5)	\$ 5,193 69,460 15,663 4,300 20,254 646,455 119,739	200,636 16,066 921 440,103	205,829 85,526 15,663 4,300 21,175 646,455 559,842	197,048 69,529 16,956 4,300 18,959 609,660 516,496
Total assets	\$ 881,064	657,726	1,538,790	1,432,948
Liabilities: Accounts payable and accrued expenses Net payable for investment securities purchased Deferred revenue Debt (note 10) Deposits held for affiliates (note 11) Accrued annual leave Unexpended federal appropriations	\$ 35.790 24,963 50,505 41,526 4,864 4,984	34,080 	69,870 24,963 50,505 41,526 4,864 19,736 182,623	69,512 1,001 53,602 1,000 3,933 19,290 173,800
Total liabilities	162,632	231,455	394,087	322,138
Net assets: Unrestricted: Funds functioning as endowments (note 7) Operational balances	387,608 63,673	426,271	387,608 489,944	404,005 471,377
Total unrestricted net assets	451,281	426,271	877,552	875,382
Temporarily restricted: Funds functioning as endowments (note 7) Donor contributions for ongoing programs	138,686 63,538	_	138,686 63,538	149,089 29,877
Total temporarily restricted net assets	202,224		202,224	178,966
Permanently restricted: True endowment (note 7) Interest in perpetual and other trusts	62,972 1,955	_	62,972 1,955	54,560 1,902
Total permanently restricted net assets	64,927		64,927	56,462
Total net assets	718,432	426,271	1,144,703	111,0810
Commitments and contingencies (note 12) Total liabilities and net assets	\$ 881,064	657,726	1,538,790	1,432,948

See accompanying notes to the financial statements.

SMITHSONIAN INSTITUTION Statement of Financial Activity For the Year Ended September 30, 1998 (In thousands)

		Unrestricted						
			Temporarily Restricted	Temporarily Permanently Restricted Restricted		Total		
	Funds	Funds	Total	Trust Funds	Trust Funds	1998	1997	
Operating revenue:								
Government funding and other revenue:								
Federal appropriations	\$	393,032	393,032			393,032	383,468	
Government grants and contracts	57,320		57,320		_	57,320	56,703	
Short-term investment income (note 8) Endowment payout (note 8)	2,374	—	2,374	6		2,380	1,924	
Private grants	13,208		13,208	6,059	459	19,726	18,174	
Rentals, fees, and commissions	5,682 8.335		5,682	7,318		13,000	7,708	
Auxiliary activities (note 15)	213,109	_	8,335 213,109	_		8,335 213,109	14,055 202,467	
			213,109			215,109	202,467	
Total government funding and other revenue	300,028	393,032	693,060	13,383	459	706,902	684,499	
Contributions:								
Program support	27,888		27,888	27,851	8,003	63,742	37,924	
Construction of facilities	_		-	3,815	_	3,815	6,422	
Total contributions	27,888	_	27,888	31,666	8,003	67,557	44,346	
Total operating revenue and support	327,916	393,032	720,948	45,049	8,462	774,459	728,845	
Net assets released from restrictions	12,170	_	12,170	(12,170)	_	_	_	
Total operating revenue, support and other additions	340,086	393,032	733,118	32,879	8,462	774,459	728,845	
Expenses:								
Research	73,953	127,644	201.597		_	201,597	190.042	
Collections management	2,729	57,128	59.857	_		59,857	56,545	
Education, public programs, and exhibitions	30,506	77,304	107,810	_	_	107,810	130,158	
Auxiliary activities (note 15)	196,990		196,990		_	196,990	183,369	
Administration	25,950	98,984	124,934		_	124,934	122,471	
Advancement	10,459		10,459	_	_	10,459	9,353	
Total expenses	340,587	361,060	701,647	—	_	701,647	691,938	
Increase (decrease) in net assets from operations	(501)	31,972	31,471	32,879	8,462	72,812	36,907	
Endowment return in excess of (less than) payout (note 8)	(21,207)	_	(21,207)	(9,621)	3	(30,825)	109,283	
Change in net assets related to collection items not capitalized (note 5):								
Proceeds from sale	737		737	_	_	737	2,719	
Collection items purchased	(6,938)	(1,893)	(8,831)		_	(8,831)	(9,358)	
Increase (decrease) in net assets	(27,909)	30,079	2,170	23,258	8,465	33,893	139,551	
Net assets, beginning of the year	479,190	396,192	875,382	178,966	56,462	1,110,810	971,259	
Net assets, end of the year	\$ 451,281							

See accompanying notes to the financial statements.

SMITHSONIAN INSTITUTION Statement of Cash Flows For the Year ended September 30, 1998 (In thousands)

	~	P. J. J.	Total	l Funds	
	Trust Funds	Federal Funds	1998	1997	
Cash flows from operating activities:					
Increase in net assets	\$ 3,814	30,079	33,893	139,551	
Adjustments to reconcile increase in net assets to net					
cash provided by operating activities:					
Proceeds from sales of collections	(737)	_	(737)	(2,719)	
Collection items purchased	6,938	1,893	8,831	9,358	
Depreciation	7,388	38,493	45,881	37,938	
Loss on disposition of assets	364	219	583	1,339	
Contributions for increases in endowment	(4,822)	_	(4,822)	(2,916)	
Contributions for construction of property	(3,815)	<u> </u>	(3,815)	(6,422)	
Appropriations for repair, restoration and construction		(68,850)	(68,850)	(52,850)	
Investment income restricted for long-term investment	(462)	_	(462)	(419)	
Provision for doubtful accounts	277		277	792	
Net realized and unrealized loss (gain) on investments	26,505	_	26,505	(107,160)	
Decrease (increase) in assets:					
Receivables and advances	(18,325)	(1,698)	(20,023)	(9,564)	
Prepaid and deferred expenses	1,293	_	1,293	6,603	
Other assets				(300)	
Inventory	(2,133)	(83)	(2,216)	1,268	

SMITHSONIAN INSTITUTION

Statement of Cash Flows For the Year ended September 30, 1998 (In thousands)

	_	To de la construcción de la constru		Total Funds	
	Trust Funds	Federal Funds	1998	1997	
Adjustments to reconcile net increase in net assets to net cash provided by operating activities: (continued) Increase (decrease) in liabilities: Accounts payable and accrued expenses Net payable for investment securities purchased Deferred revenue Deposits held for others Accrued annual leave	(299) 23,962 (3,097) 931 169	657 277	358 23,962 (3,097) 931 446	5,586 (16,635) 2,555 (2,950) (1,489)	
Unexpended federal appropriations		8,823	8,823	(9,920)	
Net cash provided from operating activities	37,951	9,810	47,761	(8,354)	
Cash flows from investing activities: Proceeds from sales of collections Collection items purchased Purchase of property and equipment Purchases of investment securities Proceeds from the sales of investment securities	737 (6,938) (20,824) (750,907) 687,607	(1,893) (68,986) 	737 (8,831) (89,810) (750,907) 687,607	2,719 (9,358) (90,789) (865,439) 901,596	
Net cash used in investing activities	(90,325)	(70.879)	(161,204)	(61,271)	
Cash flows from financing activities: Contributions for increases in endowment Contributions for construction of property Appropriations for repair, restoration and construction Investment income restricted for long-term purpose Proceeds from issuance of debt Repayments of debt	\$ 8,571 3,815 462 40,526	68.850 	8,571 3,815 68,850 462 40,526	7,605 6,422 52,850 419 500 (2,597)	
Net cash provided from financing activities	53,374	68,850	122,224	65,199	
Net increase (decrease) in cash and balances with the U.S. Treasury Cash and balances with the U.S. Treasury: Beginning of the year	1,000 4,193	7,781 192,855	8,781 197,048	(4,426) 201,474	
End of the year	\$ 5,193	200,636	205,829	197,048	

See accompanying notes to the financial statements.

(1) Organization

The Smithsonian Institution was created by act of Congress in 1846 in accordance with the terms of the will of James Smithson of England, who, in 1826, bequeathed his property to the United States of America "to found at Washington, under the name of the Smithsonian Institution, an establishment for the increase and diffusion of knowledge among men." After receiving the property and accepting the trust, Congress vested responsibility in the Smithsonian Board of Regents (Board) to administer the trust.

The Smithsonian Institution (Smithsonian) is a museum, education and research complex of 16 museums and galleries, the National Zoological Park, and other research facilities. Research is carried out in the Smithsonian's museums and facilities throughout the world. The Smithsonian's extensive collections number over 140 million objects. During fiscal year 1998, over 28 million individuals visited the Smithsonian museums and other facilities.

The Smithsonian receives its funding from federal appropriations, private gifts and grants, government grants and contracts, investment income. and various business activities, including the Smithsonian magazines and other publications, a mailorder catalogue, museum shops, and food services. A substantial portion of the Smithsonian's annual operating budget is funded from annual federal appropriations. Certain construction projects have been completely funded from federal appropriations, while others are funded using amounts raised from private sources, or by a combination of federal and private funds.

Federal operating and construction funding are both subject to the annual federal appropriations process, and therefore the potential exists for reductions in approved federal funding that would significantly impact the Smithsonian's operations.

These financial statements do not include the accounts of the National Gallery of Art, the John F. Kennedy Center for the Performing Arts, or the Woodrow Wilson International Center for Scholars, which were established by Congress within the Smithsonian, but are administered by independent boards of trustees.

(2) Summary of Significant Accounting Policies

These financial statements present the financial position, financial activity, and cash flows of the Smithsonian on the accrual basis of accounting. Funds received from direct federal appropriations are reported as Federal Funds in the financial statements. All other funds are reported as Trust Funds.

(a) Trust Funds

All non-appropriated activities are classified as trust funds, income from which arises primarily from contributions, grants and contracts, net investment income, and auxiliary activities. Trust net assets are classified and reported as follows:

Unrestricted net assets

Net assets that are not subject to any donor-imposed or other legal stipulations on the use of the funds. Funds functioning as endowments in this category represent unrestricted assets which have been designated by management or the Board for longterm investment.

Temporarily restricted net assets

Net assets subject to donor-imposed stipulations on the use of the assets that may be met by actions of the Smithsonian and/or the passage of time. Funds functioning as endowments in this category represent donor-restricted contributions that have been designated by management or the Board for longterm investment. Donor contributions represent unspent gifts and promises-to-give of cash and securities subject to donor-imposed restrictions which have not yet been met.

Permanently restricted net assets

Net assets subject to donor-imposed stipulations that the principal be maintained permanently by the Smithsonian. Generally, the donors of these assets permit the Smithsonian to use all or part of the income earned on investment of the assets for either general or donor-specified purposes.

(b) Federal Funds

The Smithsonian receives federal appropriations to support the Smithsonian's operating salaries and expenses, repair and restoration of facilities, and construction. Federal appropriation revenue is classified as unrestricted and recognized as an exchange transaction as expenditures are incurred. The liability reported as unexpended appropriations represent either goods and services that have been ordered but not yet received or appropriated funds that have not yet been obligated.

The Smithsonian received appropriations for operations of \$333,408,000 in fiscal year 1998. Federal appropriations for operations are generally available for obligation only in the year received. In accordance with Public Law 101-510, these annual appropriations are maintained by the Smithsonian for five years following the year of appropriation, after which the appropriation account is closed and any unexpended balances are returned to the U.S. Treasury. During fiscal year 1998, the Smithsonian returned \$2,193,000 to the U.S. Treasury which represents the unexpended balance for fiscal year 1993.

Federal appropriations for repair and restoration of facilities and construction are generally available for obligation until expended.

(c) Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates, however, management does not believe that actual results will be materially different from those estimates.

(d) Fair Value of Financial Instruments

The carrying value of financial instruments in the financial statements approximates fair value.

(e) Cash and Balances with U.S. Treasury

Amounts represent cash deposited with financial institutions, balances held by the U.S. Treasury that are available for disbursement, and a repurchase agreement totaling \$7,810,000 at September 30, 1998.

(f) Investments

The Smithsonian's marketable equity and debt securities are reported at fair value based on quoted market prices. Changes in fair value are recognized in the statement of financial activity. Purchases and sales of investments are recorded on the trade date. Investment income is recorded when earned, and realized gains and losses on the sale of investments are recognized on the trade date basis using the average cost method. As mandated by Congress, the Smithsonian maintains two \$500,000 Treasury investments relating to the original James Smithson gift.

(g) Contributions Receivable

Contributions receivable that are expected to be collected within one year are reported net of any estimated uncollectible amounts. Contributions expected to be collected beyond one year are also discounted to present value. Conditional contributions receivable are not recorded until material conditions have been met.

(h) Inventories

Inventories are reported at the lower of cost or market, and consist primarily of merchandise inventory, books, recordings, and office supplies. Cost is determined using the first-in, first-out method.

(i) Deferred Revenue and Expense

Revenue from subscriptions to Smithsonian magazine and Air & Space/Smithsonian magazine is recognized over the period of the subscription, generally one year.

Promotion production expenses are recognized when related advertising materials are released. Direct-response advertising relating to the magazines is deferred and amortized over one year. At September 30, 1998, prepaid and deferred expenses include \$5.403,000 of deferred promotion costs, mostly related to the *Smithsonian* magazine. Promotion expense totaled \$15,475,000 in fiscal year 1998.

(j) Split Interest Agreements and Perpetual Trusts

Split interest agreements with donors consist primarily of irrevocable charitable temainder trusts and charitable gift annuities. For the charitable remainder trusts, contribution revenue and assets are recognized at fair value on the date the trusts are established. Assets are adjusted during the term of the trusts for changes in the value of the assets, accretion of discounts, and other changes in the estimated future benefits. For the charitable gift annuities, assets are recognized at fair value on the date the annuity agreements are established. An annuity liability is recognized at the present value of future cash flows expected to be paid to the donor and contribution revenue is recognized as the difference between the assets and liability. Liabilities are adjusted during the term of the annuities for payments to donors, accretion of discounts and changes in the life expectancy of the donor.

The Smithsonian is also the beneficiary of certain perpetual trusts held and administered by others. The present values of the estimated future cash receipts from the trusts are recognized as assets and contribution revenue at the dates the trusts are established. Distributions from the trusts are recorded as contributions and the carrying value of the assets is adjusted for changes in the estimates of future receipts.

(k) Property and Equipment

Property and equipment purchased with federal or trust funds are capitalized at cost. Property and equipment acquired through transfer from government agencies are capitalized at net book value or fair value, whichever is more readily determinable. Property and equipment acquired through donation are capitalized at appraised value at the date of the gift. These assets are depreciated on a straight-line basis over their estimated useful lives as follows:

Buildings	30 years
Major renovations	15 years
Equipment	3-10 years

Certain lands occupied by the Smithsonian's buildings, primarily located in the District of Columbia, Maryland and Virginia, were appropriated and reserved by Congress for the Smithsonian's use. The Smithsonian serves as trustee of these lands for as long as they are used to carry out the Smithsonian's mission. These lands are titled in the name of the U.S. government and are not reflected in the accompanying financial statements.

(1) Collections

The Smithsonian acquires its collections, which include works of art, library books, photographic archives, objects and specimens, by purchase using federal or trust funds or by donation. All collections are held for public exhibition, education, or research, furthering the Smithsonian's mission to increase and diffuse knowledge to the public. The Smithsonian protects and preserves its collections, which total more than 140 million items. The Smithsonian's Collections Management policy includes guidance on the preservation, care and maintenance of the collections.

The Smithsonian's policy is to not capitalize its collections, therefore, no value is assigned to the collections on the statement of financial position. Purchases of collection items are recorded as expense in the year in which the items are acquired. Contributed collection items are not reflected in the financial statements. Proceeds from deaccessions or insurance recoveries from lost or destroyed collection items are reflected as increases in the appropriate net asset class, and are designated for future collection acquisitions.

Items that are acquired with the intent at the time of acquisition not to add them to the collections but rather to sell, exchange, or otherwise use them for financial gain are not considered collection items, and are recorded at fair market value at date of acquisition as other assets in the statement of financial position.

(m) Annual Leave

The Smithsonian's civil service employees earn annual leave in accordance with federal laws and regulations. Separate rules apply for trust employees. Annual leave for all employees is recognized as expense when earned.

(n) Government Grants and Contracts

The Smithsonian receives grants and enters into contracts with the U.S. government and state and local governments, which primarily provide for cost reimbursement to the Smithsonian. Revenue from governmental grants and contracts is classified as unrestricted and is recognized as reimbursable expenditures are incurred.

(o) Contributions

The Smithsonian recognizes revenue from all contributions as revenue in the period unconditional promises are received.

Unrestricted contributions with payments due in future periods are initially recorded as temporarily restricted support, and are reclassified to unrestricted net assets when payments become due.

When donor restrictions are met on temporarily restricted contributions, the related net assets are reclassified as released from restrictions in the accompanying statement of financial activity.

Gifts of long-lived assets are recorded as unrestricted revenue in the period received. Contributions of cash and other assets restricted to the acquisition of longlived assets are recorded as temporarily restricted revenue in the period received. The donor's restrictions expire and the related net assets are released from restriction when the long-lived asset is placed in service by the Smithsonian.

In-kind contributions of goods and services totaling \$6,310,000 were received in fiscal year 1998 and recorded as program support in the accompanying statement of financial activity. The nature of the in-kind contributions primarily includes donated space and interactive multimedia software programs.

A substantial number of volunteers also make significant contributions of time to the Smithsonian, enhancing its activities and programs. In fiscal year 1998, more than 5,600 volunteers contributed over 496,000 hours of service to the Smithsonian. The value of these contributions is not recognized in the financial statements.

(p) Advancement

The Smithsonian raises private financial support from individual donors, corporations and foundations to fund programs and other initiatives. Funds are also generated through numerous membership programs. Fund-raising costs are expensed as incurred and reported as advancement expense in the statement of financial activity. Membership program costs are amortized over membership terms, typically one year, and are also reported as Advancement expenses.

(q) Comparative Financial Statements

The statement of financial activity includes certain prior-year summanzed comparative information in total but not by net asset class. Such information does not include sufficient detail to constitute a presentation in conformity with generally accepted accounting principles. Accordingly, such information should be read in conjunction with the Smithsonian's financial statements for the year ended September 30, 1997, from which the summarized information was derived.

(r) Reclassifications

Certain amounts have been reclassified in pror year to conform with the current year presentation.

(3) Receivables and Advances

Receivables and advances consisted of the following at September 30, 1998:

	(\$000s)			
	_	Trust	Federal	Total
Auxiliary activities, net of \$1,590,000 in allowances	s	18,011		18,011
Contributions receivable, net		33,789		33,789
Grants and contracts		13,264	~	13,264
Interest and dividends due		660	_	660
Advance payments		1,171	16,066	17,237
Charitable trust	_	2,565		2,565
Total receivables and advances	\$	69.460	16.066	85,526

(a) Contributions Receivable

Contributions receivable (pledges) are recorded as revenue when received. Pledges for which payment is not due within one year are discounted based on United States Treasury risk-free obligation rates according to their corresponding terms. As of September 30, 1998, the aggregate discounted contributions receivable was as follows:

		(\$000s)
Due within:		
Less than 1 year	S	14.079
1 to 5 years		21,596
More than 5 years		5,964
		41.639
Less:		
Allowance for uncollectible pledges		(4,356)
Discount to present value		3(494)
Contributions receivable, net	s	33.789

At September 30, 1998, the Smithsonian has outstanding conditional contributions totaling \$14,000,000 which will be recognized when the specific conditions are met.

(b) Advance Payments

At September 30, 1998, federal advance payments of \$16,066,000 represent prepayments made to government agencies, educational institutions, firms and individuals for services to be rendered, or property or materials to be furnished.

At September 30, 1998, Smithsonian advance payments included amounts paid to the General Services Administration of \$8,512,000 for equipment purchases for the Museum Support Center and other projects to be completed in future years.

(4) Reconciliation of Federal Appropriations

Federal appropriation revenue recognized in fiscal year 1998 can be reconciled to the federal appropriations received in fiscal year 1998 as follows:

		(\$000s)			
		Salaries and Expenses	Repair and Restoration and Construction	Total	
Federal appropriation revenue Unexpended 1998 appropriation	s	331, 484 49,723	61,548 68,850	393,032 118,573	
Amounts expended from prior years Other funding Fiscal year 1998 federal		(46,724) (1.075)	(61,548)	(108,272) (1,075)	
appropriations	s	333.408	68.850	402.258	

Federal expenses recognized in fiscal year 1998 can be reconciled to the federal appropriations received in fiscal year 1998 as follows:

		(\$000s)			
		Salaries and Expenses	Repair and Restoration and Construction	Total	
Federal expenses Unexpended 1998 appropriation Depreciation	S	331,426 49,723 (6,966)	31,527 68,850 (31,527)	362,953 118,573 (38,493)	
Supplies consumption Loss on disposition of assets Unfunded annual leave		82 (219)	_	82 (219)	
Amounts expended from prior years Capital expenditures		(277) (46,724) 7,438	(61,548) 61,548	(277) (108,272) 68,986	
Other funding		(1.075)		(1,075)	
Fiscal year 1998 federal appropriations	\$	333.408	68.850	402,258	

Federal unrestricted net assets primarily represent the Smithsonian's net investment in property, plant and equipment purchased with or constructed using federal appropriated funds.

Unexpended appropriations for all fiscal years total \$182,623,000 at September 30, 1998, and consist of \$73,332,000 in unexpended operating funds and \$109,291,000 in unexpended repair and restoration and construction funds. Unexpended operating funds include amounts for the Museum Support Center move and the National Museum of the American Indian. Unexpended repair and restoration funds represent amounts available for on-going major repair and restoration of the Smithsonian's museums and facilities. Unexpended construction funds represent amounts appropriated but not yet expended for construction of new facilities.

(5) Accessions and Deaccessions

For fiscal year 1998, \$6,938,000 of trust funds and \$1,893,000 of federal funds were spent to acquire collection items. Proceeds from trust fund deaccessions were \$737,000. There were no deaccessions of collection items purchased with federal funds in fiscal year 1998. At September 30, 1998, accumulated proceeds and related earnings from deaccessions of \$16,269,000 were designated for collections acquisition in the trust funds.

Non-cash deaccessions result from the exchange, donation, or destruction of collection items, and occur because objects detenorate, are beyond the scope of a museum's mission, or are duplicative. During fiscal year 1998, the Smithsonian's noncash deaccessions included works of art, animals, historical objects, and natural specimens. Contributed items held for sale total \$4,300,000 and are reported as other assets in the statement of financial position.

(6) Investments

At September 30, 1998, investments consisted of the following:

		(\$000s)
Short-term investments Cash equivalents U.S. Government obligations	S	16,407 24,625
	_	41.032
Endowment and similar investments: Pooled investments	-	
Cash equivalents U.S. Government and quasi-government obligations Corporate bonds and other obligations Common and preferred stocks		5,270 55,731 169,779 373,146
Total pooled investments		603,926
Nonpooled investments Deposits with U.S. Treasury		1.050
Total endowment and similar investments	_	604.976
Gift annuity program investments: Corporate bonds and other obligations Common and preferred stock	-	140 307
	-	447
Total investments	S	646,455

(7) True Endowment and Funds Functioning as Endowments

The Smithsonian uses the "total return" approach to investment management of pooled true endowment funds and quasi-endowment funds, referred to collectively as the endowment. Each year, the endowment pays out an amount for current expenditures based upon a number of factors evaluated and approved by the Board of Regents. The payout for 1998 was 4.5 percent of the average market value of the endowment over the prior five years. The difference between the total return (i.e., dividends, interest and net gains), and the payout is reinvested when there is an excess of total return over payout, or withdrawn from previously accumulated returns when there is a deficiency of total return to payout. The payout amount exceeded the total return in fiscal year 1998 and the deficit was withdrawn from the endowment asset pool. The withdrawal is reported as a non-operating loss in the accompanying statement of financial activity (see note 8).

Substantially all of the investments of the endowment are pooled on a market value basis, with individual funds subscribing to or disposing of units on the basis of the per unit market value at the beginning of the month in which the transaction takes place. At September 30, 1998, each unit had a market value of \$614. The market value of the pool's net assets at September 30, 1998, was \$579,444,000. This represents all pooled investments plus net receivables and payables related to investment transactions.

Each fund participating in the investment pool receives an annual payout equal to the number of units owned times the annual payout amount per unit. The payout for fiscal year 1998 was \$21.00 per unit. Based on approved Board policy, if the market value of any endowment fund is less than 110 percent of the historical value, the current payout is limited to the actual interest and dividends allocable to that fund.

Net asset balances of the endowment consisted of the following at September 30, 1998:

	_	(\$000s)
Unrestricted Unrestricted-designated	\$	215.094 172.514
Total unrestricted		387,608
Temporarily restricted Permanently restricted	_	138,686 62.972
Total endowment net assets	\$	589,266

(8) Composition of Total Return from Investments

Total return from investments consisted of the following for the year ended September 30, 1998:

Composition of Endowment Return:

		(\$000s)
Endowment payour Payout in excess of investment income	s	19,726 (2,171)
Total investment income		17.555
Less - investment fees		(1.469)
Net investment income		16,086
Net realized and unrealized loss on investments		(27,185)
Endowment total return	\$	(11.099)

Endowment total return is reported as \$19,726,000 in operating revenue and (\$30,825,000) in nonoperating endowment return in the statement of financial activity.

Composition of Short-Term Investment Total Return:

	_	(\$000s)
Interest and dividends Net realized and unrealized gain on investments	\$	1,700 680
Short-term investment total return	S	2.380

(9) Property and Equipment

Property and equipment consisted of the following at September 30, 1998:

		(\$000s)		
	_	Trust	Federal	Total
Land	S	2.387		2.387
Buildings and capital improvements		159,668	818,325	977,993
Equipment		25,295	49.283	74.578
Leashold improvements	_	2.290		2.290
		189,640	867,608	1,057,248
Accumulated depreciation	_	(69,901)	(427.505)	(497,406)
Total property and equipment	\$	119.739	440.103	559,842

At September 30, 1998, buildings and capital improvements included \$28,135,000 and \$125,296,000 of construction in progress within Trust and Federal funds, respec-

tively. Depreciation expense for fiscal year 1998 totaled \$38,493,000 in the federal funds and \$7,388,000 in the trust funds.

(10) Debt

In January 1998, the District of Columbia issued \$41.3 million of tax-exempt revenue bonds on behalf of the Smithsonian. The Smithsonian is obligated under these bonds as follows:

		(5000s)
Series 1997 Revenue Bonds, Serial, with principal amounts rang from \$800,000 to \$1,225,000 interest rates ranging from 4.1 to 4.75%, maturing at various points from February 1, 2002 through 2012	0%	10,950
Series 1997 Revenue Bonds, Term: Interest rate 5.00% due February 1, 2017 Interest rate 4.75% due February 1, 2018 Interest rate 5.00% due February 1, 2028	_	7,105 1,640 21,625
Total bonds at face value		41,320
Less – unamortized bond discount	_	(794)
Total bonds payable	s	40.526

The serial and term bonds represent an unsecured general obligation of the Smithsonian. Proceeds from the sale of the bonds will finance certain renovations of and improvements to the National Museum of Natural History, fund capitalized interest, and pay certain costs of issuing the bonds. Interest on the bonds is payable semiannually on August 1 and February 1, beginning on August 1, 1998. Principal and interest payments will be funded solely through unrestricted Trust funds.

The term bonds maturing on February 1, 2017 and 2028 are subject to mandatory redemption by operations of sinking fund installments. Installment payments for the term bond maturing February 1, 2017, begin on February 1, 2013 and range from \$1,285,000 to \$1,565,000 per year through the maturity date. Installment payments for the term bond maturing February 1, 2028 begin on February 1, 2019 and range from \$1,720,000 to \$2,665,000 per year through the maturity date.

Interest expense on bonds payable for fiscal year 1998 totaled \$1,332,000, net of capitalized interest of \$173,000.

At September 30, 1998, the Smithsonian also had an interest-free loan from the Virginia Department of Aviation totaling \$1,000,000. The Virginia Department of Aviation agreed, in fiscal year 1995, to make available to the Smithsonian an interest-free loan facility totaling \$3 million, of which \$500,000 was drawn in fiscal years 1996 and 1997. This loan facility is intended to assist in the financing of the planning, marketing, fund-raising, and design of the proposed National Air and Space Museum extension at Washington Dulles International Airport. The Smithsonian is scheduled to repay the outstanding loan not later than June 30, 2000.

(11) Affiliate Relationships

The Smithsonian provides certain fiscal, procurement, facilities and administrative services to several separately incorporated affiliated organizations for which certain officials of the Smithsonian serve on the governing boards. The amounts paid to the Smithsonian by these organizations for the above services totaled \$164,000 of trust funds and \$70,000 of federal funds for fiscal year 1998.

Deposits held in custody for these organizations at September 30, 1998, were \$4,864,000 and were recorded in the trust funds.

The Friends of the National Zoo (FONZ), an independent 501(c)(3) organization, raises funds for the benefit of the Smithsonian's National Zoological Park. Funds received by the Smithsonian from FONZ are recorded as unrestricted revenue and totaled \$548,000 in fiscal year 1998.

(12) Commitments and Contingencies

(a) Leasing Activities

Leases for Smithsonian warehouse and office spaces provide for rent escalations to coincide with increases in property taxes, operating expenses attributable to the leased property and the Consumer Price Index. The Smithsonian has the authority to enter into leases for up to 30 years using federal funds.

The Smithsonian's operating leases for the warehouse and office spaces require future minimum lease payments as follows:

	_	(\$000s)
1999	S	13,066
2000		9.550
2001		9.291
2002		9.119
2003		8.240
Thereafter	_	29.549
Total	s	78 815

Rental expense for these operating leases totaled \$15,516,000 for fiscal year 1998.

(b) Government Grants and Contracts

The Smithsonian receives funding or reimbursement from governmental agencies for various activities which are subject to audit. Audits of these activities have been completed through fiscal year 1997, however, fiscal year 1997 has not been closed with the cognizant federal audit agency. Management believes that any adjustments which may result from this audit and the audit for fiscal year 1998 will not have a materially adverse effect on the Smithsonian's financial statements.

(c) Litigation

The Smithsonian is a party to various litigation arising out of the normal conduct of its operations. In the opinion of the Smithsonian's General Counsel, the ultimate resolution of these matters will not have a materially adverse effect on the Smithsonian's financial statements.

(13) Employee Benefit Plans

The federal employees of the Smithsonian are covered by either the Civil Service Retirement System (CSRS) or the Federal Employee Retirement System (FERS). The terms of these plans are defined in federal regulations. Under both systems, the Smithsonian withholds from each federal employee's salary the required salary percentage. The Smithsonian also contributes specified percentages. The Smithsonian's expense for these plans for fiscal year 1998 was \$15,959,000.

The Smithsonian has a separate defined contribution retirement plan for trust fund employees, in which substantially all such employees are eligible to participate. Under the plan, the Smithsonian contributes stipulated percentages of salary which are used to purchase individual annuities, the rights to which are immediately vested with the employees. Employees can make voluntary contributions, subject to certain limitations. The Smithsonian's cost of the plan for fiscal year 1998 was \$9,365,000.

In addition to the Smithsonian's retirement plans, the Smithsonian makes available certain health care and life insurance benefits to active and retired trust fund employees. The plan is contributory for retirees and requires payment of premiums and deductibles. Retiree contributions for premiums are established by an insurance carrier based on the average per capita cost of benefit coverage for all participants, active and retired, in the Smithsonian's plan. The inclusion of retirees in the calculation of average per capita cost results in a higher average per capita cost than would result if only active employees were covered by the plan. Therefore, the Smithsonian has a postretirement benefit obligation totaling \$6,097,000 at September 30, 1998, for the portion of the expected future cost of the retiree benefits that is not recovered through retiree contributions. The Smithsonian's policy is to fund the cost of these benefits on the pay-as-you-go-basis.

(14) Income Taxes

The Smithsonian is recognized as exempt from income taxation under the provisions of Section 501(c)(3) of the Internal Revenue Code (the Code). Organizations described in that section are taxable only on their unrelated business income. Periodical advertising sales is the main source of unrelated business income. An IRS determination letter has been received supporting the Smithsonian's taxexempt status. No provision for income taxes was required for fiscal year 1998.

It is the opinion of the Smithsonian's management that the Smithsonian is also exempt from taxation as an instrumentality of the United States as defined in Section 501(c)(1) of the Code. Organizations described in that section are exempt from all income taxation. The Smithsonian has not yet formally sought such dual status.

(15) Restructuring of Smithsonian Press / Smithsonian Productions Divisions

During fiscal year 1998, the Board voted to discontinue operations of three divisions of the Smithsonian Press/Smithsonian Productions auxiliary activity, including Smithsonian Books, Smithsonian Collection of Recordings, and Smithsonian Videos, effective April 1, 1998. Costs associated with the closure, include write-offs of inventory and accounts receivable, accruals for contractual product and fulfillment contract guarantees, guaranteed royalties and commissions, potential merchandise returns, litigation claims and severance costs. In fiscal year 1998, the total loss from operations and closure of the three divisions was \$4,791,000, the net effect of which is reported within auxiliary activities in the statement of financial activity.



