

ANNUAL REPORT

OF THE DIRECTOR
OF THE

MUSEUM OF COMPARATIVE
ZOOLOGY

AT HARVARD COLLEGE

1956—1957

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PRINTED AT THE UNIVERSITY
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PUBLICATION ISSUED BY OR IN CONNECTION
WITH THE
MUSEUM OF COMPARATIVE ZOOLOGY
AT HARVARD COLLEGE

BULLETIN (octavo) 1863 — The current volume is Vol. 118.

BREVIORA (octavo) 1952 — No. 86 is current.

MEMOIRS (quarto) 1864 — 1938 — Publication was terminated with Vol. 55.

JOHNSONIA (quarto) 1941 — A publication of the Department of Mollusks. Vol. 3, no. 35 is current.

OCCASIONAL PAPERS OF THE DEPARTMENT OF MOLLUSKS (octavo) 1945 — Vol. 2, no. 21 is current.

PROCEEDINGS OF THE NEW ENGLAND ZOÖLOGICAL CLUB (octavo) 1899-1948 — Published in connection with the Museum. Publication terminated with Vol. 24.

The continuing publications are issued at irregular intervals in numbers which may be purchased separately. Prices and lists may be obtained on application to the Director of the Museum of Comparative Zoology, Cambridge 38, Massachusetts.

Of the Peters "Check List of Birds of the World," volumes 1-3 are out of print; volumes 4 and 6 may be obtained from the Harvard University Press; volumes 5 and 7 are sold by the Museum, and future volumes will be published under Museum auspices.

Museum of Comparative Zoology

To the Dean of the Faculty of Arts and Sciences:

Sir, — I submit herewith the report of the Museum of Comparative Zoology for 1956-1957. The year has not been marked by any event of startling nature, but has, I think, been one of solid accomplishment in research, teaching, curatorial work, and other activities.

STAFF

The Museum loses by retirement at the end of this year one of its most valued staff members, Arthur Loveridge, Curator of Reptiles and Amphibians. Educated in Great Britain, Mr. Loveridge engaged in museum work in East Africa before coming to Cambridge in 1923. Over the years he has returned to Africa on collecting expeditions no less than five times. He is an outstanding authority on African reptiles and amphibians and in addition to numerous scientific monographs has published several delightful popular books describing his adventures in the field. He will be succeeded as curator by Dr. Ernest E. Williams, Assistant Professor in the Department of Biology and in General Education, whose special field of interest is turtles, living and extinct.

Dr. Donald Baird, who has served for three years as Assistant Curator of Vertebrate Paleontology, is leaving to accept a comparable position at Princeton University. As well as being an enthusiastic research worker, he has during this time done us a valuable service in greatly improving the state of our fossil vertebrate collections.

Mr. James A. Jensen and Mr. David S. Fuller have joined the preparation staff in vertebrate paleontology. To aid the current exhibition program, Mr. Joseph A. O'Leary has come to us from

MUSEUM OF COMPARATIVE ZOOLOGY

the Reading (Pennsylvania) Museum as a member of the preparation staff.

Dr. Mayr was awarded an honorary doctorate by the University of Uppsala last spring; Dr. Edinger was similarly honored by the University of Giessen. Dr. Carpenter is the national president-elect of the Society of the Sigma Xi, to take office as president at the end of 1958. Dr. Whittington was awarded the Bigsby Biennial Prize Medal by the Geological Society of London. Drs. Darlington, Whittington, and Chickering were awarded Guggenheim fellowships. Dr. Mayr, in addition to continuation of his services on a number of councils, committees, and advisory boards, was elected president of the American Ornithological Union, vice-president of the Nuttall Club, and an honorary member of the British Ornithological Club, was appointed to the editorial board of *Ergebnisse der Biologie* and a member of the zoology committee of the International Union of Biological Societies, and organized a symposium on species problems for the annual meeting of the American Association for the Advancement of Science. Dr. Turner is president this year of the American Malacological Union and was appointed a Research Associate of the University of Puerto Rico; both she and Dr. Clench have been named as consultants to the Natural Science Foundation of Philadelphia. Dr. Lyman was a Visiting Lecturer at the University of Toronto. Dr. Levi was elected to the board of governors of the Nature Conservancy.

In addition to the teaching of a very considerable number of advanced students, many of the staff members took part, as usual, in formal instruction in the Faculty of Arts and Sciences. Dr. Carpenter continued as chairman of the Department of Biology as well as teaching entomology. Drs. Whittington and Kummel gave courses in general and invertebrate paleontology, historical geology, stratigraphy and sedimentation in the Department of Geology. I taught in comparative anatomy, evolution, and vertebrate paleontology; Dr. Williams also taught in comparative anatomy and was in charge of the evolution course. Professor Patterson participated in the course in vertebrate paleontology and in

MUSEUM OF COMPARATIVE ZOOLOGY

that in general paleontology. Dr. Wilson taught in two Natural Science courses in the General Education program. Dr. Lyman repeated his course in the biology of mammals, and Dr. Mayr offered his course on systematics and evolution. Drs. Clench and Turner lectured in the invertebrate zoology course and the latter engaged in considerable informal teaching as well as some lecturing during a visit to the University of Puerto Rico.

For many years Dr. Williams and I had conducted a weekly seminar on vertebrate zoology in the fall term. This past spring Dr. Levi has conducted a similar seminar on invertebrate topics; the coming year the two will be combined as a full-year seminar on zoological and natural history problems in general.

RESEARCH

In mammals, Curator Lawrence has engaged in work on the origins of domestic dogs and, with Dr. A. Novick, on Philippine and Congo bats. For the past two years she has served as a member of the Committee of Archaeological Identifications of the National Research Council, and this year particularly has devoted considerable time to this project. Dr. Lyman, in his studies on hibernation, has continued study of the process of entering the hibernating state and on the effect of hibernation on mitosis and length of life of mammalian cells. Mr. Schevill continued study of cetacean acoustics and sound production at Woods Hole, made further measurements of cetacean swimming, and studied the distribution of the pothead whale (*Globicephala*).

Although Curator Greenway has carried the major editorial burden, Drs. Mayr and Paynter have also been active in the bird department's important project of completion of the *Check List of Birds of the World*. Volume 8 is close to completion and work on other volumes is in progress. Dr. Mayr has continued work on the cooperative research projects mentioned in last year's report and on his study of tropical snail populations, has prepared manuscripts for various symposia and conferences, and continued work on his book on "Animal Species and Evolution." Dr. Paynter,

MUSEUM OF COMPARATIVE ZOOLOGY

although devoting considerable time to exhibition work, studied the F. C. Smithe collections from Guatemala, edited contributions to the "Biological Investigations in the Selva Lacandona, Chiapas, Mexico," and was consulted by the U. S. Public Health Service regarding Central American birds; both Greenway and he assisted the work of the Massachusetts Encephalitis Survey.

During his final year with us Mr. Loveridge completed an annotated check list of all East African reptiles and amphibians, prepared revisionary studies of certain African snake genera, and compiled for publication a bibliography of all African reptiles and amphibians. Dr. Williams studied the zoogeography of *Anolis*, undertook, with Dr. Vanzolini of Sao Paulo, a study of chelid turtles, and reviewed broadly the development of vertebrae in lower vertebrates. Mr. Shreve has identified and reported on Mexican reptiles and amphibians collected by Dr. Paynter and is currently working on the considerable Costa Rican collection made by Dr. Carl Gans.

Dr. Bigelow and Mr. Schroeder completed a paper, now in press, on the sharks of the suborder Squaloidea, and are describing new skates from the Gulf of Mexico; Schroeder additionally is preparing a report on the lobsters and red crabs living in deep waters along the outer Atlantic Shelf and upper slope.

Dr. Carpenter prepared manuscript for the insect volume of the *Treatise on Invertebrate Paleontology* and studied Neuroptera from the Baltic amber and, for the Pacific Science Board, from Micronesia. Publication of Dr. Darlington's book on zoogeography is expected shortly. Dr. Brown made progress on three sections of the reclassification of ants, and finished two parts of the world revision of dacetine ants. Dr. Levi continued revision of the American spiders of the family Theridiidae, and finished work on the genera *Crustulina* and *Steatoda* and on *Achaearanea*, *Theridion* and *Sphyrotinus* from the West Indies, Mexico and Central America. Dr. Chickering spent the summer and other holidays at the Museum furthering his neotropical spider studies. Dr. Chapin finished his work on Micronesian scorpions and continued working on the coccinellid beetles of Colombia and Micronesia. Dr.

MUSEUM OF COMPARATIVE ZOOLOGY

Chapman pushed his studies of certain Old World army ants nearer completion. Dr. Fairchild carried forward his projects on two groups of neotropical Diptera of medical and veterinary importance. Dr. Wilson completed several sections of his revision of the classification of the ants of Melanesia, as well as a study of the evolution of legionary behavior in ants, and made field and laboratory observations and experiments on the behavior of ants and anole lizards.

In the Department of Mollusks, studies on Western Atlantic forms continue, with those of the family Cymatidae now in press and work on other groups well advanced. The land and freshwater shells collected by the "Galathea" from Rennell Island in the Solomons are being studied by Dr. Clench. Dr. Turner is continuing research on the world fauna of the destructive and economically important boring mollusks of the family Teredinidae. In addition she has started a monograph of the land and freshwater mollusks of Puerto Rico and the Virgin Islands. Dr. Bequaert, before leaving for a winter at the University of Houston, did further work on the marine mollusks of western Africa. Dr. Champion continued studies of North American land mollusks as well as giving much editorial aid on mollusk department publications. Mr. Johnson has nearly completed biobibliographical studies of Temple Prime and Augustus A. Gould, important malacologists of the last century; most of their type material is contained in the Museum collections.

In other areas of marine zoology, Dr. Deichmann has nearly completed work on the Dendrochirota series of the "Discovery" holothurians, worked with Dr. Bayer of the U. S. National Museum on the revision of studies of the West Indian Plexauridae, completed a report on the yellow plexaurids of the West Indies and Brazil, and is revising the Brazilian gorgonians. With Dr. Moulton of Bowdoin College she is preparing a report on the American spring lobsters omitted, due to lack of materials, by Holthuis in his 1946 monograph.

Among the vertebrate paleontologists, Professor Patterson has made further studies on Mesozoic Mammalia, South American

MUSEUM OF COMPARATIVE ZOOLOGY

fossil mammals, and the relationship of some of the insectivore groups. In her continued work in paleoneurology, Dr. Edinger this year has been especially interested in a Paleocene specimen in the Princeton collections which appears to be the oldest known bat brain endocast. Mr. van Frank has done further work on *Toxodon* material and Dr. Baird has continued his attempts to untangle the "who's who" of the important and interesting Linton Carboniferous tetrapod fauna. I completed and published a paper on the limb and girdles of the embolomere *Archeria* and studied the postcranial anatomy of the giant pelycosaur *Cotylorhynchus*. At long last my overlengthy tome on the Osteology of Reptiles has appeared.

By June, search of the necessary literature for the bibliography of non-North American vertebrate paleontology on which Miss Wright, Dr. Edinger and I have been long working, and with which Mr. van Frank has been occupied as well for the past three years, seemed so close to completion that it is planned that van Frank will start in the autumn to prepare the materials for publication. It is expected that the work will run to about 2600 pages. It is our fond hope that it will be a useful working tool for the paleontological profession.

Dr. Whittington completed studies on the ontogeny of trilobites and an introductory chapter on that group for the *Treatise on Invertebrate Paleontology*, together with a longer essay on the same subject for *Biological Reviews*. He further made a preliminary report on the limestone conglomerate of western Newfoundland and continued work on silicified trilobites from Virginia. Topics studied by Dr. Kummel included Triassic ammonoids and Jurassic nautiloids from New Zealand and paleogeographic problems of the Mesozoic system. He also advanced close to completion a volume on earth history.

EXPEDITIONS AND TRAVEL

In November Dr. Darlington left for a trip to Australia, planned to last somewhat more than a year, in search of carabid beetles.

MUSEUM OF COMPARATIVE ZOOLOGY

Dr. Whittington left at the end of January for a spring and summer of work in North Wales and study and collection of invertebrates at a number of European localities. In April Dr. Mayr and Professor Patterson left for Neuchatel to attend a conference on the evolution of parasites — Mayr to act as chairman of the conference, Patterson to discuss the evolution of the mammals who play host to these creatures. Patterson took the opportunity to study a number of European fossil collections before his return. After the conference Mayr visited a number of European institutes, took part in a conference in Uppsala on "Systematics of Today" in commemoration of the 250th anniversary of the birth of Linnaeus, and did field work in Italy with Professor Stresemann of Berlin and Dr. Kramer of Wilhelmshaven. Dr. Kummel did stratigraphic work in Libya and Egypt during the summer of 1956 and studied larger Foraminifera in collections in Rome. Mr. Schevill last year cruised some 2000 miles in the North Atlantic in search of cetaceans; last autumn he visited various institutes and museums in England and Germany and presented a paper on the use of underwater sound by cetaceans at an international navigational congress in Hamburg; his travels and studies were mainly supported by the Woods Hole Oceanographic Institution. Plans have been completed for Dr. Paynter to leave at the end of the summer in charge of a Harvard-Yale expedition in search of birds in the Himalayan regions of Nepal, India, and Pakistan.

A series of travels closer to home base may be noted. Last summer Dr. Whittington, with a grant from the Shaler Memorial Fund, collected trilobites and graptolites from Cambrian and Ordovician rocks of the south shore of the St. Lawrence River. Dr. Burnett made a fine collection of bats in the course of a trip to Mexico during the summer of 1956. Dr. Paynter, on the invitation of Mr. F. C. Smithe, spent with him most of March at Tikal, Peten, Guatemala, in collecting and making a preliminary survey of the avifauna of the region. He has agreed to identify the skeletal remains from this important archaeological site. This work should be a valuable aid to future studies of Central American birds.

MUSEUM OF COMPARATIVE ZOOLOGY

During the summer of 1956 exploration of Carboniferous continental deposits for amphibian remains was continued under National Science Foundation auspices. Nova Scotia was the area searched. Preparator Lewis was in charge, and, with Dr. and Mrs. Baird, Miss Wright, Mr. van Frank, and Mr. Jensen, spent two months in the field; my wife and I also worked for part of this period. As expected, results were poor for most of the season. Near its close, however, rich material was discovered in fossil tree stumps in the North Sydney coal fields. We wish to thank various Nova Scotia friends for aid and encouragement, notably the Nova Scotia Research Foundation, and the Nova Scotia Department of Mines and the Massachusetts Institute of Technology for hospitality at their summer geological field camp. The past spring Messrs. Lewis and Jensen worked for a time at the Thomas Farm locality in Florida, and made a reconnaissance of the phosphate beds farther south in the state; Professor Patterson, Mrs. Romer, and I worked with them for a short time. We are indebted to our friends at the University of Florida, particularly Dr. J. C. Dickinson, Jr., for their hospitality, and to Mr. Stanley Olsen of the Florida Geological Survey for advice on the southern localities.

COLLECTIONS

Although an immense amount of work still remains to be done to put our collections in efficient working order, nearly every department reports considerable progress in this direction. This is due to the constant faithful work of both curators and assistants on necessary, but often dreary and tedious, tasks. I would like on this occasion to mention especially the very valuable services of Mrs. Myvanwy Dick to the badly understaffed Department of Fishes.

A notable example in more efficient use of space is the work in progress in invertebrate paleontology where, by substituting shallow drawers for the needlessly deep ones formerly used, the amount of possible storage in the space available has been nearly doubled.

MUSEUM OF COMPARATIVE ZOOLOGY

The Museum's policy is to avoid needless increase in the volume of its collections, but on the other hand representation of a wide range of forms for comparative studies is highly desirable. In this connection, Mr. Loveridge, I am sure, may have felt some justifiable pride in noting, in his final report for the Department of Reptiles and Amphibians, that during the period since 1923-1924 when he took charge of the collections, the number of species and races represented has nearly doubled, increasing from 3514 to 6661.

I wish it were possible to express here our thanks for each and every gift received during the year, but space permits me to mention only a few of the larger gifts, such as: approximately 2000 bird skins from the Phillips Estate Collection; 250 specimens of Central American birds from Mr. F. C. Smithe; a valuable collection of bird skeletons from Chiapas, Mexico, from Senor Miguel Alvarez del Toro; Canadian amber insects collected by Mr. William L. Legg, given by Mrs. Bruce Mathai of Baltimore; gifts of African reptiles and amphibians from Mr. C. J. P. Ionides and Father M. C. Lesage and important mollusk materials given by Dr. Jeanne Schwengel, David and Nevada Schmidt, Mrs. Amy Phares, and Mrs. Germaine Warmke; an insect collection made by the late Norman S. Easton of Fall River; and Brazilian Lepidoptera and Coleoptera from Professor C. M. de Biezanko.

Various friends of the Museum and students have volunteered services in work on the collections. Notably Professor W. T. M. Forbes has spent much time on our collections of moths and butterflies, Dr. R. Crabill on the centipedes and millipeds, and Messrs. Joseph Rosewater and Robert Robertson have done much volunteer work in the Mollusk Department.

LIBRARY

Despite the fact that the library budget is, of necessity, well below the level which this department of the Museum deserves, it has, under Miss Mackenzie's efficient management, been able to keep well abreast of work on new materials. Of necessity, how-

MUSEUM OF COMPARATIVE ZOOLOGY

ever, little can be done in catching up on arrearages of work due to even smaller budgets of earlier years. Most worrisome is the fact that there are large accumulations of unbound journals subject to slow deterioration in their present condition.

Much progress has been made in coordinating the efforts of the various biological libraries and the College Library to give a more efficient distribution of the University's library resources in biology. With the expansion of their library area, the Biological Laboratories have been able to accommodate about 1000 volumes of journals, mainly of a physiological nature, which had been in the Museum collections but which are more advantageously placed for use in the Laboratories. Integration of efforts in book purchases has already been undertaken, and progress has been made in elimination of unnecessary expense in duplication of journal purchases and binding. The Museum made further progress in the building up of the geological collections. However pressure of work in Widener Library has delayed the planned transfer to us of geological journals and certain zoological books, and, on our part, work pressures have similarly slowed up our integration of geological works already transferred.

At present we currently receive 2379 journals, few of which are present elsewhere in the Harvard collections, and of which a large proportion are not to be found in any other New England library. Fortunately, most are received by exchange for the *Bulletin* and *Breviora*, and only 17.5% are purchases. Our current holdings in volumes and catalogued pamphlets are 233,105.

PUBLICATIONS

In 1955-1956, by chance, *Bulletin* and *Breviora* papers published during the twelve months totalled but 459 pages. This past year, in contrast, 1314 pages were published in these two journals under Miss Wright's editorship, 162 pages as numbers 59 to 78 of *Breviora* and 1152 pages of *Bulletin* material — the latter including a concluding number of volume 114, and papers in volumes 115 and

MUSEUM OF COMPARATIVE ZOOLOGY

116. The Mollusk Department published two numbers of *Occasional Papers* and the Museum subsidized eleven papers published in *Psyche*.

EXHIBITS

As noted last year, it has been necessary to consider carefully our public exhibits, to which little attention has been given for nearly three decades. Drs. Lyman, Paynter, and Baird acted with me as a committee to formulate a general program of revision. It was decided that eventually all exhibits would be concentrated on the third floor, bringing the paleontological material up from their present isolated position in a first floor "pocket," and arranging the specimens of living animals in a systematic rather than faunal pattern; all this with an attempt, as the work goes on, to present the materials in a more instructive and attractive fashion. It is hoped that this may be accomplished without drawing on the regular Museum budget for funds, and several gifts already received have enabled us to initiate this revision. Work on the skeleton of the great plesiosaur *Kronosaurus*, in charge of Preparator Arnold Lewis, has proceeded to the point where it is expected that this impressive mount will be opened to the public this coming winter, and the revision of the display of the Thayer Collection of North American birds, ably directed by Dr. Paynter, is close to completion.

ALFRED S. ROMER
Director

MUSEUM OF COMPARATIVE ZOOLOGY

FACULTY, 1957-1958

- NATHAN MARSH PUSEY, PH.D., LL.D., L.H.D., President.
HENRY BRYANT BIGELOW, PH.D., S.D. (*hon.*), PH.D. (*hon.*).
ALFRED SHERWOOD ROMER, PH.D., S.D., (*hon.*).
GEORGE CHEEVER SHATTUCK, M.D., A.M. (*hon.*).

STAFF, 1957-1958

- ALFRED SHERWOOD ROMER, PH.D., S.D., (*hon.*), Director, Alexander Agassiz Professor of Zoology, and Curator of Vertebrate Paleontology.
HENRY BRYANT BIGELOW, PH.D., S.D. (*hon.*), Research Oceanographer, Retired.
LOUIS CARYL GRATON, PH.D., Sturgis Hooper Professor of Geology, Emeritus.
FRANCIS BIRCH, PH.D., Sturgis Hooper Professor of Geology.
FRANK MORTON CARPENTER, S.D., Alexander Agassiz Professor of Zoology, and Curator of Fossil Insects.
ERNST MAYR, PH.D., Alexander Agassiz Professor of Zoology, and Professor of Zoology.
BRYAN PATTERSON, A.M. (*hon.*), Alexander Agassiz Professor of Vertebrate Paleontology, and Professor of Vertebrate Paleontology.
JOSEPH CHARLES BEQUAERT, DR. PHIL., Head Curator of Recent Insects, Retired.
MARLAND PRATT BILLINGS, PH.D., Curator of the Geological Museum.
WILLIAM JAMES CLENCH, PH.D., S.D. (*hon.*), Curator of Mollusks.
PHILIP JACKSON DARLINGTON, JR., PH.D., Fall Curator of Coleoptera, and Curator of Recent Insects.
ELISABETH DEICHMANN, PH.D., Curator of Marine Invertebrates.
TILLY EDINGER, DR. PHIL. NAT., S.D. (*hon.*), Research Paleontologist.
JAMES COWAN GREENWAY, JR., A.B., Curator of Birds.
LUDLOW GRISCOM, A.M., Research Ornithologist, Retired.

MUSEUM OF COMPARATIVE ZOOLOGY

- COLUMBUS O'DONNELL ISELIN, II, A.M., S.D. (*hon.*), Research Oceanographer.
- ARTHUR LOVERIDGE, Curator of Reptiles and Amphibians, Retired.
- BARBARA LAWRENCE SCHEVILL, A.B., Curator of Mammals.
- HARRY BLACKMORE WHITTINGTON, PH.D., D.Sc., Curator of Invertebrate Paleontology.
- ERNEST EDWARD WILLIAMS, PH.D., Curator of Reptiles and Amphibians.
- WILLIAM LOUIS BROWN, JR., PH.D., Associate Curator of Insects.
- WILLIAM GEORGE FOWLE HARRIS, Associate Curator of Oology.
- BERNHARD KUMMEL, PH.D., Associate Curator of Invertebrate Paleontology.
- RAYMOND ANDREW PAYNTER, JR., PH.D., Associate Curator of Birds.
- WILLIAM CHARLES SCHROEDER, Associate Curator of Fishes.
- CHARLES PEIRSON LYMAN, PH.D., Research Associate in Mammalogy.
- WILLIAM EDWARD SCHEVILL, A.M., Research Associate in Zoology.
- RUTH DIXON TURNER, PH.D., Research Associate in Malacology, and Alexander Agassiz Fellow in Oceanography and Zoology.
- PATRICIO SANCHEZ, M.D. Research Fellow.
- GERD VON WAHLERT, DR.RER.NAT., Research Fellow.
- HERBERT WALTER LEVI, PH.D., Assistant Curator of Arachnology.
- BENJAMIN SHREVE, Research Assistant.
- NELDA EMELYN WRIGHT, M.A., Research Assistant, and Editor of Publications.
- CHARLES HENRY BLAKE, PH.D., Associate in Ornithology.
- ARTHUR JAMES BOUCOT, PH.D., Associate in Invertebrate Paleontology.
- MERRILL EDWIN CHAMPION, M.D., M.P.H., Associate in Mollusks.
- EDWARD ALBERT CHAPIN, PH.D., Associate in Entomology.
- JAMES WITTENMEYER CHAPMAN, Sc.D., Associate in Entomology.
- ARTHUR MERTON CHICKERING, PH.D., Associate in Arachnology.
- HAROLD JEFFERSON COOLIDGE, JR., S.B., Associate in Mammalogy.
- ALEXANDER GRAHAM BELL FAIRCHILD, PH.D., Associate in Entomology.

MUSEUM OF COMPARATIVE ZOOLOGY

- WILLIAM CAMERON FORBES, A.B., LL.D., Associate to Collect Specimens in Natural History.
- RICHARD WINSLOW FOSTER, A.B., Associate in Mollusks.
- RICHARD IRWIN JOHNSON, A.B., Associate in Mollusks.
- EDWARD HARLAN MICHELSON, PH.D., Associate in Mollusks.
- GEORGE MITCHELL MOORE, PH.D., Associate in Mollusks.
- NATHAN WENDELL RISER, PH.D., Associate in Mollusks.
- HENRY SETON, A.M., Associate in Vertebrate Paleontology.
- ROBERT RAKES SHROCK, PH.D., Associate in Invertebrate Paleontology.
- EMERY FREDERICK SWAN, PH.D., Associate in Marine Invertebrates.
- THEODORE ELMER WHITE, PH.D., Associate in Vertebrate Paleontology.
- EDWARD OSBORNE WILSON, PH.D., Associate in Entomology.
- GEORGE NELSON, Preparator in Chief, Retired.
- ARNOLD DAVID LEWIS, Preparator.
- CONSTANCE LOUISE DOLPHIN, A.B., Assistant Preparator.
- JAMES ALVIN JENSEN, Assistant Preparator.
- BERTRAM ALROY JOHNSTON, Assistant Preparator.
- JOSEPH O'LEARY, Assistant Preparator.
- DAVID FULLER, Assistant Preparator.
- NANCY JO BUFFLER, B.A., Assistant.
- FRANCES LOWELL BURNETT, PH.D., Assistant.
- MYVANWY MILLAR DICK, Assistant.
- LORNA ROSE LEVI, B.A., Assistant.
- HELEN MARIANNE VAITAITIS, Assistant.
- RICHARD VAN FRANK, A.B., Assistant.
- DOROTHY HUGHES MARSH, Artist.
- PATRICIA MARY WASHER, B.S., Artist.
- RUTH WOOD NORTON, A.B., Secretary to the Director.
- CATHERINE MCGEARY, Staff Secretary.
- MARILYN BELL, B.A., Secretary to the Bird Department.
- JESSIE BELL MACKENZIE, A.B., Librarian.
- LOUISE HOAGLAND CROZIER, Assistant Librarian.
- BARBARA PESCOSOLIDO, Assistant in Library.
- NELLIE COLLIER, Assistant in Library.

MUSEUM OF COMPARATIVE ZOOLOGY

NANCY DAY, A.B., Assistant in Library.

LYA WAGNER, Cataloguer.

MAXWELL LESLIE FRENCH, Staff Assistant.

PUBLICATIONS FOR THE YEAR 1956-1957

The following have been printed under Museum auspices during the year from July 1, 1956 to June 30, 1957.

BREVIORA

- No. 59. A new subgenus of *Chamaeleo* from Rhodesia and new race of *Mabuya* from Kenya Colony. By Arthur Loveridge. 4 pp. September 12, 1956.
- No. 60. A new species of *Agriognatha* from Jamaica, B.W.I. By Arthur M. Chickering. 7 pp. September 12, 1956.
- No. 61. On regeneration by earthworms of a species of the lumbricid genus *Dendrobaena* Eisen 1874. By G. E. Gates. 6 pp. September 14, 1956.
- No. 62. A third leaf-nosed species of the lizard genus *Anolis* from South America. By James A. Peters. 8 pp. October 3, 1956.
- No. 63. New bathyal Isopoda from the Caribbean with observations on their nutrition. By Robert J. Menzies. 10 pp. October 11, 1956.
- No. 64. Rare species of Copepoda, Calanoidea, taken from the Izu region. By Otohito Tanaka. 8 pp. October 11, 1956.
- No. 65. A new species of *Agriognatha* (Araneae, Argiopidae) from Panama. By Arthur M. Chickering. 7 pp. November 20, 1956.
- No. 66. The Caninae of the Thomas Farm Miocene. By Stanley J. Olsen. 12 pp. November 27, 1956.
- No. 67. Notes on certain species of *Tetragnatha* (Araneae, Argiopidae) in Central America and Mexico. 4 pp. January 31, 1957.
- No. 68. The genus *Tetragnatha* (Araneae, Argiopidae) in Jamaica, B.W.I., and other neighboring islands. By Arthur M. Chickering. 15 pp. January 31, 1957.
- No. 69. A new zodariid spider from Panama. By Arthur M. Chickering. 7 pp. January 31, 1957.
- No. 70. "Anguimorph" tooth replacement in *Amphisbaena alba*

MUSEUM OF COMPARATIVE ZOOLOGY

- Linnaeus, 1758, and *A. fuliginosa* Linnaeus, 1758 (Reptilia: Amphisbaenidae). By Carl Gans. 12 pp. January 31, 1957.
- No. 71. Taxonomic notes on the New World forms of *Trogodytes*. By Raymond A. Paynter, Jr. 15 pp. March 29, 1957.
- No. 72. Is the ant genus *Tetramorium* native in North America? By W. L. Brown, Jr. 8 pp. March 29, 1957.
- No. 73. Additions to the mammalian fauna of Peru and notes on some other Peruvian mammals. By Oliver P. Pearson. 7 pp. March 29, 1957.
- No. 74. The discovery of cerapachyine ants on New Caledonia, with the description of new species of *Phyracaces* and *Sphinctomyrmex*. By E. O. Wilson. 9 pp. May 1, 1957.
- No. 75. On a new octochaetine earthworm supposedly from Guatemala. By G. E. Gates. 8 pp. May 1, 1957.
- No. 76. Two new land and freshwater mollusks from New Guinea. By William J. Clench. 4 pp. June 18, 1957.
- No. 77. *Dacotinops*, a new ant genus from New Guinea. By W. L. Brown, Jr. and E. O. Wilson. 7 pp. June 21, 1957.
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Vol. 114

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Vol. 115

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MUSEUM OF COMPARATIVE ZOOLOGY

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Vol. 2

No. 20. The eastern Pacific marine mollusks described by C. B. Adams. By R. D. Turner. Pp. 21-133. September 22, 1956.

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Vol. 63

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MUSEUM OF COMPARATIVE ZOOLOGY

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