

ANNUAL REPORT OF THE
MARINE MAMMAL COMMISSION, CALENDAR YEAR 1982
A REPORT TO CONGRESS

Woods Hole Oceanographic Institution
Woods Hole Oceanographic Institution

Marine Mammal Commission
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CHAPTER I

INTRODUCTION

Background

This is the tenth Annual Report of the Marine Mammal Commission, covering the period from 1 January through 31 December 1982. It is being submitted to Congress pursuant to Section 204 of the Marine Mammal Protection Act of 1972.

Established under Title II of the Act, the Marine Mammal Commission is an independent agency of the Executive Branch. It is charged with the responsibility for developing, reviewing, and making recommendations on actions and policies of all Federal agencies with respect to marine mammal protection and conservation.

Personnel

Three Commissioners, appointed by the President in 1981, continued to serve throughout 1982. They are: Dr. James C. Nofziger (Chairman), Canoga Park, California; Dr. Donald K. MacCallum, Ann Arbor, Michigan; and Dr. Robert B. Weeden, Fairbanks, Alaska. The Commission's senior staff members are: John R. Twiss, Jr., Executive Director; Robert J. Hofman, Scientific Program Director; Robert Eisenbud, General Counsel; and JoAnn Lashley, Administrative Officer.

On 10 December 1982, Congress amended the Marine Mammal Protection Act to require that all future members of the Commission be appointed "by and with the advice and consent of the Senate." This provision, signed into law by the President on 29 December 1982, does not affect the status of the current Commissioners.

The Commission Chairman, with the concurrence of the other Commissioners, appoints the nine members of the Committee of Scientific Advisors on Marine Mammals, a committee of scientists knowledgeable in marine ecology and

marine mammal affairs, At the end of 1982, its members were: Dr. David G. Ainley, Point Reyes Bird Observatory; Dr. Douglas G. Chapman (Chairman), University of Washington; Dr. Douglas P. DeMaster, National Marine Fisheries Service, Southwest Fisheries Center; Dr. Daryl P. Domning, Howard University; Dr. L. Lee Eberhardt, Pacific Northwest Laboratory, Battelle Memorial Institute; Dr. Bruce R. Mate, Oregon State University; Dr. James G. Mead, National Museum of Natural History, Smithsonian Institution; Dr. William Medway, University of Pennsylvania; and Dr. William F. Perrin, National Marine Fisheries Service, Southwest Fisheries Center. During 1982, five other scientists completed their terms of service on the Committee. They are: Dr. Daniel B. Botkin, University of California at Santa Barbara; Dr. Paul K. Dayton, Scripps Institution of Oceanography; Dr. Joseph R. Geraci, University of Guelph; Dr. Daniel K. Odell, University of Miami; and Dr. Katherine Ralls, Smithsonian Institution.

Funding

The Marine Mammal Commission came into existence during the second half of Fiscal Year (FY) 1974 and was appropriated \$412,000 for that period. Subsequent appropriations were: \$750,000 for FY 75; \$900,000 for FY 76; \$1,000,000 for FY 77; \$900,000 for FY 78; \$702,000 for FY 79; \$940,000 for FY 80; \$734,000 for FY 81; and \$672,000 for FY 82. In FY 83, the Commission was appropriated \$822,000 by the Senate and House Appropriations Committees, which directed that a major portion of the program funds be used to support critically important work on the Hawaiian monk seal and southern sea otter. Further discussion of these species is included in Chapter II, Research and Studies Program, and Chapter VI, Species of Special Concern.

CHAPTER II

RESEARCH AND STUDIES PROGRAM

The Marine Mammal Protection Act requires that the Commission maintain a continuing review of research programs conducted or proposed to be conducted under the authority of the Act, undertake or cause to be undertaken such other studies as it deems necessary or desirable in connection with marine mammal conservation and protection, and take every step feasible to prevent wasteful, duplicative research. To accomplish these tasks, the Commission: conducts an annual survey of Federally-funded marine mammal research; reviews and recommends steps that should be taken to prevent duplication and improve the marine mammal research programs conducted or supported by the National Marine Fisheries Service, the Fish and Wildlife Service, the Minerals Management Service, and other Federal agencies; convenes meetings and workshops to review, plan, and coordinate marine mammal research; and contracts for studies to help define and develop solutions to domestic and international problems affecting marine mammal and habitat conservation so as to complement the other agencies' activities.

Survey of Federally-Funded Marine Mammal Research

Research directly or indirectly relevant to the conservation and protection of marine mammals and their habitats is conducted or supported by a broad range of Federal departments and agencies. To determine the precise nature of this research and how it can be used to facilitate marine mammal conservation and protection, and to prevent wasteful duplication, the Commission annually requests and reviews information on the marine mammal research programs being conducted, supported, or planned elsewhere in the Federal Government.

In 1982, the Commission requested information from eighteen Federal departments and agencies. Responses are not due until early in 1983, but at least thirteen agencies are known to be conducting or supporting research relevant to the conservation and protection of marine mammals. Those organizations are: the Department of State; the Minerals

Management Service; the National Institutes of Health; the National Marine Fisheries Service; the National Park Service; the Naval Ocean Systems Center; the North Pacific Fishery Management Council; the Office of Naval Research; the Smithsonian Institution; the U.S. Air Force; the U.S. Fish and Wildlife Service; and the U.S. Geological Survey. The Minerals Management Service, the National Marine Fisheries Service, and the Fish and Wildlife Service have the largest and most diverse marine mammal research programs.

As a result of past Commission efforts, duplication of research is no longer considered a problem, but certain programs could benefit from better integration or coordination to meet information needs more effectively and economically. As an example, the offices of the Minerals Management Service are supporting regional marine mammal research projects that would benefit from better coordination with related marine mammal projects being conducted or supported by the Fish and Wildlife Service and/or the National Marine Fisheries Service.

When all of the information from the 1982 survey is compiled and verified, the Commission, in consultation with its Committee of Scientific Advisors, will evaluate the information and, as appropriate, recommend steps that should be taken to better develop, focus, and coordinate agency programs.

Research Program Reviews, Workshops, and Planning Meetings

In 1982, the Commission, in consultation with its Committee of Scientific Advisors, reviewed, commented on, and/or made recommendations concerning: the overall scope of Federally-funded marine mammal research; the National Marine Fisheries Service's tuna-porpoise, bottlenose dolphin, Hawaiian monk seal, California coastal marine mammal, and North Pacific fur seal research programs; the bowhead whale research programs being conducted and/or supported by the National Marine Fisheries Service and the Minerals Management Service; the latter's Regional Environmental Studies Program; and the Fish and Wildlife Service's manatee and sea otter research programs. The Commission also convened or participated in meetings and workshops to: better define the nature and scope of research programs needed to determine what more can be done to conserve and protect the West Indian manatee, the southern sea otter, and the bowhead whale; identify research programs needed to conserve and protect marine mammals in

outer continental shelf lease sale areas in the Gulf of Mexico; identify research needs and the optimal U.S. research program relative to the conservation and protection of living resources, including whales and seals, in the oceans surrounding Antarctica; review the National Marine Fisheries Service's tuna-porpoise and California coastal marine mammal research programs; and review and evaluate ongoing research related to the conservation of the North Pacific fur seal. Details of these activities, and the resulting recommendations, are provided elsewhere in this Report.

Commission-Sponsored Research and Study Projects

The Departments of Commerce and the Interior have primary responsibility under the Marine Mammal Protection Act for acquiring the biological and ecological data needed to protect and conserve marine mammals and the ecosystems of which they are a part. This responsibility has been delegated to the National Marine Fisheries Service and the Fish and Wildlife Service, respectively.

As noted earlier, the Commission convenes workshops and contracts for research and studies to identify and evaluate threats to marine mammal populations and supports, within its budget limitations, other research it deems necessary. Since it was established, the Commission has contracted for more than 300 projects ranging in amounts from several hundred dollars to \$128,000. The average contract cost has been approximately \$8,000. Total contract amounts were: \$258,787 in FY 74; \$446,628 in FY 75; \$479,449 in FY 76; \$132,068 in the FY 76-77 three-month transition period; \$523,504 in FY 77; \$407,678 in FY 78; \$219,897 in FY 79; \$391,000 in FY 80; \$173,652 in FY 81; and \$197,117 in FY 82.

In many cases, the Commission's investment in research activities is in the form of transfers of funds to other Federal agencies, particularly the National Marine Fisheries Service and the Fish and Wildlife Service. When such transfers are made, they are accompanied by detailed scopes of work which describe precisely what the agency is to do or have done. They also include requirements for reporting on progress to the Commission. In many instances, this approach has been used to enable the agencies to start needed research, at a time when it might not otherwise be possible for them to do so, on the understanding that the agency itself will continue project support as long as necessary. The Commission also believes that it is valuable to maintain agency involvement to the greatest extent possible and that such transfers provide a useful means of doing so.

Contract work undertaken by the Commission in 1982 is summarized below. Final reports from Commission-sponsored studies completed in 1982 and earlier are available from the National Technical Information Service and are listed in Appendix B of this Report. Papers based on Commission-sponsored research that have been published elsewhere are listed in Appendix C.

Survey of Federally-Funded Marine Mammal Research
(G. H. Waring, Southern Illinois University)

The Commission conducts an annual survey to identify marine mammal research conducted or supported by Federal agencies. At the end of 1982, the contractor was beginning to organize and summarize information provided by the agencies on their FY 82 and FY 83 marine mammal research programs. After the completed report has been sent to the agencies for verification of the data contained therein, the Commission, in consultation with its Committee of Scientific Advisors, will review the information and, as appropriate, recommend actions to better develop, orient, and coordinate agency research programs. Copies of the final report will be provided to all agencies and will also be available through the National Technical Information Service.

Preparation for the Fifth Meeting of the Ad Hoc Group
of U.S. Antarctic Scientists
(K. A. Green Hammond, Ecosystem Modeling, Inc.)

Pursuant to the international Convention on the Conservation of Antarctic Marine Living Resources, a Commission, a Scientific Committee, and an Executive Secretariat were established to facilitate implementation of the Convention, and headquarters were set up in Hobart, Tasmania, Australia. The first meetings of the Commission and Scientific Committee were held in Hobart from 24 May to 11 June 1982. Although the next meetings have not yet been scheduled, they probably will be held in Hobart in the late spring or early fall of 1983. To help prepare for these meetings, the National Oceanic and Atmospheric Administration, in consultation with the Marine Mammal Commission, the Department of State, and the National Science Foundation, is planning a fifth meeting of U.S. scientists in February 1983 to consider and provide advice on scientific issues bearing upon effective implementation and operation of the Convention. In support of these efforts, the Commission has contracted with Dr. Green Hammond to help organize the meeting and prepare the report. The report will be provided to the U.S. delegation to assist in preparing for the next Commission and Scientific Committee meetings.

Evaluation of Pinniped and Seabird Species as Possible Indicators of Changes in the Abundance of Antarctic Krill
(K. A. Green Hammond, Ecosystem Modeling, Inc.)

The Convention on the Conservation of Antarctic Marine Living Resources requires that harvesting of these resources be managed so as to prevent the depletion of dependent as well as harvested species and to maintain the basic structure and dynamics of the Southern Ocean ecosystem. It would be prohibitively costly and perhaps impossible to assess and monitor the status of every species or population that could be affected directly or indirectly by harvesting or related activities. Therefore, one of the initial tasks of the Commission and Scientific Committee established by the Convention will be to determine which species, populations, or population parameters are most likely to change in direct or indirect response to harvesting and to design and implement appropriate monitoring programs. To help facilitate these determinations, the contractor is compiling and evaluating available data on the demography and dynamics of pinniped and seabird populations in the Antarctic and elsewhere to determine whether one or more pinniped or seabird species might serve as an indirect indicator of harvest-caused changes in the size of Antarctic krill populations. The project report is expected to be completed in the spring of 1983 and will be provided to the U.S. delegation to help prepare for the next meetings of the Commission and Scientific Committee.

Mitigation of Marine Mammal-Fisheries Conflicts in the Columbia River and Elsewhere
(National Marine Fisheries Service)

During a Commission-sponsored workshop held in October 1981, participants identified a number of measures that might be useful for avoiding or mitigating marine mammal-fisheries conflicts in the Columbia River and elsewhere. However, there was not sufficient time or information available to determine and describe the precise types of research and monitoring programs needed to test and evaluate the possible mitigation measures which were identified. Therefore, in 1982, the Commission transferred funds to the National Marine Fisheries Service to support development of a detailed research and studies plan. The National Marine Fisheries Service contracted with the Washington Department of Game to develop the study plan which is expected to be completed early in 1983. The Commission, in consultation with its Committee of Scientific Advisors, will review the plan and, as appropriate, recommend that it be adopted and implemented by the National Marine Fisheries Service.

Workshop on Marine Mammal-Fisheries Interactions in
the Bering Sea
(North Pacific Fishery Management Council)

In 1979, the Commission provided funds to the North Pacific Fishery Management Council to help support a review of available data on the status, feeding habits, and habitat requirements of marine mammals in the Bering Sea. The review was conducted by the Alaska Department of Fish and Game under contract to the North Pacific Fishery Management Council and was completed in 1982. The report identifies a number of data gaps and recommends, among other things, that a workshop be held to determine how best to obtain needed data and how available data can be used to improve and coordinate management plans for marine mammals and fisheries in the Bering Sea. A steering group has been constituted to plan the workshop (see Chapter IV) and the Commission has transferred funds to the North Pacific Fishery Management Council to help underwrite a portion of the costs. The workshop results will be reviewed by the Commission, the North Pacific Fishery Management Council, and other interested parties to determine what further actions can and should be taken to develop ecologically sound management strategies for both marine mammal and fish populations in the Bering Sea.

Incidental Take of Marine Mammals in California Gill
Net Fisheries
(California Department of Fish and Game)

Recent studies in Monterey Bay and other coastal areas of California indicate that several species of marine mammals, as well as marine birds and non-target fish species, are being taken incidentally in gill net fisheries, such as those for shark, halibut, and croaker. There is a need to document the nature and extent of this incidental take and, more importantly, to determine what additional measures may be needed to avoid or reduce it. The California Department of Fish and Game has begun to develop and implement an appropriate assessment program. In addition, the National Marine Fisheries Service, the Fish and Wildlife Service, the Minerals Management Service, and several non-governmental organizations are conducting, supporting, or planning programs which are providing or could provide supplemental data. To facilitate data collection and assure that full benefit is gained from the separate studies, the Commission has provided funds to the California Department of Fish and Game to augment the ongoing studies and to determine how programs being conducted, supported, or planned by other

organizations might be used to expedite acquisition of needed data. Preliminary assessments and a comprehensive program plan are expected to be completed by spring 1983 and will be reviewed by the Commission, in consultation with its Committee of Scientific Advisors, to determine whether additional measures may be needed to resolve the problem.

On-Site Assessment of Potential Sea Otter Translocation Sites in Washington, Oregon, and California
(Fish and Wildlife Service)

The Southern Sea Otter Recovery Plan recommends that at least one colony of southern sea otters be established outside the current range in California to assure that all or a substantial portion of the population cannot be affected simultaneously by an oil spill or similar catastrophic event in or near the population's current range. To assist in determining and evaluating sites where additional colonies might be established, the Fish and Wildlife Service, acting on a Commission recommendation, contracted with a consulting firm to compile and map readily available biological, ecological, and socio-economic information relevant to the selection and evaluation of potential translocation sites (see page 9 in the Annual Report for Calendar Year 1981). While it was possible for the contractor to tentatively identify a number of possible sites based on a careful examination of available data, published reports, and other sources, the Commission considered it important that the contractor also be able to verify these findings with benefit of on-site examinations as the project nears completion. Therefore, the Commission provided supplemental funding for on-site examination of those areas identified as potential translocation sites. Insight and data obtained during these site visits will be incorporated into the final project report which will be finished early in 1983.

Computer Entry of Farallon Islands Elephant Seal Data
(National Marine Fisheries Service, Southwest Fisheries Center)

Northern elephant seals, California sea lions, and harbor seals have recently reestablished breeding populations on the Farallon Islands. This offers a unique opportunity to determine how populations interact and reestablish themselves after depletion and may provide valuable insight into the demography and dynamics of pinniped populations in general.

From 1974 to 1979, the Commission provided support for periodic population surveys and behavior studies. From 1979 through 1982, the National Marine Fisheries Service provided support to continue the studies and a substantial amount of data, particularly on the northern elephant seal population, was acquired. By 1982, it was clear that the elephant seal data were sufficient to necessitate computer entry for efficient storage, retrieval, and evaluation. Since the National Marine Fisheries Service was unable to provide the funds needed to organize the data, develop the necessary computer programs, and enter the data into the computer, the Commission transferred funds to the Service for those purposes.

Radio-Tagging Humpback Whales in and near Glacier Bay, Alaska
(National Marine Fisheries Service)

Late in 1980, the National Park Service transferred funds to the National Marine Fisheries Service to develop and support a research program to determine whether vessel traffic or other factors were causing humpback whales to avoid entering or staying in the Glacier Bay National Park (see Chapter VI of this Report for additional information). The studies carried out during the summer of 1981 did not provide sufficient information to answer all relevant questions. At a program review held by the Commission in December 1981, participants recommended that additional interdisciplinary studies using radio and sonic tracking devices, sound playback experiments, behavioral observations, and environmental sampling be conducted to develop a better basis for decision-making. The National Park Service was unable to provide sufficient funds to fully support recommended radio-tracking and other studies and the Commission transferred funds to the National Marine Fisheries Service to purchase a full complement of radio tags for the tagging work. One whale was tagged and followed periodically for two weeks and three other whales were successfully tagged just prior to the end of the 1982 field season. Contractors' reports are due in April 1983 and will be used to assist in determining whether restrictions on vessel traffic are necessary to assure the continued well-being of humpback whales in Glacier Bay and adjacent waters.

Demography and Behavior of Gray Whales in Laguna San Ignacio, Baja California Sur, Mexico
(M. L. Jones and S. L. Swartz, Cetacean Research Associates)

Whale-watching, exploration for and subsequent development of offshore oil and gas resources, and other human activities may adversely affect gray whales in the lagoons of Baja

California where they calve and breed. During the past five years, the contractors, with the support of the Commission and others, have collected information on the number and behavior of gray whales and their interactions with humans in Laguna San Ignacio. Although these data were evaluated and reported in both English and Spanish after each field season, it was decided that it would be desirable to integrate and assess the data from all years to assist in determining whether additional measures were needed to protect the whales and/or the calving/breeding lagoons. The Commission, therefore, provided additional support for the contractors to synthesize and evaluate the data collected over the past five field seasons and to recommend such additional research and management actions as seem appropriate. The summary report and recommendations, expected to be completed early in 1983, will be used, as appropriate, as a basis for recommendations to the National Marine Fisheries Service, Department of State, or other agencies with responsibilities relevant to the protection of gray whales and their habitat.

Workshop on the Biology and Status of Right Whales
(New England Aquarium)

Although commercial hunting of right whales has been prohibited since the mid-1930's, there is uncertainty as to whether various populations or stocks are increasing, decreasing, or stable. At its 1982 meeting, the Scientific Committee of the International Whaling Commission recommended that a workshop be held prior to its next meeting to assess available data concerning the status of various right whale populations, particularly those in the Okhotsk/Sea of Japan, the northwest Atlantic, the southwest Atlantic, and Australasia. The New England Aquarium subsequently agreed to organize and host the meeting, and the Marine Mammal Commission, the International Whaling Commission, and other organizations have provided funds to cover costs. The workshop will be held in late May/early June 1983 and the resulting report is to be available for consideration during the 1983 meeting of the International Whaling Commission.

Development of a Right Whale Sighting Network in the
Southeastern United States
(Howard E. Winn, Biological Writers and Consultants)

In the northwestern Atlantic, right whales are known to occur in coastal waters between Cape Cod and Nova Scotia during the summer months. Calving and breeding are thought

to occur in the winter, but precisely when and where are unknown. A few scattered sightings suggest that the whales may spend the winter months in waters off Georgia and northern Florida. However, the significance of these sightings and the nature and extent of possible wintering/calving grounds are unknown. The purpose of this project is to develop a sighting/reporting network to facilitate acquisition of information on the presence, abundance, distribution, and movements of right whales in the coastal waters of Georgia and northern Florida. Such information is necessary to determine whether offshore oil and gas development or other human activities in the area might adversely affect right whales and, if so, how the effects might be mitigated.

Identification of Possible Differences in the Hardiness of Bottlenose Dolphins from Different Coastal Areas of the Southeastern United States

(J. E. Reynolds III, Eckerd College)

Bottlenose dolphins have been and are being taken from a number of coastal areas of the United States for purposes of both public display and scientific research. It appears that animals from some areas do not survive as well in captivity as do animals from other areas, which suggests that there may be area-specific differences in capture, transport, or holding procedures or that animals from some areas are healthier or hardier than those from others. This in turn suggests the possibility of between-area differences in population fitness or, alternatively, between-area differences in either pre- and/or post-capture stress or environmental quality. The contractor is obtaining and reviewing capture records and other relevant data to: determine whether and, if so, to what extent survival of bottlenose dolphins in captivity is dependent upon the area from which they were taken; identify environmental contaminants or other variables that could be responsible for either documented or possible area-related differences in post-capture survival; determine whether bottlenose dolphins could be used to help monitor the health of certain coastal ecosystems; and determine what, if any, steps should be taken to monitor or improve the general health of local populations, including development of standard tests for assessing the health of captured animals.

Estimation of the Size and Species Composition of
Porpoise Schools in the Eastern Tropical Pacific
(National Marine Fisheries Service)

Reliable estimates of the size and species composition of porpoise schools in the eastern tropical Pacific Ocean are needed to assess the effects of incidental taking of porpoise in the yellowfin tuna purse seine fishery. The National Marine Fisheries Service and the Inter-American Tropical Tuna Commission have collected photographs and other data on porpoise schools in the eastern tropical Pacific, but have not had sufficient personnel or funds to fully analyze the data. The Commission therefore transferred funds to the National Marine Fisheries Service to contract with appropriately qualified scientists to complete the data analysis. The contractor's report will be used by the National Marine Fisheries Service, in consultation with the Marine Mammal Commission, the Inter-American Tropical Tuna Commission, and the Porpoise Rescue Foundation, to help develop better estimates of the status of porpoise stocks affected by the yellowfin tuna purse seine fishery.

Assessment of Issues Bearing Upon Marine Mammals in Alaska
(J. W. Lentfer)

The National Marine Fisheries Service and the Fish and Wildlife Service have lead Federal responsibility for protecting and conserving the wide variety of marine mammals that inhabit or migrate through the coastal waters of Alaska. Other Federal agencies such as the Minerals Management Service, State agencies such as the Alaska Department of Fish and Game, and other entities such as the Alaska Eskimo Whaling Commission are involved with marine mammals as well. Planning and coordination among all involved organizations as well as responsiveness of the Federal Government to initiatives from certain of the groups have not always been what might be desired. The contractor, through consultation with representatives of the above-mentioned groups and others, is preparing a report in which he will analyze the present situation and set forth steps that might be taken by the Commission and others to improve planning, coordination, and responsiveness.

Assessment of Possible Mechanisms for Protecting Areas
of Special Biological Importance to Manatees
(D. Gluckman)

Identification and protection of feeding areas, breeding areas, and other areas of similar biological importance are essential to assure the continued existence of the West

Indian manatee and other species of marine mammals. The type and extent of required protection may vary according to the nature, size, and location of the areas requiring protection, as may the most appropriate mechanism for achieving the required protection. This contractor is assisting the Commission's Committee of Scientific Advisors in its examination of critical habitat areas by providing advice on available mechanisms for protecting areas of special biological importance to manatees. The contractor's analyses will be incorporated into the Committee of Scientific Advisors' report to the Commission on actions which it feels should be taken to protect important manatee habitat.

Special Research Concerns for Fiscal Year 1983

The Hawaiian monk seal and the southern, or California, sea otter have been designated as "endangered" and "threatened," respectively, under the Endangered Species Act of 1973. Although the National Marine Fisheries Service and the Fish and Wildlife Service, the agencies with lead responsibility for these species, have taken steps to develop and implement recovery plans, progress has not been as rapid as expected. Recognizing that greater efforts were needed and needed promptly, Congress increased the Commission's budget request from \$594,000 to \$822,000 for FY 1983 and directed that the bulk of the increase be spent on the Hawaiian monk seal and the southern sea otter. The money became available to the Commission at the end of 1982.

Following consultations with the National Marine Fisheries Service, the Fish and Wildlife Service, the States of Hawaii and California, relevant industry and environmental groups, and its Committee of Scientific Advisors on Marine Mammals, the Commission will apply the funds to specific research and management activities determined to be the most essential for protecting and encouraging recovery of these species.

CHAPTER III

INTERNATIONAL ASPECTS OF MARINE MAMMAL PROTECTION AND CONSERVATION

Section 108 of the Marine Mammal Protection Act directs that the Departments of Commerce, the Interior, and State, in consultation with the Commission, seek to further the protection and conservation of marine mammals under existing international agreements and take such initiatives as may be necessary to negotiate additional agreements required to achieve the purposes of the Act.

In addition, Section 202 of the Marine Mammal Protection Act directs that the Marine Mammal Commission recommend to the Secretary of State, and other Federal officials, appropriate policies regarding existing international arrangements for the protection and conservation of marine mammals.

The Commission's activities in 1982 with respect to conservation and protection of marine mammals in the Southern Ocean, the International Whaling Commission, the Interim Convention on Conservation of North Pacific Fur Seals, and the Convention on International Trade in Endangered Species of Wild Fauna and Flora are discussed below.

Conservation and Protection of Marine Mammals in the Southern Ocean

At least thirteen species of seals and whales inhabit or migrate through the Southern Ocean, the seas surrounding Antarctica. Although unregulated or poorly regulated sealing and whaling brought several of these species to near-extinction, the end of commercial sealing and improved regulation of whaling under the International Whaling Commission make threats from commercial exploitation no longer as serious as they once were. However, new threats have arisen. These are the developing fisheries, particularly the fishery for Antarctic krill (Euphausia superba), and growing interest in possible offshore oil and gas resources.

Because of the possible direct and indirect effects of fisheries and offshore oil and gas development on marine mammals, the Marine Mammal Commission, since it became operational in 1974, has undertaken a continuing review of matters that might affect the structure and dynamics of the Southern Ocean ecosystem. (Commission activities prior to 1982 are described in detail in earlier Commission reports.) The Commission has made numerous recommendations concerning the need for a comprehensive biological and ecological research program in the Southern Ocean, as well as the need for international arrangements to regulate fisheries and offshore oil and gas activities in the Southern Ocean. A brief summary of these activities as well as a description of 1982 activities is provided below.

Activities Related to Living Resources

Within its first month of operation in 1974, the Commission helped prepare an environmental impact statement on the Convention on the Conservation of Antarctic Seals, and also worked with the Department of State and other agencies to prepare materials which were provided to the Senate for its consideration of the agreement, which was ratified in 1976.

In 1975, the Commission was asked by the National Science Foundation to review material relating to the conservation of krill in the Southern Ocean. The Commission responded, noting, among other things, that: existing information was inadequate to provide a reliable basis for management decisions; research on various aspects of krill and the impacts of a possible krill fishery should be given high priority; attention should be paid to the principle of establishing management regulations prior to exploitation; and all necessary steps should be taken to conclude an effective international agreement to govern any krill fishery.

In 1976, the Commission, concerned with the lack of progress in addressing the conservation of living resources, recommended to the Department of State that it: (1) promptly undertake a review and re-evaluation of U.S. policy regarding the Antarctic; (2) pursue the development of a policy to conserve the living resources of the Southern Ocean and the development of an international convention to implement that policy; and (3) undertake measures to prepare a draft environmental impact statement in the course of developing the policy and the convention. Throughout 1977, the Commission continued to encourage the Department of State and the

National Science Foundation to develop, adopt, and pursue policies that would lead to cooperative international efforts to protect the Antarctic marine ecosystem. At the IXth Antarctic Treaty Consultative Meeting held late in 1977, the representatives of the United States and the other Antarctic Treaty Consultative Parties* recommended to their governments that a definitive regime for the conservation of Antarctic marine living resources be concluded before the end of 1978 and that a Special Consultative Meeting be convened for the purpose of developing a Draft Convention.

In response to the decision made at the IXth Consultative Meeting, Australia hosted a Special Consultative Meeting in Canberra, Australia (27 February to 16 March 1978). In preparation, the Department of State prepared and requested comments on a Draft Environmental Impact Statement (DEIS) for a Possible Regime for Conservation of Antarctic Marine Living Resources. The Commission, in consultation with its Committee of Scientific Advisors, provided extensive comments and helped prepare a draft convention which was tabled at the meeting. Further discussions were needed in order to reach agreement on a negotiating text for the convention, and these were held in Buenos Aires (July 1978), Washington, D.C. (September 1978 and September-October 1979), and Bern (March 1979).

The Formal Diplomatic Conference to conclude the Convention was held in Canberra, Australia, 7-20 May 1980. Subsequently, a "preparatory meeting" was held in Hobart, Tasmania, Australia, from 10-24 September 1981 to discuss steps that could be taken to facilitate operation of the Commission and Scientific Committee which were to be established when the Convention entered into force. The Convention entered into force on 7 April 1982, 30 days after deposit of the eighth instrument of ratification. The first meeting of the Commission for the Conservation of Antarctic Marine Living Resources (the Living Resources Convention) was held in Hobart from 24 May to 11 June 1982 and the first meeting of the Scientific Committee in Hobart from 7-11 June 1982.

* The Antarctic Treaty Consultative Parties at that time were: Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, Republic of South Africa, U.S.S.R., United Kingdom, and the United States. Since then, the Federal Republic of Germany and Poland have become Consultative Parties.

The Marine Mammal Commission, as indicated in previous Annual Reports, has provided advice and assistance in developing U.S. positions on issues under discussion at each of the meetings, and the Commission's Scientific Program Director has served as an advisor to the Head of the U.S. Delegation at all but the informal discussion in Bern in March 1979. In addition, the Commission: has provided detailed comments and recommendations on a Draft Environmental Impact Statement for a Possible Regime for Conservation of Antarctic Marine Living Resources (see pages 66-69 of the Commission's Annual Report on Calendar Year 1978); was instrumental in arranging a review of marine ecosystem research in the Antarctic (see pages 57-61 of the Commission's Annual Report on Calendar Year 1979 and pages 76-77 of the Commission's Annual Report on Calendar Year 1980); was the initiator of the meetings of the Ad Hoc U.S. Scientific Working Group on the Antarctic to provide advice on scientific and technical matters concerning negotiation of the Living Resources Convention; and testified on Antarctic issues before the Senate Foreign Relations Committee, the Senate Committee on Commerce, Science, and Technology, and the House Merchant Marine and Fisheries Committee.

The first meetings of the Antarctic Living Resources Commission and Scientific Committee -- As noted above, the first meetings of the Commission and Scientific Committee for the Conservation of Antarctic Marine Living Resources were held in Hobart in late May and early June of 1982. To help prepare for these meetings, a Fourth Meeting of the Ad Hoc U.S. Scientific Working Group on the Antarctic was held in Washington, D.C. on 16-17 March 1982. The meeting was organized and convened by the National Marine Fisheries Service, in consultation with the Commission, the Department of State, and the National Science Foundation. The meeting report, prepared under contract to the Commission (see page 7 of the Annual Report on Calendar Year 1981), was used to help prepare positions on scientific and technical matters included on the agendas for discussion at the first meetings of the Living Resources Commission and Scientific Committee.

The first meeting of the Living Resources Commission resulted in the election of a chairman and vice chairman; the approval of rules of procedure, financial regulations, and staff regulations; the appointment of an Executive Secretary; the conclusion of an interim headquarters agreement; and the preparation of budgets for 1982 and 1983.

The first meeting of the Scientific Committee was somewhat less productive than the Commission meeting. Although a chairman and two vice-chairmen were elected, the Committee was unable to agree on rules of procedure. However, draft rules of procedure, generally acceptable to the United States and many other delegations, were produced, and it seems likely that the remaining difficulties can be resolved before or during the next Committee meeting.

Although the Scientific Committee was unable to agree on rules of procedures, participants did consider a number of substantive matters during informal sessions chaired by the chairman-elect. During these sessions, it was proposed, among other things, that: (1) a thorough inventory of current and past activities in fields of relevance to the Convention should be conducted as a matter of priority; (2) the Commission should take steps to introduce a logbook system for obtaining information on all commercial fishing in the Convention area; (3) the Commission and Scientific Committee should establish cooperative working relationships with the Scientific Committee on Antarctic Research's (SCAR) Group of Specialists on Southern Ocean Ecosystems and Their Living Resources; (4) the SCAR Group of Specialists should be asked by the Commission to update, under contract, its 1976 review of available data on the structure and status of the Southern Ocean ecosystem; (5) the Group of Specialists' Working Group on Modeling should be consulted to assist in determining whether and what models might be used to define and resolve management problems; (6) a Working Group on Remote Sensing should be constituted to determine current remote sensing capabilities and how they might be applied to management of marine living resources in the Antarctic; and (7) a Data Base Working Group should be established to assist in describing and developing the appropriate data base to facilitate the Committee's work.

The next meetings of the Living Resources Commission and Scientific Committee have not yet been scheduled, but are expected to be held in the late spring or early autumn of 1983. To help prepare for these meetings, the National Marine Fisheries Service, in consultation with the Commission, the Department of State, and the National Science Foundation, is convening another meeting of the Ad Hoc U.S. Scientific Working Group on the Antarctic. This meeting will be held on 16-17 February 1983 and, as noted in Chapter II of this Report, the Commission has provided funds to help organize the meeting and provide a timely meeting report.

Activities Related to Non-Living Resources

Activities associated with exploration for and exploitation of non-living resources, particularly offshore oil and gas deposits, could have direct and indirect effects on whales, seals, krill, and other components of the Southern Ocean ecosystem. The Antarctic Treaty Consultative Parties recognize these risks and, at the Xth Antarctic Treaty Consultative Meeting held in Washington, D.C. in September-October 1979, the Consultative Party representatives recommended: that their governments facilitate the development of research programs which would contribute to an improved understanding of relevant aspects of Antarctica and its environment; that the question of mineral exploration and exploitation be placed on the agenda for consideration at the XIth Consultative Meeting; and that, prior to the XIth Consultative Meeting, a meeting be held to consider the ecological, political, technological, legal, and other aspects of a possible Antarctic minerals regime. The representatives also noted that an agreed regime should provide a means for judging the acceptability of proposed exploration and development activities as well as for governing those activities judged to be acceptable.

The Marine Mammal Commission helped develop U.S. positions for resource-related issues considered during the Xth Antarctic Treaty Consultative Meeting, the Special Meeting on Antarctic Mineral Resources held in Washington, D.C. from 8-12 December 1980, and the XIth Antarctic Treaty Consultative Meeting held in Buenos Aires from 23 June to 7 July 1981. To help prepare for the latter meeting and subsequent negotiation of a minerals regime, the Commission, early in 1981, contracted for the preparation of a paper entitled "Environmental Aspects of Potential Petroleum Exploration and Exploitation in Antarctica: Forecasting and Evaluating Risks." A draft of that paper (now available in final form from the National Technical Information Service, see Appendix B, Green Hammond) was provided to the Department of State and other agencies for use in preparing for the XIth Antarctic Treaty Consultative Meeting.

At that meeting, delegates adopted a recommendation calling on their governments to convene a special consultative meeting to: (1) elaborate a regime for Antarctic mineral resources; (2) determine whether the regime should be in the form of an international instrument such as a convention or take some other form; (3) establish a schedule for negotiations, using informal meetings and sessions of the special consultative meeting as appropriate; and (4) take any other steps that might be necessary to facilitate the conclusion of the regime, including a decision as to the procedure for its adoption.

Following the XIth Consultative Meeting, the Department of State prepared and distributed a Draft Environmental Impact Statement (DEIS) on the Negotiation of an International Regime for Antarctic Mineral Resources. The Marine Mammal Commission commented on the DEIS and helped the Department of State prepare for the first session of the Special Consultative Meeting to begin elaboration of a minerals regime which was held in Wellington, New Zealand, on 14-25 June 1982. The Commission's Scientific Program Director participated in that meeting as an advisor to the Head of the U.S. Delegation.

It is likely that a number of additional formal and informal sessions of the Special Consultative Meeting will be needed to elaborate an acceptable minerals regime, and one informal and one formal session have been scheduled. The informal session is to be held in Wellington from 17-28 January 1983 and the formal session is to be in Bonn, West Germany, in the summer of 1983. As before, the Marine Mammal Commission will help to prepare for those meetings and, as requested, provide experts to advise the U.S. representative at the meetings.

Reaffirmation of U.S. Interest in Antarctica

The National Science Foundation's Division of Polar Programs is responsible, among other things, for development and operation of the U.S. national program in the Antarctic. On 5 February 1982, President Reagan reaffirmed U.S. interests in Antarctica, and directed that the U.S. Antarctic Program be maintained at a level providing an active and influential presence designed to support the range of U.S. interests. The President further directed that this presence shall include the conduct of scientific activities in relevant disciplines and the year-round occupation of the South Pole and two coastal stations.

According to the President's decision, the National Science Foundation will: continue to budget for and manage the entire U.S. national program in Antarctica; fund university research and Federal agency programs related to Antarctica; draw upon the logistic support capabilities of other government agencies on a cost-reimbursable basis; and use commercial facilities as necessary. Other agencies will be able to fund and undertake directed, short-term programs of scientific activity, subject to review and approval of the Antarctic Policy Group chaired by the Department of State.

* * *

As noted above, significant progress has been made in the past several years to develop and implement international agreements which will assure the conservation and protection of marine mammals and other components of the Southern Ocean ecosystem. The efforts have been successful, in part, because of the unique nature of the Antarctic Treaty and the history of international cooperation in the Antarctic. The Commission will continue to work with the National Science Foundation, the Department of State, the National Oceanic and Atmospheric Administration, and other appropriate organizations and agencies towards the successful implementation of the provisions of the Convention on the Conservation of Antarctic Marine Living Resources and towards the development of an ecologically sound regime to govern exploration for and exploitation of mineral resources.

International Whaling Commission (IWC)

Representatives of the Marine Mammal Commission consulted with the U.S. Commissioner to the International Whaling Commission and others in preparation for the Special Meeting and the Thirty-fourth Annual Meeting of the IWC in Brighton, England, and attended the meetings of the IWC and its Scientific Committee during 1982. The Commission's activities in 1982 regarding the bowhead whale issue as they relate to the IWC are discussed in Chapter VI of this Report. A summary of the Commission's activities relating to other aspects of IWC action in 1982 is set forth below.

Special Meeting, March 1982

As discussed in the Commission's previous Annual Report, the IWC set quotas of zero at its meeting in 1981 for all stocks of sperm whales throughout the world except the western division North Pacific stock which was harvested by Japanese coastal whalers under a quota of 890 for 1981. Instead, the IWC agreed to refrain from inserting an explicit zero in the Schedule for this stock and to specify by a footnote in the Schedule that, beginning in the fall of 1982 and thereafter, no whales could be killed from this stock unless and until the IWC established catch limits for it. The IWC also agreed to convene a special meeting of the Scientific Committee in Cambridge, England, from 27 February until 5 March, and a special meeting of the Commission in Brighton, England, 24-25 March 1982 to consider any additional data and analyses that might become available

relating to that stock. Japan filed an objection to this footnote in November 1981 and was therefore relieved of the obligation under the Convention to comply with this provision. In filing its objection, however, Japan indicated that it was conditional in the sense that it would be withdrawn if the special meeting in March or the regular meeting in July resolved the issue to its satisfaction.

The efforts of the Scientific Committee at its special meeting were devoted to an extensive review of the two assessment techniques -- "length specific" and "age specific" -- which gave significantly different results. Most members of the Committee concluded that the former was more reliable and that its performance was superior in the validation studies that were conducted. The Committee did not, however, have sufficient time to interpret the projected trends in stock size derived from the two techniques or formulate management recommendations for consideration by the Commission.

After considering the Report of its Scientific Committee, the IWC agreed, by consensus, to take no action to amend the existing Schedule provisions relating to this stock and to refer the question to the annual meeting in July for further consideration. The IWC also asked the Scientific Committee to attempt to complete its review of the stock at its regular meeting so as to provide any additional information or advice for consideration. As a result, the ban on killing sperm whales from the western division North Pacific stock in the fall of 1982 and thereafter remained in effect, subject to Japan's objection.

The July 1982 Meeting

A total of 37 members participated in the July 1982 meeting of the IWC. Eight non-whaling nations (Antigua-Barbuda, Belize, Egypt, Federal Republic of Germany, Kenya, Monaco, Philippines, and Senegal) joined the IWC after the July 1981 meeting while Dominica withdrew from the IWC and was not represented at the 1982 meeting and Jamaica maintained its membership in the IWC but was not represented at the meeting. A summary of the major actions taken at the meeting is set forth below.

Cessation of commercial whaling -- Five proposals for various types of moratoria on commercial whaling were on the agenda as the first substantive item of business -- one each submitted by Seychelles, United Kingdom, United States,

France, and Australia. The Seychelles' proposal, calling for a cessation of all commercial whaling by the 1985/86 pelagic and 1986 coastal whaling seasons, was considered first. It was amended by Costa Rica so as to become effective for the 1984/85 pelagic and 1985 coastal seasons, one year earlier than that proposed by the Seychelles, and passed in Technical Committee by 19 to 6 with 9 abstentions. The United States, United Kingdom, France, and Australia withdrew their proposals in light of the passage of the Seychelles' proposal. Consideration of the proposal in the plenary session of the Commission meeting was postponed until after the Technical Committee had completed action on catch limits for each stock and other matters. The Technical Committee's recommendation was then amended back to the original proposal by the Seychelles so as to become effective for the 1985/86 pelagic and 1986 coastal seasons and was passed in plenary toward the end of the session by 25 to 7 with 5 abstentions. The text of the cessation and votes are as follows.

Paragraph 10(e):

Notwithstanding the other provisions of paragraph 10, catch limits for the killing for commercial purposes of whales from all stocks for the 1986 coastal and the 1985/86 pelagic seasons and thereafter shall be zero. This provision will be kept under review, based upon the best scientific advice, and by 1990 at the latest the Commission will undertake a comprehensive assessment of the effects of this decision on whale stocks and consider modification of this provision and the establishment of other catch limits.

Votes (25-7-5)

Yes: Antigua-Barbuda, Argentina, Australia, Belize, Costa Rica, Denmark, Egypt, France, Federal Republic of Germany, India, Kenya, Mexico, Monaco, Netherlands, New Zealand, Oman, St. Lucia, St. Vincent, Senegal, Seychelles, Spain, Sweden, United Kingdom, United States, Uruguay;

No: Brazil, Iceland, Japan, Korea, Norway, Peru, U.S.S.R.;

Abstain: Chile, Peoples Republic of China, Philippines, South Africa, Switzerland.

Catch limits -- After passage of the deferred cessation in plenary session, the IWC set catch limits resulting in a reduction from the total limit of 14,070 set at last year's meeting to 12,371 for the upcoming 1982/83 pelagic and 1983 coastal seasons. These quotas, together with the deferred cessation, reflect the decision of the majority of IWC members to accommodate and attempt to ease the difficulties anticipated by whaling nations in attempting to cease whaling operations and provide for a transition period. Notwithstanding these accommodations, the quotas for all but two stocks remained the same as or were reduced from those set at the previous meeting. The quota for North Pacific Bryde's whales, the first of the two exceptions, was increased by 20 based upon the recommendation of the Scientific Committee. The decision on the quota for the western division North Pacific sperm whale stock (the other exception), however, was more complicated. Because of major uncertainties and inadequacies relating to the data and population dynamics models, the Scientific Committee was unable to reach consensus on estimates of the initial or current size of this stock or on its replacement yield and effects of continued catches on the stock. As a result, the Committee was unable to recommend a stock classification or catch limits for the stock under the applicable management procedures.

In previous years, such circumstances would almost certainly have led the IWC to leave the ban on killing sperm whales from this stock in effect. Adoption of the cessation, however, led to a compromise which, by a vote of 14 to 3 with 15 abstentions, set the quota for the 1982 season at 450 and the quota for the 1983 season at 400, including a by-catch of females up to 11.5 percent of the total for each year. The quotas were reflected in the Schedule in a new footnote providing an exception to the footnote prohibiting any whales to be taken from this stock. As a result, the quotas for the 1984 and 1985 seasons will be zero unless the Commission decides by a three-fourths majority vote to permit sperm whales to be killed.

Cold harpoon -- As discussed in the previous Annual Report, the IWC voted to ban the use of the cold harpoon to kill minke whales, the ban to become effective with the 1982/83 pelagic and the 1983 coastal seasons. Brazil, Iceland, Japan, Norway, and the U.S.S.R. all filed objections to this ban. At the 1982 meeting, there were no proposals to modify the ban and the IWC adopted a resolution calling upon those nations to withdraw their objections and comply with it. They did not do so, and the issue remains unresolved.

Aboriginal whaling -- As discussed in previous Annual Reports, the IWC has reflected increasing concern over the past several years about the status and trends of the Bering Sea population of bowhead whales as well as some other stocks affected by aboriginal whaling and the need to establish management principles governing such whaling which recognize the distinction between commercial and aboriginal whaling and provide a basis for setting allowable catch limits. For this purpose, the IWC established an ad hoc Working Group at its July 1980 meeting to develop proposed management principles and guidelines for subsistence catches of whales by aboriginal peoples. The United States participated in the meeting of that Working Group prior to the IWC's July 1981 meeting and again prior to the July 1982 meeting. The IWC considered the Report of the Working Group at its July 1982 meeting and adopted a resolution setting forth management objectives and establishing a standing subcommittee of the Technical Committee to consider information and make recommendations on aboriginal subsistence needs for consideration by the Commission. In addition, the IWC adopted amendments to its Schedule of regulations setting forth an aboriginal whaling management scheme and procedures for setting catch limits for such whaling in 1984 and thereafter. The text of the Schedule amendment is as follows:

Paragraph 13(a):

Notwithstanding the provisions of paragraph 10, catch limits for aboriginal subsistence whaling to satisfy aboriginal subsistence need for the 1984 whaling season and each whaling season thereafter shall be established in accordance with the following principles:

- (1) For stocks at or above the MSY level, aboriginal subsistence catches shall be permitted so long as total removals do not exceed 90 percent of MSY.
- (2) For stocks below the MSY level but above a certain minimum level, aboriginal subsistence catches shall be permitted so long as they are set at levels which will allow whale stocks to move to the MSY level.*
- (3) The above provisions will be kept under review, based upon the best scientific advice, and by 1990 at the latest the Commission will undertake a comprehensive assessment of the effects of these provisions on whale stocks and consider modification.

Footnote to paragraph 13(a)(2):

*The Commission, on advice of the Scientific Committee, shall establish as far as possible (a) a minimum stock level for each stock below which whales shall not be taken, and (b) a rate of increase towards the MSY level for each stock. The Scientific Committee shall advise on a minimum stock level and on a range of rates of increase towards the MSY level under different catch regimes.

As a result of this and associated amendments, the taking of bowheads by Alaskan Eskimos, humpbacks, fins, and minke by Greenlanders, and gray whales by Soviets as well as any other whaling for aboriginal subsistence purposes will be allowed in 1984 and thereafter only at levels that the IWC finds, based upon advice of both the Standing Subcommittee on Need and the Scientific Committee, to be consistent with these criteria.

Post-Meeting Decisions and Activities

Under the terms of the Convention, decisions reached by the IWC at its July 1982 meeting setting quotas and otherwise amending the Schedule of regulations governing whaling activities did not become effective until 4 November 1982, 90 days after they were formally transmitted to the members. Any member nation that filed an objection within the 90-day period would not be legally obligated to comply with any Schedule change to which it had objected. As of 4 November 1982, Japan, Norway, Peru, and U.S.S.R. had filed objections to the cessation measure, Peru had filed an additional objection to the quota of 165 for the Peruvian stock of Bryde's whales, and Chile had filed an objection to the quota of zero for the Eastern South Pacific stock of Bryde's whales. Under the Convention, the filing of those objections extended the objection period for an additional 90 days, until 2 February 1983, and any other member nation may join in filing objections to those provisions of the Schedule.

As discussed in previous Annual Reports, whaling activities pursuant to objections to the IWC Schedule may trigger certain provisions of two U.S. laws -- the Pelly Amendment to the Fishermen's Protective Act and the Packwood-Magnuson Amendment to the Magnuson Fishery Conservation and Management Act. Under the former, the United States may embargo imports of fish products from

countries whose nationals are certified by the Secretary of Commerce as conducting fishing operations (including whaling) in a manner or under circumstances which diminish the effectiveness of international conservation programs such as that of the IWC. The Packwood-Magnuson Amendment mandates a reduction by at least 50 percent in the allocation of fish that may be caught within the U.S. Fishery Conservation Zone by any nation so certified. As in the past, the United States advised whaling nations of the potential applicability of these laws to their whaling activities pursuant to objections. In addition to the potential imposition of sanctions under these laws, the issue arose in the course of Congressional action on 10 December 1982 to approve the proposed Governing International Fishery Agreement between the United States and Japan, during which members of Congress noted the potential adverse impacts of Japan's objection upon U.S.-Japanese relations, including fisheries.

The Commission will continue to consult and cooperate with other agencies and interested groups and individuals during 1983 concerning these and other issues relating to the International Whaling Commission.

Interim Convention on Conservation of North Pacific Fur Seals

The Interim Convention on Conservation of North Pacific Fur Seals calls for cooperative research and management efforts by the United States, Japan, Canada, and the U.S.S.R. to achieve the maximum sustainable productivity of the fur seal resources of the North Pacific Ocean. The objective is to maintain fur seal populations at levels which will provide the greatest harvest year after year, with due regard to their relation to the productivity of other marine living resources of the area. Harvesting of fur seals at sea has been prohibited by agreement of the parties to the Convention. On land, an average of 32,278 fur seals have been harvested annually in recent years -- 26,507 on the Pribilof Islands of the United States and 5,771 on the Commander and Robben Islands of the U.S.S.R. The Convention entered into force in 1957 and has been extended by four Protocols. The most recent extension was agreed to by the parties on 14 October 1980 and was ratified by the Senate on 11 June 1981.

On 10 February 1982, the National Marine Fisheries Service circulated to the Marine Mammal Commission and others the U.S. Draft position papers and other related documents for the annual meeting of the North Pacific Fur Seal Commission,

scheduled for 12-16 April 1982 in Ottawa, Canada. The Commission consulted with the Service and participated in a 24 February preparatory meeting to discuss these proposed positions. An important issue concerned an analysis of data, being carried out by U.S. scientists in preparation for the Annual Meeting, which indicated that entanglement of fur seals in fishing net fragments and discarded packing bands may be a far more significant mortality factor than had previously been believed and may be a primary cause of the on-going decline in the North Pacific fur seal population. It was estimated that the annual mortality rate due to entanglement may be as high as five percent of the population as a whole.

This was recognized to be a serious problem and one that warranted thorough discussion and consideration at the April meeting of the parties to the Convention. The Department of State, following consultation with the Commission and the National Marine Fisheries Service, on 24 March 1982 notified the other parties to the Convention of the United States' concern and its intention to raise the issue of pelagic entanglement both at the meeting of the Standing Scientific Committee and at the plenary sessions. It asked the other party governments to be prepared to discuss the matter and noted that the United States considered it especially important to assess possible effects of continued harvest, coupled with mortality due to entanglement, on size and productivity of the fur seal population before reaching a final determination on 1982 harvest levels.

The Commission subsequently drafted two position papers, one on pelagic entanglement and one on setting 1982 harvest levels, and on 1 April 1982 forwarded these to the National Marine Fisheries Service with the recommendation that they be adopted as the U.S. position for the Fur Seal Commission meeting later that month. The Commission noted that the position paper on entanglement would have to be supplemented by completing an analysis of the U.S. legal position prohibiting the discard of such material. Further analyses would also be needed and determinations would need to be made on whether the fur seal population currently is being maintained at its maximum sustainable productivity level; whether it is declining and, if so, by how much per year; how continued harvest might affect population trends; and whether the size and age/sex composition of harvests should be modified so as to contribute to the recovery of the population. The Commission recommended that the Service take the necessary steps to make these determinations and complete the required analyses in advance of the 1982 fur seal harvest.

On 12 April 1982, the National Marine Fisheries Service responded to the Commission's recommendations, stating that its scientists had determined it would not be possible to conclude the work suggested in the Commission's letter before beginning the 1982 harvest, but that such work was expected to be concluded prior to deliberations on the U.S. position for the 1983 meeting. Additionally, the Service said it was the opinion of their scientists that an end to the male-only harvest was not warranted at that time.

On 20 May 1982, the Commission received a copy of the report of the U.S. delegation to the 25th meeting of the North Pacific Fur Seal Commission, which had been held 13-16 April 1982 in Ottawa, Canada. On 15 June 1982, the U.S. Commissioner to that body responded further to the questions raised in the Commission's 1 April letter, noting that the National Marine Fisheries Service's National Marine Mammal Laboratory was continuing its analysis of the ramifications of fur seal entanglement. Some "tentative" answers to the Commission's specific questions were provided. The Service noted that it was difficult to assess the maximum sustainable productivity level of the Pribilof Islands herd because of an undetermined carrying capacity for the fur seal's ecosystem, but that current information seemed to indicate that the current population level is below carrying capacity and that the population is about one-half of the level observed during the 1950s. The Service also estimated that the Pribilof Islands fur seal population has decreased by approximately seven percent annually over the past few years.

It was the Service's tentative opinion that the harvest of sub-adult males was in no way contributing to the observed population decline. Furthermore, since no major changes in the harvest regime for sub-adult males has occurred since the 1920s, in the Service's opinion there is an implication that changes in management are not likely to reduce the rate of decline of number of pups for those presently harvested populations that are experiencing declines. The management actions required to reverse these trends are not obvious, the Service stated, and ending or reducing the commercial harvest will not have this effect.

During 1984, the Interim Convention on Conservation of North Pacific Fur Seals will come up for reconsideration by the parties, who must decide whether to renegotiate the Convention, extend it, or allow it to expire. In 1981, in conjunction with its ratification of the Protocol extending the Convention until 1984, the Senate adopted an

understanding which specifically calls for studies to be undertaken to determine: fur seal feeding habits, food requirements, at-sea migration and distribution patterns; the impact that any change in the size of the harvest would have on the Pribilof Island residents, the fur seal herd, and the Bering Sea ecosystem; and the impact of possible alternative sources of employment for the residents on those residents, the animals and the ecosystem.

The Commission will consult with the National Marine Fisheries Service during 1983 in an effort to ensure that the necessary determinations are made and considered during the course of evaluating extension of the Convention beyond 1984.

Convention on International Trade
in Endangered Species of Wild Fauna and Flora (CITES)

The United States is a party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which is designed to control trade in animal and plant species which are or may become threatened with extinction. The extent of trade control depends upon the extent to which the species is endangered, as reflected by inclusion in one of three appendices which can be modified by agreement of the parties. Appendix I includes species threatened with extinction that are or may be affected by trade. Appendix II includes species that, although not necessarily currently threatened with extinction, may become so unless trade in them is strictly controlled, as well as species that must be regulated so that trade in "look-alike" species that are endangered may be brought under effective control. Appendix III includes species that any party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exportation and for which the party needs the cooperation of other parties in controlling trade.

Overall responsibility for coordinating the development of U.S. positions and implementation of the provisions of the Convention is vested in the Fish and Wildlife Service. As was discussed in the Commission's Annual Report for Calendar Year 1981, the Service consulted with the Commission and others in preparation for the biennial meeting of the parties to the Convention, held 25 February - 8 March 1981 in New Delhi, India. Among the proposals adopted at that meeting was one to add all stocks of fin, sei, and sperm whales to Appendix I of the Convention. The addition of those stocks of whales to Appendix I became effective on 6 June 1981.

During 1982, an issue arose related to the effect of inclusion of sperm whales on Appendix I of the Convention. On 22 March 1982, the Convention's Executive Secretary notified the parties of Portugal's intention to export sperm whale oil taken in Madeira and the Azores. Portugal, which became party to the Convention on 11 March 1981, declared that the oil stocks were produced prior to 6 June 1981, that is, prior to inclusion of the sperm whale on Appendix I and that they were therefore entitled to the "pre-Convention exemption."

Based upon a review of the information and consultation with Fish and Wildlife Service personnel, the Commission wrote the Service on 16 August 1982 suggesting that the United States should express reservations about the legality of the proposed export under the Convention, identify the issues for consideration and resolution at the forthcoming meeting of parties to the Convention in April 1983, and review Portugal's sperm whaling activities in consultation with the National Marine Fisheries Service and the Department of State for possible certification under the Pelly and Packwood-Magnuson Amendments. The Commission noted that it appears that Portugal's sperm whaling activities have exceeded the International Whaling Commission's quotas for 1980 through 1982 and that its continued whaling will certainly exceed the zero quota set by the International Whaling Commission for 1983.

The Service concurred with the Commission's suggestions and, by letter of 29 September 1982, advised the Executive Secretary of the Convention of the United States' concerns and took steps to ensure that the issue will be considered at the next meeting of the parties.

The Commission will consult with the Fish and Wildlife Service, the National Marine Fisheries Service, and others during 1983 concerning this and other matters relating to the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

CHAPTER IV

MARINE MAMMAL-FISHERIES INTERACTIONS

Interaction between marine mammals and sport and commercial fisheries is not a new problem, but is one that appears in some cases to be intensifying. Such interactions can take various forms -- sometimes to the detriment of the marine mammal population involved and other times with more apparent impact on the involved fishery. In the former cases, marine mammals can be killed, injured, or harassed, either inadvertently or deliberately, during fishing operations. The best known and most controversial example of this involves the yellowfin tuna purse seine fishery in the eastern tropical Pacific Ocean, discussed in Chapter V.

In other instances, marine mammals take or damage fish caught on lines or in traps and nets; they also may damage fishing gear during these encounters or when they accidentally become entangled. In some areas, they compete with fishermen for the same fish and shellfish resources.

Prior to enactment of the Marine Mammal Protection Act, regulated or unregulated hunting, bounty programs, and various forms of harassment were employed in a number of areas in an effort to eliminate or reduce marine mammal-caused gear damage, fish damage, and fish loss. With the implementation of the Act, there was a moratorium on such taking and, as a result, over the past ten years, animals in some areas apparently have become more numerous and/or bolder in their interactions with fishermen and fishing gear.

Columbia River Project

A 1977 workshop sponsored by the Commission confirmed that there was a potentially acute problem in the Pacific Northwest involving seals, sea lions, and the salmon gill net fisheries in the Copper River Delta area of Alaska and the Columbia River in Washington and Oregon. As a result of workshop recommendations, the Commission provided funds to

initiate a study of marine mammal-fisheries interactions in the Copper River Delta/Prince William Sound area in Alaska. This study was completed in 1978 and has been discussed in past Annual Reports.

In 1978, the Commission also provided funds to begin development of a plan to investigate apparent conflicts in the Columbia River and adjacent waters. With funding provided by the National Marine Fisheries Service early in 1980, the Washington Department of Game, in cooperation with the Oregon Department of Fish and Wildlife started a study of marine mammal-fisheries interactions in the Columbia River and adjacent waters. Partial support also was provided by the Columbia River Estuary Data Development Program.

Following review of the project's first draft annual report and participation in a project review meeting, the Commission in 1981 offered to provide funds to the National Marine Fisheries Service to support additional work on the number, movements, and diet of harbor seals in the Columbia River and adjacent waters. Funds were subsequently provided to the Washington Department of Game for this work, and it was anticipated that the project would be continued by the National Marine Fisheries Service during 1982.

At the same time, concern was expressed by the Commission and others that the Columbia River Project and other ongoing studies of marine mammal-fisheries interactions might not be providing either comparable data or the types of information needed to resolve the problems. This concern resulted in the decision to hold a follow-on workshop on marine mammal-fisheries conflicts to review and coordinate ongoing efforts and to determine whether the maximum amount of useful information was being obtained. The Workshop on Marine Mammal-Fisheries Interactions was convened in October 1981 in Vancouver, Washington, by the Washington Department of Game under contract to the Commission.

The report of that workshop, published in April 1982, noted, among other things, that: (1) while broad generalizations about marine mammal-fisheries conflicts are not possible and each situation must be considered individually, there is a need for broad-based, long-term funding commitments; (2) because of the complexity of indirect actions between marine mammals and fisheries, there is a substantial risk of making bad management decisions; to minimize this, marine mammals and fisheries should be managed cooperatively in areas where they may be competing or otherwise affecting the same fish or shellfish resources; (3) since funding is limited, and

since direct conflicts are less complex and easier to define, higher priority should presently be afforded to research on direct conflicts rather than on indirect conflicts; (4) ongoing efforts to determine and document the extent and nature of impacts should be continued and expanded to identify and evaluate possible methods and techniques for mitigating these impacts on both the fisheries and the marine mammal populations involved; and (5) when remedial measures are found to be necessary, first consideration should be given to non-lethal methods.

On the basis of these recommendations, the Commission concluded that ongoing research by the Washington Department of Game should be augmented to expedite identification and evaluation of possible mitigation measures. By letter of 7 June 1982, the Commission advised the National Marine Fisheries Service of its conclusion on the need to support additional work on mitigation measures and offered to make Commission funds available for that purpose. The Commission noted that it felt that present information was inadequate to determine what methods or technologies merited such evaluation or how the evaluation might best be accomplished. The Commission suggested that, before a major investment was made, it would be desirable to develop a comprehensive program plan and to design and initiate a small-scale study to identify the most effective and appropriate methods and technologies for mitigating marine mammal-fisheries conflicts.

On 27 August 1982, funds were transferred to the Service to support development of a research and studies plan to identify the most effective methods for mitigating marine mammal-fisheries conflicts in the Columbia River (see Chapter II, Research and Studies Program). The work will be carried out by researchers from the Washington Department of Game as part of its fourth year of work under the Columbia River Project. The plan is expected to be completed early in 1983.

In December 1982, the Washington Department of Game circulated for comment its draft third-year report on marine mammal-fisheries interactions in the Columbia River and adjacent waters. The Commission, in consultation with its Committee of Scientific Advisors, is reviewing the draft document and will provide comments, as appropriate, early in 1983.

California Coastal Program

Efforts to determine the nature and extent of marine mammal-fisheries conflicts in California coastal waters have been underway since 1979 as a cooperative project of the National Marine Fisheries Service and the California Department of Fish and Game. Preliminary results of the first two years of the study, discussed at the Commission's 1981 workshop, indicated that two major problem areas involved seals and sea lions interacting with salmon fisheries and pilot whales interacting with the purse seine fishery for squid.

The two components of the California Coastal Program -- a management component administered by the National Marine Fisheries Service's Southwest Region Office and a research component administered by the Southwest Fisheries Center -- were discussed at the 13 August 1982 program review which the Commission had requested. Objectives of the research program include, among other things, assessment and monitoring the numbers of seals, sea lions, pilot whales, and other marine mammals being taken incidentally in California coastal fisheries and identification and evaluation of possible mitigating methods and technologies. During the program review, the Commission expressed its uncertainty as to whether, from a management perspective, the National Marine Fisheries Service had identified the precise types and quality of data needed to make necessary determinations of optimum sustainable population levels and whether ongoing or planned research would provide this information. The Commission suggested that the Service conduct a review, and consult with the California Department of Fish and Game and public interest groups to assure that programmatic needs and priorities have been defined appropriately.

At the program review, it was noted that recent studies of newly developing gill net fisheries, such as those for shark, halibut, and croaker, have confirmed that several species of marine mammals including sea otters, as well as marine birds and other fish species, are being taken incidentally in these fisheries. Efforts to assess the nature and extent of this incidental take have been initiated by the California Department of Fish and Game, and several Federal and non-governmental agencies are considering or have underway programs which could provide more information. In order to assure that the maximum benefit is obtained from these studies, the Commission in 1982 provided funds to the California Department of Fish and Game to support efforts to identify ways of expediting the collection of needed data on this marine mammal-fisheries conflict (see Chapter II, Research and Studies Program). Results of this study are expected to be available in spring 1983.

Bering Sea Workshop

Since marine mammals and fishermen compete for some of the same fish and shellfish, the Commission believes that marine mammals and fisheries must be managed cooperatively in order to obtain and maintain optimum sustainable populations of marine mammals and optimum sustainable yields of fish resources. This conclusion was reflected in the recommendations of the Commission-sponsored workshop held in October 1981.

Since 1980, the Commission has been working with the North Pacific Fishery Management Council to try to develop an integrated ecosystem approach to the management of marine mammals and fishery resources in the Bering Sea. As part of this effort, the Commission and the Council have jointly supported a project to compile and evaluate available information on the distribution, movements, abundance, and food habits of marine mammals in the Bering Sea. This review was carried out by the Alaska Department of Fish and Game under a contract administered by the Council and with Commission support. A report on "Feeding Habits, Food Requirements, and Status of Bering Sea Marine Mammals" was distributed to the Commission, the North Pacific Fishery Management Council, and others on 9 April 1982.

Among the report's recommendations are that a workshop be held to consider a number of issues bearing upon interactions among marine mammals and fisheries in the Bering Sea. The Commission agreed that such a workshop would be useful and has provided funds to the North Pacific Fishery Management Council to help organize and convene the workshop. A steering group, including representatives of the North Pacific Fishery Management Council, the Alaska Department of Fish and Game, the National Marine Fisheries Service, the Fish and Wildlife Service, the Commission, and the academic community, was subsequently organized to help plan the workshop. At a 9 November 1982 meeting of that steering group, it was agreed that the principal objective of the workshop will be to identify and develop a plan for obtaining the kinds of information needed by management agencies to properly manage both fisheries and marine mammal populations in the eastern Bering Sea. It is anticipated that one result of the workshop may be recommendations to the North Pacific Fishery Management Council for changes in the Bering Sea Fisheries Management Plan.

CHAPTER V

INCIDENTAL TAKE OF MARINE MAMMALS IN THE COURSE OF COMMERCIAL FISHING OPERATIONS

The Marine Mammal Protection Act directs the Secretaries of Commerce and the Interior, in consultation with the Commission, to develop regulations governing the incidental taking of marine mammals by persons subject to the jurisdiction of the United States and to develop effective international arrangements, through the Secretary of State, for the purpose of reducing the incidental taking of marine mammals to insignificant levels approaching a zero mortality and serious injury rate.

Although the incidental taking of marine mammals occurs in the course of several fisheries and involves several different species of marine mammals, the "tuna-porpoise" issue involving the incidental mortality and serious injury of porpoises entrapped in the purse seine nets used by commercial yellowfin tuna fishermen has, over the past years, been the subject of the most intense concern, attention, and controversy. Of more recent concern has been the incidental taking of Dall's porpoise in the course of the Japanese salmon gill net fishery in the North Pacific Ocean, a portion of which occurs within the United States' 200-mile Fishery Conservation Zone. The Commission's activities relating to both of these issues are discussed below.

The Tuna-Porpoise Issue

A detailed discussion of the Commission's past activities and a historical summary of efforts to resolve the problem are presented in the Commission's previous Annual Reports. During 1982, the Commission continued to devote attention to this issue and consulted with the National Marine Fisheries Service and others in a continuing effort to contribute to the resolution of the tuna-porpoise issue. The pace of progress toward that goal which had characterized recent years, however, was slowed during 1982 as a result of several factors discussed below.

The 1982 Fishing Season

The National Marine Fisheries Service issued final regulations on 31 October 1980 establishing an annual quota of 20,500 animals for each of the years 1981 through 1985, and a general permit to take porpoise incidentally in compliance with the final regulations and quotas was issued to the American Tunaboat Association on 1 December 1980. Although analyses have not yet been completed and a final figure is not yet available, the data available at the end of 1982 indicate that the total estimated porpoise mortality and serious injury for the year was 22,736. Of these, 19,956 were taken from species or stocks for which quotas were specifically allocated, while 110 were from other species or stocks for which individual quotas had not been set, 558 were unidentified animals which have yet to be assigned to species or stock categories, and 2,112 were eastern spinners which have been determined to be depleted and of which only limited accidental taking is permitted. For reference, figures for the estimated porpoise mortality and serious injury associated with U.S. commercial yellowfin tuna fishing vessels since passage of the Act are set forth below.

| <u>Year</u> | <u>Estimated Kill and Serious Injury</u> |
|-------------|--|
| 1972 | 368,600 |
| 1973 | 206,697 |
| 1974 | 147,437 |
| 1975 | 166,645 |
| 1976 | 108,740 |
| 1977 | 25,452 |
| 1978 | 19,366 |
| 1979 | 17,938 |
| 1980 | 15,305 |
| 1981 | 18,780 |
| 1982 | 22,736 |

The causes of the increased mortality and serious injury level and rate during 1982 (4.83 animals per porpoise set and 0.40 animals per ton of yellowfin caught on porpoise in 1982 compared to 3.28 and 0.34, respectively, in 1981) have not yet been determined. It appears that the unanticipated increased mortality may have resulted from several high mortality sets toward the end of the year, a shift in fishing effort to areas where porpoise stocks are unaccustomed to encirclement and suffer proportionately higher mortality during attempted release procedures, and an increased dependence by the fishing fleet upon setting on porpoise due to the relative scarcity of school fish which can be

caught without setting on porpoise. In any event, the causes of the increased mortality warrant attention and the Commission will consult with the National Marine Fisheries Service, the tuna industry, and others in an attempt to determine the causes of the mortality and take steps to reduce it during 1983.

Litigation

Two lawsuits relating to the tuna-porpoise regulations were pending during 1982.

On 12 December 1980, representatives of the U.S. fishing fleet filed a lawsuit in the U.S. District Court for the Southern District of California (American Tunaboat Association v. Baldrige (sic)). The plaintiffs in this case alleged that the decision of the Administrator of the National Oceanic and Atmospheric Administration in October 1980 and the tuna-porpoise regulations were illegal because, among other things, the recommendations of the administrative law judge concerning mean school size, density, and range of the porpoise stocks were not adopted and the determination that the coastal spotted dolphin stock is depleted was improper. The plaintiffs alleged that because the regulations and quotas were not based upon the best scientific evidence available, they are unlawful. On 10 March 1982, the District Court ruled that the Administrator should have accepted the administrative law judge's determinations and that the Administrator's rejection of those determinations was unsupported by substantial evidence and unlawful. The District Court granted the plaintiffs' motion for summary judgment and directed the Government to submit recalculations concerning the density and range of porpoise schools, and the current status of the affected porpoise stocks based upon the recalculated density, range, and mean school size values. On 21 May 1982, the District Court denied the Government's motion for reconsideration and on 25 June 1982, the Government appealed the District Court's decision to the U.S. Court of Appeals for the Ninth Circuit. No action had been taken by the Court of Appeals at the end of 1982.

The second lawsuit (Balelo v. Baldrige (sic)), filed 1 October 1980, was also brought by representatives of the U.S. fishing fleet in the U.S. District Court for the Southern District of California. This lawsuit challenged the statutory and Constitutional authority for the Government's use of information gathered by observers onboard tuna vessels for enforcement of the quotas and other provisions of the

regulations. On 27 July 1981, the District Court ruled that, in the absence of statutory authority, such use of observer-gathered information violated the Act and the Fourth Amendment of the U.S. Constitution. The Court enjoined the Government from using such information for civil or criminal penalty proceedings, forfeiture actions, permit or certificate sanctions, or any purpose except scientific research. On 22 September 1981, the Government appealed the District Court's decision to the U.S. Court of Appeals for the Ninth Circuit and no action had been taken by the Court of Appeals at the end of 1982. In the interim, pending a decision on appeal, the National Marine Fisheries Service has continued its observer program for purposes of gathering scientific data and monitoring porpoise mortality and serious injury but no enforcement actions have been initiated based upon such information gathered during 1982.

Research Planning and Coordination

As part of the continuing consultation between the National Marine Fisheries Service and the Commission, representatives of the Commission met with representatives of the Service's Southwest Fisheries Center on 11-13 August 1982 to discuss the Center's plans for research relating to the tuna-porpoise problem and other marine mammal issues.

During the review, the following general points were noted:

- (1) The primary objective of ongoing and planned research is to provide the best possible determinations of the status of affected porpoise stocks by 1985 when regulations for 1986 and beyond will be considered;
- (2) Although another comprehensive aerial survey tentatively had been scheduled for early 1983, funding was not provided and it has been cancelled; consequently the next status of stocks determinations necessarily will be based primarily on data from the aerial survey conducted in early 1979 and from shiboard surveys conducted before, during, and since the 1979 aerial survey;
- (3) Determinations of the status of affected porpoise stocks are scheduled to be completed

in 1984 and, to facilitate the determinations, the Southwest Fisheries Center has initiated or plans to initiate a number of studies that will contribute information on which the stock assessment will be based. To assist in reviewing the reports of completed studies, the Center is planning to organize and convene three panels of experts to review the reports and provide advice on proper use of the findings;

(4) The Center has terminated its gear research program and, at present, has no plans to conduct gear or other research aimed at reducing porpoise mortality or seeking an alternative to the practice of setting on porpoise; and

(5) Nearly 50 percent of the tuna currently being caught is being taken by foreign-flag vessels; the Inter-American Tropical Tuna Commission's observer program is providing some data from foreign fleets (eight observed trips in both 1979 and 1980, four in 1981, and six up to that time in 1982) but the greatest percentage of the foreign-flag vessels are from Mexico, which is not a participant in the IATTC observer program. Consequently, there is an inadequate basis for reliably estimating the species' composition or numbers of porpoise being killed or injured by foreign-flag purse seiners.

Porpoises may avoid research and fishing vessels and, as a result, go undetected in the course of shipboard census efforts. Such avoidance could result in underestimation of population size. This possibility had been raised as an issue during hearings held in 1979 and, to assure that related questions can be addressed during forthcoming hearings, the Commission recommended, by letter of 8 September 1982, that the Service conduct school avoidance studies in February and March 1983. The Service concurred with the Commission's recommendation and, by letter of 30 September 1982, advised the Commission that it was considering a number of ways whereby funding and other uncertainties could be resolved. Subsequently, the Center consulted with the Commission concerning the terms of reference, membership, and scheduling for the panels being constituted to help prepare for the 1984 status of stocks review.

The Dall's Porpoise Issue

Dall's porpoise (Phocoenoides dalli) become entangled and die in the gill nets used by Japanese salmon fishermen in the North Pacific Ocean. As a result of the renegotiation of the International Convention for the High Seas Fisheries of the North Pacific and amendments to the U.S. North Pacific Fisheries Act implementing that Convention, the Japanese are permitted to fish for salmon both within and outside the U.S. 200-mile Fishery Conservation Zone. This fishing is subject, among other things, to the provisions of a Memorandum of Understanding between the United States and Japan concerning coordinated research efforts and, beginning 10 June 1981, to compliance with the permit and other requirements of the Marine Mammal Protection Act with respect to incidental taking of Dall's porpoise and other marine mammals within the fishery zone. As discussed in the Commission's previous Annual Reports, on 15 May 1981 the National Marine Fisheries Service published final regulations and issued a permit to Japanese fishermen allowing them to incidentally take up to 5,500 Dall's porpoise, 450 northern fur seals, and 25 northern sea lions each year during the 1981 through 1983 fishing seasons. The permit required the Japanese fishermen to accept U.S. Government observers onboard their fishing vessels and to assist as requested in meeting the objectives of the research program agreed to by the Governments of the United States and Japan.

Litigation

On 6 July 1981, Friends of Animals filed suit against the Government in the United States District Court for the District of Columbia (Friends of Animals v. Baldrige) (sic) challenging the regulations and permit which had been issued on 15 May 1981. The plaintiffs alleged that the Government, among other things, violated the requirements of the Marine Mammal Protection Act that incidental take be reduced to insignificant levels approaching a zero mortality and serious injury rate and that the regulations be based upon the best scientific evidence available so as to ensure that the taking would not be to the disadvantage of the affected populations. On 18 May 1982, the District Court issued a memorandum opinion and order noting that although it was concerned about the lack of empirical data underlying some aspects of the regulations and permit and would not have reached the same results as the agency did, the decision was supported by substantial evidence and the court cannot substitute its judgment for that of the agency. The court granted the Government's motion for summary judgment and dismissed the lawsuit.

Research Activities

During 1982, the Commission corresponded with the National Marine Fisheries Service in an effort to contribute to the development of an effective research and development program to resolve uncertainties relating to the status and trends of Dall's porpoise and to reduce the incidental take rate.

On 4 March 1982, the Commission wrote to the Service setting forth questions, comments, and recommendations relating to research plans and preparations for the forthcoming discussions with the Japanese. In summary, the Commission requested a copy of the proposed research plan for review and comment; recommended increased observer coverage of Japanese fishing operations; requested information on the Service's budget and the responsibility of the Japanese to conduct and/or fund those activities; recommended clarification of the relationship between the permit and Memorandum of Understanding; and recommended that a negotiating position be prepared for review and comment in preparation for the discussions with the Japanese.

The Service responded to the Commission by letters of 10 March and 13 April 1982 indicating, among other things, that it believed the current level of observer coverage provided sufficiently reliable estimates of incidental take and enclosing a proposed research plan for 1982. The major portion of this plan described proposed research on reproductive rates to be conducted in 1982 utilizing the dedicated vessel provided by the Japanese in accordance with the provisions of the Memorandum. With respect to the negotiating position for discussions with the Japanese, the Service indicated that the results of the meeting of U.S. and Japanese scientists would be provided to each government and, once both governments were in full agreement on the 1982 research program, then an exchange of letters and an agreement consistent with the Memorandum would occur. With the exception of the review of the permit application to conduct reproductive studies, discussed below, the Commission was not consulted further on the results of the meeting of scientists or the United States' position.

On 17 February 1982, the Commission received from the Service an application for a scientific research permit by the Service's Northwest and Alaska Fisheries Center to kill by harpooning up to 960 Dall's porpoise over a five-year period. The proposed research was designed to resolve questions about the reproductive rate of Dall's porpoise and was to be conducted utilizing a dedicated research

vessel provided by the Japanese. After reviewing the application, the Commission transmitted its comments to the Service by letter of 22 March 1982, recommending that the application be approved provided that certain steps be taken to ensure that the method of taking is humane and that a control sample be collected and analyzed so as to develop a correction factor to treat bias in the sample before additional animals are collected. In addition to these conditions, the Commission requested information about the research design and rationale of the proposed activities in the context of the overall U.S.-Japan cooperative research program on Dall's porpoise. The Service issued the permit on 13 May 1982 and responded to the Commission by letters of 13 and 17 May 1982. In August 1982, in response to expressions of opposition and concern from several quarters, the Service cancelled the research activities which were about to commence. No alternative research plan had been developed for use of the Japanese dedicated vessel and it therefore was not utilized during 1982.

The 1982 Fishing Season

Preliminary analyses of data obtained by U.S. observers aboard Japanese salmon fishing vessels indicate that 4,187 Dall's porpoise were incidentally taken within the U.S. Fisheries Conservation Zone and a total of 5,903 were taken within and outside the Zone by the Japanese mothership fishery in 1982. The kill per set rate was 0.63 in 1982. While the 4,187 figure is below the 5,500 quota, the incidental take levels and rate have increased substantially from an estimated 2,039 within the Zone, 2,892 within and outside the Zone, and 0.32 porpoise per set in 1981.

Congressional Action

In apparent recognition of the difficulties associated with efforts to resolve the Dall's porpoise problem, the Congress included provisions relating to Dall's porpoise in H.R. 3942, the Fisheries Amendments of 1982. The House of Representatives and the Senate passed the bill on 10 December 1982 and the President signed the enrolled bill into law on 29 December 1982. Section 201 of the Fisheries Amendments of 1982 amends the North Pacific Fisheries Act by adding certain provisions specifically dealing with the Dall's porpoise problem. The amendments require, among other things, that all Japanese fishing vessel adopt over the

next four years new fishing gear and techniques to reduce incidental taking of porpoise. They also call for the Service to develop detailed annual action plans relating to monitoring, research and development, and other necessary actions, and they extend the duration of the permit issued to Japanese fishermen until 9 June 1987.

CHAPTER VI

SPECIES OF SPECIAL CONCERN

The Commission reviews the status of marine mammal populations and makes recommendations for appropriate actions and designations under the Marine Mammal Protection Act and the Endangered Species Act. During 1982, the Commission continued to direct its efforts toward the several species of marine mammals designated as "endangered" or "threatened," including the West Indian manatee, the Hawaiian monk seal, the California sea otter, the bowhead whale, the humpback whale, and the right whale. Attention was also focused on bottlenose dolphin populations in the southeastern United States because of concern that Outer Continental Shelf oil and gas activities and continued, long-term taking could be placing unacceptable stress on certain populations and subpopulations.

West Indian Manatee (*Trichechus manatus*)

The West Indian manatee is one of the most endangered species of marine mammals found in the coastal waters of the United States. The largest concentrations are found in Florida.

The Florida manatee population is generally estimated to be somewhat above 1,000 animals, but there is reason to believe it may be declining. A high level of manatee mortality in the past few years, including a record high number of deaths in 1982, heightens concern for the species. Based on recovered carcasses, the levels of mortality for the past six years have been: 99 animals in 1977; 79 animals in 1978; 73 animals in 1979; 63 animals in 1980; 113 animals in 1981; and 117 animals in 1982.

Many of the deaths recorded in the past two years are related to unusual phenomena. In 1981, as had been the case in 1977, an extended period of cold winter weather contributed to the high mortality rate. In 1982, the deaths of the 37 animals which died during February and March in the vicinity of Fort Myers were tentatively linked to an occurrence of red tide.

Human-related factors which further jeopardize the species' chance for survival in the southeastern United States include: accidental death or serious injury resulting from collisions with hulls or propellers of boats and barges; entrapment in water level control gates and navigation locks; entanglement in fishing gear; poaching; vandalism; and loss of habitat due to coastal development.

Despite the magnitude of problems facing the Florida population of manatees, there was reason to be encouraged in 1982. The strong cooperative efforts among Federal and state agencies, particularly the Fish and Wildlife Service and the Florida Department of Natural Resources, as well as the Army Corps of Engineers, the Florida Game and Freshwater Fish Commission, other agencies, and private groups continued to increase and improve. Within the State, there were intensified enforcement efforts, further protection of areas of special biological significance, and continuing public information and education programs. Of particular note in the information and education area has been the work of the Florida Power and Light Company, the Florida Audubon Society, the Department of Natural Resources, and The Nature Conservancy.

Among the accomplishments of 1982 was the completion of installation of a network of signs to alert boaters to the presence of manatees and prescribe speed limits. This project, a cooperative effort resulting from discussions among the Commission, the Florida Department of Natural Resources, and the Army Corps of Engineers, was first agreed to in 1980 and initiated late in 1981 with additional help from the Coast Guard. The beneficial effects have been significant, particularly insofar as the increased enforcement efforts have been well publicized and have led to greater public awareness and support for manatee protection.

Another encouraging sign was the State of Florida's establishment of five new State manatee sanctuaries at Turkey Creek, Loxahatchee, Port of the Islands, Venice, and the Withlacoochee River, which took effect on 1 July 1982. The State also announced its intention to revise its manatee sanctuary rules to bring them into conformance with Federal regulations under the Endangered Species Act. On 9 December 1982, the State's Environmental Regulation Commission voted unanimously to include the Crystal River as an "Outstanding Florida Water," thus providing an opportunity for further protection of this important winter habitat for manatees.

Additional protection for the Crystal River area was provided by the acquisition of 14 islands in King's Bay by the Florida Chapter of The Nature Conservancy. The December 1981 announcement of the Conservancy's intention to purchase the islands was followed by a \$425,000 fund-raising campaign initiated in February 1982. Without such action, existing zoning and permitting standards would have allowed for the construction of more than 50 single-family homes on the 14 islands, with a resulting adverse impact on the manatee habitat. Prevention of such development in the Crystal River area has been a priority goal of Florida conservationists for a number of years. Acquisition was completed in December 1982.

Further encouragement was provided in 1982 by the increasingly effective role played by the Florida Department of Natural Resources' Manatee Technical Advisory Council. The Council, established in 1980 with the assistance of the Marine Mammal Commission, proved in 1982 to be an effective forum for the definition of problems and the coordination of State, Federal, and private activities to address them. Its periodic meetings provided an opportunity for State and Federal officials, scientists, enforcement personnel, conservationists, and interested members of the public to work together on the many issues affecting manatees.

The Commission's substantial efforts over the past years to encourage the protection and recovery of the West Indian manatee are discussed in detail in past Annual Reports. Among the many projects partially supported by the Commission was the Fish and Wildlife Service's initial effort to develop a comprehensive research and management plan for the manatee population of the Crystal River area. In October and November 1981, portions of a draft plan were submitted to the Commission for review and, on 12 November 1981, the Commission commented to the Service that the plan needed further work, particularly with regard to format and organization, and enclosed a suggested outline for a revised plan.

On 26 April 1982, the Commission received a copy of the report submitted to the Fish and Wildlife Service in which the research and management plan for the Crystal River population of manatees was set forth. By letter of 6 May 1982, the Commission advised the Service that it had reviewed the report and concluded, among other things, that:

while it represented an improvement over previous versions, it still did not provide an adequate basis for developing a comprehensive research and management plan; it did not represent a useful prototype for developing other site-specific research and management plans; the recommended research and management actions were incomplete and not sufficiently detailed; and, in many cases, recommended actions were not clearly justified. The Commission referred the Service to its earlier comments and recommendations on development of the plan.

Subsequently, the Fish and Wildlife Service closed the contract after consultation with the Commission, and decided to develop a research and management plan through its Cooperative Research Unit at the University of Florida in Gainesville. The Commission worked closely with the Service on the project, and will continue to do so. The Service established a project Steering Committee which met on 21 October 1982 to review the draft of a revised plan outline with respect to the types and organization of information, both biological and legal, that needed to be incorporated. A final outline was agreed upon and the principal investigator immediately undertook negotiations to contract for the necessary legal advice. It appears that the Service is well on its way to completing a useful research and management plan for the Crystal River area in 1983.

As mentioned earlier, a number of deaths in 1982 appeared to be attributable to red tide. In February, substantial numbers of manatees began dying of unknown causes in the Fort Myers area on the west coast of Florida. The die-off continued for several weeks until, by 16 April 1982, 41 manatee deaths had been confirmed in the area and 39 carcasses had been recovered. Of these 39, two appeared to have died as a result of collisions with boats, but for the remainder a variety of causes, including red tide, botulism, and bacterial meningeal encephalitis, were under investigation.

While the die-off was occurring, it became apparent that facilities in the Fort Myers area for performing autopsies and histopathological work-ups were inadequate. However, since the necessary facilities were available at the University of Miami, the Commission made funds immediately available to transport the carcasses to Miami for examination. The Commission also made known to the Fish and Wildlife Service its willingness to support additional veterinary services should the Service wish it to do so.

Additional assistance from the Commission was not needed, however, because of the extremely thorough and comprehensive series of investigations initiated by the staff of the Fish and Wildlife Service's Sirenia Project in Gainesville. Under their direction, investigators and laboratories in a number of states were called upon to examine a wide variety of organs, tissue samples, blood, and stomach contents. Although an absolutely certain diagnosis of the cause of mortality could not be determined, the preponderance of evidence suggested that the cause was poisoning from ingestion of tunicates, small, sessile marine chordates, which concentrate red tide toxins and produce a toxin of their own. Tunicates were found in a large number of the manatee stomachs.

In 1981, the National Oceanic and Atmospheric Administration's Sanctuary Programs Office contracted with Chelsea International Corporation to identify coastal and offshore areas that would qualify, from a scientific standpoint, as national marine sanctuaries under the Marine Protection, Research, and Sanctuaries Act of 1972. On 14 June 1982, the Commission was asked to comment on seven sites in the Gulf of Mexico. One site, the Big Bend Seagrass Beds off the northwest coast of Florida, includes a portion of the critical migratory corridor connecting summer and winter habitats for the Crystal River manatee population as well as important manatee feeding areas.

After consultations with its Committee of Scientific Advisors, the Commission commented on the Big Bend Seagrass Beds site on 29 July, noting, among other points, during the summer months, after manatees leave winter refuges at Crystal River and Homosassa Springs, they disperse along the northwest coast of Florida particularly between the Chassahowitzka and Steinhatchee Rivers; the nearshore seagrass beds along this stretch of coast provide migratory, feeding, and resting areas for manatees in summer months while sheltered creeks and bayous are used as calving areas; protection of these summer habitats is essential for maintaining and continuing recent growth of the northwest Florida manatee population; and because of intensive manatee research and management efforts conducted along the northwest coast of Florida by the Fish and Wildlife Service, the State of Florida, and others over the past 15 years, the establishment of the sanctuary offers a unique opportunity to complement future State and Federal research and management activities. In view of these comments, the Commission recommended that future deliberations on designating the site as a national marine sanctuary consider potential contributions to manatee-related research and management objectives and that the

proposed boundaries of the site be extended southward along the coast to the Chassahowitzka National Wildlife Refuge and, insofar as possible, up the rivers used by manatees so as to include most of the summer/migratory habitat used by the northwest Florida manatee population.

Another important and as yet unresolved question involving habitat protection centered on efforts by the Coast Guard to relocate its Lake Worth Station in Florida from Peanut Island to a site at 59th Street in West Palm Beach. On 11 May 1981, the Commission wrote the Commandant of the U.S. Coast Guard to advise the agency that the Commission had recently learned that the Coast Guard might be considering establishing a station near the Riviera Beach power plant. The Commission pointed out that the area is heavily used by manatees and that its use as a staging area for Coast Guard search and rescue craft would pose a serious threat to the species' well-being. Since collisions with boat hulls and propellers have been a major cause of manatee mortality in the past, the Commission expressed its hope that the Coast Guard would base its craft elsewhere so as to minimize such threats.

By letter of 1 March 1982, the Seventh Coast Guard District wrote to the Commission indicating that it was continuing its analysis of the proposed development and use of the 59th Street site and that it was requesting information on possible environmental impacts and relationships with Commission plans, programs, and policies. On 29 March 1982, the Commission, in consultation with its Committee of Scientific Advisors, responded to the Coast Guard's request by noting that: the manatee is among the most endangered marine mammals in U.S. coastal waters; approximately 10 percent of the total southeastern U.S. manatee population congregate in the waters adjacent to the Riviera Beach power plant during cold winter periods; the waters around the power plant and the 59th Street site are included within the area that has been designated as critical habitat for manatees under the Endangered Species Act and are also afforded special protection under the Florida Manatee Sanctuary Act through annual regulation of boat traffic between 15 November and 15 March; collisions with boat hulls and propellers are the major cause of human-caused manatee mortality in Florida; and, among other possible direct and indirect effects, high-speed boat operations, such as those necessary for Coast Guard search and rescue operations, are likely to result in serious injury and mortality to some manatees if the 59th

Street site is used as a base for Coast Guard operations. Based on these and other considerations, the Commission formally recommended that the Coast Guard not move its Peanut Island Station to the 59th Street site in West Palm Beach.

On 2 April 1982, the Commission learned that the Coast Guard had relocated a 95-foot cutter to the 59th Street site and intended to keep it there until 31 October 1982. On 20 May 1982, representatives of the Commission met with representatives of the Coast Guard and the Fish and Wildlife Service to discuss the proposed relocation and its possible effect on manatees. The Commission pointed out: that Coast Guard actions taken with respect to construction of the facility appeared to have been in violation of the Endangered Species Act; that the Coast Guard, having requested comments and set a comment period, moved its cutter before the comment period ended; and that there was need to examine other alternatives. Subsequently, the Coast Guard made known to the Fish and Wildlife Service its intent to discontinue use of the 59th Street pier pending the results of the Fish and Wildlife Service's Section 7 consultation under the Endangered Species Act.

By letter of 29 December 1982, the Fish and Wildlife Service forwarded its Biological Opinion to the Coast Guard. Consistent with the comments and recommendations put forth by the Commission in its 29 March 1982 letter, the Fish and Wildlife Service concluded that the proposed relocation of the Coast Guard station to the 59th Street site would be likely to jeopardize the continued existence of the manatee and that reasonable and prudent alternatives to the proposed 59th Street location would be: (1) to renovate and maintain the existing station on Peanut Island; or (2) to select a new site away from the Riviera Beach power plant so as to eliminate the need for vessel traffic through the area of high manatee concentrations.

In early 1983, the Commission resumed discussions with the Coast Guard to resolve this potentially serious problem, and was pleased to learn of the Coast Guard's intention to vigorously pursue alternative sites for the relocation of the Peanut Island facility. The Commission will assist the Coast Guard in any way that it can in this effort.

Hawaiian Monk Seal (*Monachus schauinslandi*)

The Hawaiian monk seal inhabits a limited area on and around the Leeward Hawaiian Islands and is in grave danger of extinction. It is one of three members of the genus Monachus and may be the only member of the genus with a chance of surviving the 20th century. Of its congeners, the Caribbean species (Monachus tropicalis) appears to be extinct and the Mediterranean species (Monachus monachus) is declining rapidly.

Responsibility for protection and conservation of the Hawaiian monk seal is delegated to the National Marine Fisheries Service under the Marine Mammal Protection Act and the Endangered Species Act. Because the species' range includes the Hawaiian Islands National Wildlife Refuge, the Fish and Wildlife Service shares responsibility for protecting the monk seal and its habitat.

The extent of the Commission's efforts over the past years to enhance the protection and encourage the recovery of the Hawaiian monk seal are set forth in detail in previous Annual Reports. Among the actions taken were recommendations to the National Marine Fisheries Service that it constitute a Hawaiian Monk Seal Recovery Team and designate critical habitat for the species. The Commission has also provided support for a number of population studies and in Fiscal Year 1981 received a special \$100,000 appropriation to aid in development of an effective research and management plan.

During 1981, the Commission worked closely with the National Marine Fisheries Service in an effort to facilitate development of a Hawaiian monk seal recovery plan. Congress, recognizing the precarious state of the Hawaiian monk seal, directed the National Marine Fisheries Service to expend \$400,000 on monk seal work during Fiscal Year 1982, and the Commission consulted with the Service on the most appropriate use of these funds.

On 17 November 1981, the Commission received the draft recovery plan for the Hawaiian monk seal from the National Marine Fisheries Service. On 14 January 1982, the Commission, in consultation with its Committee of Scientific Advisors, provided detailed comments on the draft plan. The Commission noted, among other things, that although the draft provided a relatively complete list of actions needed to protect and encourage recovery of the Hawaiian monk seal, it was deficient in a number of ways. It did not, for example, constitute a plan of

action in that it failed to adequately describe and provide rationales for the tasks included in the outline; it did not set forth a schedule for activities; it did not indicate how much money would be needed to complete each task; and it did not indicate which agencies or organizations should be responsible for conducting or supporting the various tasks. Furthermore, the plan provided no indication of when and how an operational work plan would be developed.

The Commission recommended to the Service that it ask the Recovery Team to set priorities and to provide estimates of the time, personnel, logistic support, and funding which would be required to complete each of the tasks identified in the draft outline. The Commission also asked to review and comment on the completed recovery plan before it was submitted for approval and implementation.

On 27 June through 1 July 1982, the Commission's Scientific Program Director met in Hawaii with representatives of the National Marine Fisheries Service, the Fish and Wildlife Service, the Coast Guard, the State of Hawaii, and others to discuss issues concerning the conservation and protection of the Hawaiian monk seal and other marine mammals in Hawaiian waters. It was apparent from those discussions that the Congressional directive to the National Marine Fisheries Service to invest \$400,000 in monk seal research and management activities in FY 1982 had had positive effects. Not only had several critically needed research and management programs been either started or expanded, but there also was heightened awareness of and desire to address monk seal problems within the National Marine Fisheries Service, the Fish and Wildlife Service, the Coast Guard, involved State agencies, and the academic community.

At the request of the Commission, the National Marine Fisheries Service held a meeting on 11 August 1982 to review actions already taken or being planned to protect and encourage recovery of the Hawaiian monk seal. Information presented during the review indicated, among other things, that: the Service's captive pup rearing program on Kure Atoll is improving pup survival and should be continued; the pilot radio-tagging and dive-profile studies being conducted at Lisianski Island show promising results and should be expanded to include females and juvenile animals as well as adult male monk seals; mortality and injury caused by entanglement in lost or discarded fishing gear and aberrant behavior

resulting from an unbalanced sex ratio on some islands are of concern and warrant further investigation; and the ongoing monk seal studies at French Frigate Shoals should be continued inasmuch as they are providing information needed to develop economical assessment and monitoring procedures as well as basic biological and ecological data.

Participants at the program review noted that funds available to the National Marine Fisheries Service for monk seal work in FY 1983 were totally inadequate to meet even the basic program needs identified by the Hawaiian Monk Seal Recovery Team. In hopes, however, that Congress might see fit to strengthen research and management activities through an increased appropriation, the Commission, in consultation with the National Marine Fisheries Service, developed a summary of necessary research tasks, listed in order of priority. Fortunately, Appropriations Committees in both the Senate and the House of Representatives agreed on the need for substantially increased funding and, late in December, an additional \$150,000 was made available to the Commission for monk seal research and management activities.

In January and early in February 1983, the Commission will continue its consultations with its Committee of Scientific Advisors, the National Marine Fisheries Service, the Fish and Wildlife Service, and the State of Hawaii to reach agreement on the best possible uses of all available monies. Following agreement, the Commission will invest the \$150,000 in clearly described activities to be undertaken within the context of the overall research program. This will be done by an interagency transfer of funds in February 1983 to the National Marine Fisheries Service.

On 28 December 1982, the Commission received the Agency Review Draft of the Hawaiian Monk Seal Recovery Plan prepared by the Monk Seal Recovery Team under the aegis of the National Marine Fisheries Service. The plan will be reviewed by the Commission in consultation with its Committee of Scientific Advisors in January 1983 and comments provided to the Service shortly thereafter.

Southern Sea Otter (Enhydra lutris)

The small remnant population of sea otters in California could be reduced substantially by oil spills or other catastrophic events and, for this reason, was designated "threatened" under the Endangered Species Act in January 1977. The possibility of the population being endangered by an oil spill or other catastrophic event could be reduced by establishing one or more sea otter colonies outside the population's present range. Such an action could adversely affect certain commercial and recreational fisheries, however, since sea otters eat abalone and other shellfish of commercial or recreational value.

To facilitate protection and restoration of the California sea otter population, while minimizing possible adverse effects on commercial and recreational shellfish fisheries, the Commission, in December 1980, recommended that the Fish and Wildlife Service, the responsible management agency, adopt and implement a management strategy recognizing the ultimate need for "zonal" management of sea otters and the need to establish at least one additional group of sea otters at a site not likely to be affected by an oil spill occurring in or near the population's present range. The Commission also repeated an August 1979 recommendation that the Fish and Wildlife Service compile and map biological, ecological, and socio-economic information bearing on the selection of possible translocation sites.

The Fish and Wildlife Service concurred with the Commission's recommendation concerning zonal management and the concept is reflected in the Southern Sea Otter Recovery Plan adopted by the Service in February 1982. The Service also concurred with the Commission's recommendation concerning the need to compile and map information bearing upon the selection of possible translocation sites and, as noted in the Commission's previous Annual Report, contracted with a private consultant in September 1981 to do the work.

The Service constituted a Technical Review Team, including representatives of the Commission, the Minerals Management Service, the California Department of Fish and Game, and several other agencies and organizations to help overview conduct of the mapping project. The review team met on 21 May and 29 October 1982. Following the May review, the Commission determined that a number of questions concerning the availability, reliability, and interpretation of certain data could best be resolved by on-site examination of those areas which the contractor tentatively had identified as

potential translocation sites. Subsequently, the Commission transferred funds to the Fish and Wildlife Service so that the principal investigators could visit each of the four areas tentatively identified as potential translocation sites.

The site visits were carried out late in October and early in November 1982. The final project report is expected to be completed early in 1983 and the Fish and Wildlife Service, in consultation with the Commission, the California Department of Fish and Game and other interested parties, presently is planning a meeting in March 1983 to review the results of the mapping project and to determine how best to proceed.

Regulating Distribution and Movements

Zonal management would require designation of "otter" and "otter-free" zones, and would be feasible only if there are acceptable and effective methods for limiting the movement of otters into and out of these predetermined areas. To help assess the likely feasibility of zonal management, the Commission, late in 1981, contracted for a study to identify and evaluate possible methods for influencing the distribution and movements of sea otters.

The project report, published in September 1982, identifies and discusses nine techniques that might be useful for regulating sea otter movements and distribution. The report concludes that no single technique likely will be effective in all situations and that a combination of techniques may be required to be effective. The report further concludes that it may well be impossible to completely prevent otters from leaving designated areas, but that undesired movement might be limited by: selecting boundaries that coincide with natural barriers; augmenting barriers with negative conditioning; capturing and relocating otters that stray into non-otter zones; or manipulating the demographic parameters of established colonies.

The report notes that additional research would be necessary to: (1) identify and assess habitat breaks that might be used as boundaries; (2) develop more efficient methods and equipment for herding and capturing otters; (3) determine how density, age, sex, reproductive condition, time of year, availability of prey, and other variables affect sea otter movements; and (4) assess the possible use of acoustic or other stimuli to cause otters to leave or avoid selected areas.

Five-Year Status Review

The Endangered Species Act, as amended, requires that the Fish and Wildlife Service review the status of all species designated as either "threatened" or "endangered" at least once every five years. In partial fulfillment of this responsibility, the Service, on 27 September 1982, published a Federal Register notice requesting information on the status of the southern sea otter population and a number of other listed species.

To provide a better basis for assessing population status, the Fish and Wildlife Service and the California Department of Fish and Game jointly conducted a population count in November 1982. During the count, 1,194 independent otters and 144 dependent pups were seen along the coast of California between Point Concepcion and Point Ano Nuevo. During a comparable count in 1976, 1,357 independent otters and 85 pups were seen. The differences between the 1976 and 1982 counts indicate that the population has not grown, and may have declined since 1976.

From 1976 through 1982, the number of dead otters found on California beaches averaged about 100 per year. This is approximately seven percent of the aforementioned population counts, and is only part of the actual annual mortality. Thus, it seems likely that annual mortality has been close to or greater than gross annual recruitment since 1976 or before.

Recent studies indicate that sea otters, several other species of marine mammals, several species of marine birds, and non-target fish species are being taken incidentally in gill net fisheries in Monterey Bay and other coastal areas of California. This take may be responsible, at least in part, for the lack of growth and possible population decline. The California Department of Fish and Game is developing a program to document the nature and extent of this incidental take, and the Commission, as noted in Chapter II, has provided funds to augment the ongoing studies and to determine how programs being conducted, supported, or planned by other agencies and organizations might be used to facilitate data collection.

The Commission, in consultation with its Committee of Scientific Advisors, currently is reviewing available information concerning the distribution, size, and productivity of the southern sea otter population, and the nature and extent of incidental taking and possible threats from oil spills or other catastrophic events. The results of this review will be conveyed to the Fish and Wildlife Service early in 1983.

Bowhead Whale (Balaena mysticetus)

Over-exploitation by commercial whalers reduced the bowhead whale to extremely low levels throughout its range. It has been totally protected from commercial whaling for more than 40 years, and it is listed as both "endangered" under the Endangered Species Act and "depleted" under the Marine Mammal Protection Act.

Although commercial exploitation of the Bering Sea population of bowheads did not begin until the mid-19th century, they have been hunted for subsistence purposes by Eskimos for centuries. Reported increases in the number of bowhead whales landed, killed but lost, and struck but lost by Alaskan Eskimos during the mid-1970s, however, led to increasing concern about the adverse impact of unregulated Eskimo hunting on the endangered bowhead population. This concern led to a decision by the International Whaling Commission (IWC) in June 1977 to ban the taking of bowhead whales for subsistence by all its member nations' people, including Alaskan Eskimos. Subsequently, in December 1977 and thereafter, the IWC modified the total ban in recognition of the subsistence and cultural dependence of Alaskan Eskimos upon bowheads, and established limited quotas for subsistence hunting during 1978, 1979, and 1980. At its July 1980 meeting, the IWC adopted a "block quota" for the years 1981 through 1983 of 45 bowhead whales landed or 65 struck, whichever comes first, provided that not more than 17 whales could be landed during any one of those three years. Detailed discussions of the Commission's activities in previous years and a historical summary of the bowhead whale issue are presented in the Commission's Annual Reports for Calendar Years 1977-1981.

Cooperative Agreement

As discussed in the Commission's previous Annual Report, the National Oceanic and Atmospheric Administration on behalf of the Government and the Alaska Eskimo Whaling Commission (AEWC) on behalf of Eskimo whalers, signed a Cooperative Agreement on 26 March 1981 in order to provide Eskimo whalers with substantial opportunity and responsibility for regulation, monitoring, and enforcement of the bowhead whale hunt. The Agreement recognizes that the National Oceanic and Atmospheric Administration has the primary responsibility for bowhead whale management and provides a mechanism for the Alaska Eskimo Whaling Commission to assume responsibility for important aspects of whaling management under its Management Plan. Under the Agreement, which extends through 31 December 1987, the

strike limit was set at 32 for 1981 and at 19 for 1982. The Agreement and associated Management Plan also set forth required whaling techniques, require the best efforts of whalers to strike only those whales that are less than 12 meters long and presumed to be sexually immature, and provide for assessment of civil penalties for violations of the strike or landed limit. The Alaska Eskimo Whaling Commission assumes the responsibility for determining the allocation of strikes among the whaling villages under the terms of the Agreement and for providing daily oral reports during the hunt concerning the number of strikes and landings and a detailed written report within 30 days after conclusion of the hunt.

Eskimo Whaling During 1982

The Alaska Eskimo Whaling Commission allocated the total of 19 strikes among the whaling villages and monitored and reported on whaling activities during 1982 in compliance with the Cooperative Agreement. At the end of the spring hunt, six whales had been landed and ten more struck but lost for a total of 16 strikes. During the fall hunt, one whale was landed and two were struck but lost, resulting in a total for the year of 19 strikes, of which eight were landed and 11 lost. The Eskimo whalers ceased whaling after the 19th whale was struck but lost. The 1982 hunt, like that in 1981, complied with the limits established by the International Whaling Commission's three-year quota and the Cooperative Agreement. A total of 18 strikes remain available under the IWC's three-year quota for use in 1983.

Consideration by the International Whaling Commission During 1982

In addition to adopting a resolution and a Schedule amendment establishing an aboriginal whaling scheme (discussed in Chapter III of this Report), members of the IWC also considered at their July 1982 meeting the report by the United States relating to the Eskimo bowhead hunts and the report of the Scientific Committee relating to the status and trends of the affected population. Reports on the 1981 hunts indicated that 17 bowhead whales had been landed and 11 others had been struck and lost. The Scientific Committee considered the results of U.S. research during the preceding year and concluded that previous estimates should be corrected to account for whales missed in shore-based censuses. It concluded that the best estimate of present

stock size is 3,857 (range 3,390 - 4,325) and that current stock size is therefore 42.9 - 21.4 percent of the estimated range of the initial 1848 population size (9,000 - 18,000). The Committee indicated that because of the large catches during the course of early, commercial whaling activities, it believes that the initial stock size was nearer to the upper end of the range of estimates so that the present stock size is closer to the lower percentage (21.4 percent) of initial size. It therefore recommended that the stock continue to be classified as a protected stock and that the safest course for the recovery of the stock is for the take to be zero.

During the consideration of catch limits for the bowhead hunt in Technical Committee, Spain proposed that the quota for 1983 be set at zero. This proposal was seconded by U.S.S.R. and passed by a vote of nine (Federal Republic of Germany, Kenya, Mexico, Oman, Peru, St. Vincent, South Africa, Spain, and U.S.S.R.) to seven (Australia, Denmark, Seychelles, Sweden, Switzerland, United Kingdom, and United States) with 19 abstentions. During the discussion in plenary session, the IWC members noted that the previous decision establishing a three-year quota running through the 1983 season should be honored and it was agreed, despite the strong feelings of several members, to leave the existing quota in place and defer consideration of the matter until the July 1983 meeting. At that time, quotas for 1984 and thereafter will be established pursuant to the aboriginal whaling scheme which was adopted.

Research Coordination and Planning

Research relevant to the conservation and protection of bowhead whales is conducted or supported by a variety of agencies and organizations, including the National Marine Fisheries Service, the Minerals Management Service, the North Slope Borough, the Alaska Eskimo Whaling Commission, the State of Alaska, and the oil and gas industry. Since 1978, the Commission, as described in previous Annual Reports, has overviewed and made a number of recommendations to facilitate planning and coordination of this research.

A substantial amount of new information has been obtained and, in January 1982, the Alaska Eskimo Whaling Commission sponsored a Conference on the Biology of Bowhead Whales to review research results and identify possible methods for obtaining better information on population size and productivity. The Commission participated in the conference and, by letter of 11 January 1982, recommended

that the National Marine Fisheries Service organize and convene a follow-up meeting to develop and, if possible, agree on a coordinated plan for obtaining biological and other information needed to resolve IWC-related as well as other bowhead issues.

The National Marine Fisheries Service concurred with the Commission's recommendation and convened a meeting on 11-12 March 1982 to develop a coordinated, interagency research plan. Meeting participants included representatives of the North Slope Borough, the Alaska Eskimo Whaling Commission, the Bureau of Land Management, and the oil and gas industry, as well as the Commission and the National Marine Fisheries Service. During the meeting, it was agreed that additional research was needed to: 1) provide a more reliable estimate of annual recruitment; 2) evaluate possible sources of bias in census data; and 3) provide better information on distribution and movement patterns, particularly in and near OCS lease sale areas in the Beaufort Sea. It also was agreed that obtaining a reliable estimate of annual recruitment was of particular importance.

Following the 11-12 March meeting, a report was prepared and circulated and the National Marine Fisheries Service obtained funding for additional surveys of bowhead whales in the eastern Beaufort Sea. This work was carried out by a contractor in August and early in September 1982 and the resulting data currently are being analyzed.

At the March 1982 coordination meeting, it was agreed that the group should meet again some time late in 1982 or early in 1983 to evaluate research progress and to make further recommendations as needed. This meeting was held in Anchorage, Alaska, on 15-16 December 1982. Although the data from the 1982 studies had not yet been analyzed fully, preliminary results were promising. However, it was clear that further work is needed to provide a reliable estimate of recruitment, determine stock distributions, and assess the possible direct and indirect effects of offshore oil and gas exploration and exploitation.

The report from the December 1982 meeting is expected to be completed early in 1983 and will be reviewed by the Commission, in consultation with its Committee of Scientific Advisors, to determine what additional action is needed to facilitate planning or coordination of bowhead research.

Humpback Whale (Megaptera novaeangliae)

Humpback whales can be found, at certain times of the year, in waters off Alaska, Hawaii, and the east and west coasts of the U.S. mainland. In the past, the species was over-exploited by commercial whaling and it is now designated as "endangered" under the Endangered Species Act. Commercial exploitation has been prohibited and no longer constitutes a threat to the species. Subsistence hunting off Greenland and other human activities, however, still pose a threat to humpback whales. These include commercial and recreational boating, offshore oil and gas development, sport and commercial fisheries, and certain coastal development. While the Commission has continued its efforts to ensure protection of humpback whales in Hawaii and elsewhere, its primary focus in 1982 concerned humpback whales in Alaska.

Glacier Bay National Park, Alaska

The inland waters of the Glacier Bay National Park and surrounding waters in southeast Alaska are used by a portion of the North Pacific population of humpback whales during the summer months. In 1978 and 1979, fewer whales entered the Bay than had been the case during the previous ten years. It was determined by the National Park Service, which has management responsibility for the Glacier Bay National Park, that the increasing number of vessels using the Bay might be one reason for the absence of humpback whales. Thus, in 1979, the Park Service established interim regulations to restrict vessel traffic and, at the same time, initiated consultations with the National Marine Fisheries Service to determine whether additional actions might be necessary to assure that whales were not adversely affected by vessel traffic or other activities in the Bay.

In October 1979, a workshop on the issue was convened by the Marine Mammal Commission, and in December of that year, the National Marine Fisheries Service prepared and issued a Biological Opinion. The findings in both instances were recommendations that the National Park Service undertake studies to: (1) characterize the food and feeding behavior of humpback whales in Glacier Bay and surrounding waters; (2) assess the acoustic characteristics of the Bay and the vessels operating in the Bay; and (3) compare the behavioral responses of whales to vessels in the Bay and in other areas of southeast Alaska. In FY 1981, Congress appropriated special funds to the National Park Service to address the problem and these funds were transferred to the National Marine Fisheries Service to support the recommended studies.

The National Park Service asked the Commission to convene a second workshop, following the 1981 field season, to review the work just completed and recommend future actions. The Commission did so on 20-21 December 1981 in Seattle, Washington, and preliminary results are discussed in the Commission's Annual Report for 1981. The participants concluded, among other things, that additional studies would probably be required to meet management needs and they recommended that the program be continued and, if possible, expanded in 1982. It was recognized that lack of adequate funding as well as insufficient time to plan and coordinate research had limited the success of the 1981 field research.

In 1982, the National Park Service again transferred funds to the National Marine Fisheries Service to continue research on the relationship between whales and prey and whales and boats in Glacier Bay and nearby waters. The scope of work called for studies of prey resources to identify and quantify the principal prey species in humpback whale feeding areas and to measure the changes in abundance and distribution of prey types during the season. It also called for studies on behavior to determine whale response to vessels of different types and sizes which were traveling at different speeds. A major component of this work was the radio-tagging and tracking of individual whales to detect stress caused by vessels.

It was apparent, however, that existing funds were insufficient to provide an adequate number of radio-tags to tag the optimum number of humpback whales. Thus, on 12 July 1982, the Commission transferred funds to the National Marine Fisheries Service to provide an adequate number of tags to increase the probability of the success of both the tagging program and the entire research program.

At the end of 1982, the possibility of convening a third interagency workshop to review research and management activities concerning humpback whales in Alaska waters was under consideration. While analyses of data from the 1982 field program probably will not be completed for several months, a meeting might be useful for determining whether the 1982 research results likely will indicate or suggest further management actions that could or should be taken to protect humpback whales, and what additional research and monitoring programs, if any, likely will be necessary to assess and detect the possible adverse effects of vessel and other human activities on humpback whales in Glacier Bay.

Right Whale (Eubalaena glacialis)

Right whale populations in the North Atlantic and elsewhere were severely depleted by commercial exploitation in the 19th and early 20th centuries. The remnant population of right whales in the North Atlantic is thought to number no more than a few hundred animals and may well be the most endangered cetacean population occurring in U.S. coastal waters.

Commercial exploitation has been prohibited since the mid-1930s and no longer constitutes a threat to the continued existence of right whale populations. In some areas, however, offshore oil and gas development and other human activities pose new threats to the whales and their habitat.

The Commission, as noted in Chapter VII, has advised the Minerals Management Service that additional studies, monitoring programs, or lease stipulations may be required to assure that right whales are not jeopardized by exploration or exploitation of oil and gas resources offshore the U.S. east coast. The Commission also has provided funds, as noted in Chapter II, to develop a right whale sighting network in the southeastern United States and to hold a workshop on the biology and status of right whales.

In 1983, the Commission, in consultation with its Committee of Scientific Advisors, will review the workshop report and other relevant information, and, as appropriate, will recommend that the National Marine Fisheries Service and the Minerals Management Service take additional steps to assure the continued existence and welfare of right whales and their habitat in U.S. waters.

Bottlenose Dolphin (Tursiops truncatus)

The bottlenose dolphin is the most common cetacean in the coastal waters of the southeastern states and is the cetacean species most frequently taken alive for purposes of scientific research and public display. Live-captures began in the early 1900s and, although records are poor, it may be that as many as 1,800 animals were captured and taken from the coastal waters of the southeastern states prior to passage of the Marine Mammal Protection Act in 1972. From 1970 through 1972, at least 600 animals were taken from the coastal waters of Florida alone -- 215 in 1970, 172 in 1971, and 214 in 1972.

Live-captures and removals probably have not had a significant adverse effect on the species as a whole. However, the species does not occur uniformly throughout its range and may include a number of more or less discrete populations. If so, captures and removals may have had or may be having an adverse effect on "local" populations. In addition, disturbance and environmental degradation from coastal development, exploration and exploitation of offshore oil and gas resources, or other human activities may have had or be having an adverse effect on populations.

The National Marine Fisheries Service is responsible, under the authority of the Marine Mammal Protection Act, for assuring that live-captures and removals do not have significant adverse effects on bottlenose dolphins. To meet this responsibility, the Service, in 1977, following consultations with the Commission, developed and adopted a system for regulating the number of bottlenose dolphins that can be taken annually from various areas for scientific research and public display. Information available at that time was insufficient to accurately identify or assess the status of the populations that may have been affected by prior removals or to determine the precise number, age, or sex of animals that could be taken annually from various areas without causing the populations to be reduced below their optimum sustainable size. Therefore, in December 1978, the National Marine Fisheries Service, in consultation with the Commission, convened a workshop to define information needs and to determine how those needs best could be met. Subsequently, the Southeast Fisheries Center of the National Marine Fisheries Service developed a long-range plan for assessing and monitoring the number, age/sex composition, and productivity of dolphins in areas where past and current collection activities were focused.

During 1982, the Commission consulted with representatives of the Service concerning the further development and implementation of the research and management plan so as to provide the necessary information for protection of Tursiops populations. Representatives of the Service will join members of the Commission and its Committee of Scientific Advisors at their meeting in February 1983 to develop an agreed plan and schedule for completing the analysis of available data and for modifying the research and management plan as necessary.

CHAPTER VII

OUTER CONTINENTAL SHELF OIL AND GAS DEVELOPMENT

Activities and events associated with exploration and development of offshore oil and gas resources may have direct and indirect effects on marine mammals and the ecosystems of which they are a part. The Bureau of Land Management and, more recently, the Minerals Management Service (which was created early in 1982 by combining parts of the Bureau of Land Management and the Geological Survey) have been delegated responsibility by the Secretary of the Interior under the Outer Continental Shelf (OCS) Lands Act, as amended, for predicting, mitigating, and detecting the adverse effects of OCS oil and gas development. The National Marine Fisheries Service and the Fish and Wildlife Service are responsible, under the authority of the Marine Mammal Protection Act and the Endangered Species Act, for reviewing proposed actions and advising the Minerals Management Service of measures that may be needed to assure that proposed actions will not be to the disadvantage of marine mammals and other wildlife. The Commission reviews the relevant policies and activities of these agencies and recommends actions that appear necessary to conserve marine mammals and their habitats. The Commission's activities in this regard during 1982 are discussed below.

Proposed OCS Lease Sale #71 Diapir Field, Alaska

On 24 November 1981, the Bureau of Land Management distributed and requested comments on the Draft Environmental Impact Statement for OCS Lease Sale #71, consisting of 372 blocks (approximately 1.8 million acres) of submerged lands in the Beaufort Sea, 5 to 60 kilometers offshore.

The DEIS noted, among other things, that: bowhead whales, polar bears, and other marine mammals could be affected by exploration and development activities in the proposed lease sale area; new information on bowhead migrations

had been obtained since the last OCS lease sale in the Beaufort Sea; the new information indicated that a two-month seasonal drilling restriction, rather than the seven-month restriction included as a stipulation in an earlier sale, was adequate to assure that bowhead whales would not be affected adversely by the proposed action; and a Biological Task Force had been constituted to provide advice on biological surveys and lease stipulations needed to assure that wildlife and wildlife habitat would not be affected adversely by the proposed action.

The DEIS did not include a complete description or discussion of the new information on bowhead whale migrations or the rationale for reducing the seasonal drilling restriction from seven to two months. Neither did it provide a complete assessment of the possible impacts of the proposed action on polar bears or a clear description of the responsibilities and authorities of the Biological Task Force. The Commission pointed out these deficiencies in a 12 February 1982 letter commenting on the DEIS and suggested ways whereby they could be corrected.

Proposed OCS Lease Sale #70
St. George Basin, Alaska

Proposed OCS Lease Sale #70, tentatively scheduled for February 1983, consists of 479 blocks (approximately 2.7 million acres) of submerged lands in the St. George Basin, Alaska. The Commission, in consultation with its Committee of Scientific Advisors, reviewed the Draft Environmental Impact Statement on the proposed lease sale and, by letter of 9 April 1982, provided comments to the Bureau of Land Management.

In its comments, the Commission indicated that the DEIS should be modified to: (a) provide additional information concerning the possible effects of the proposed action on the North Pacific fur seal, the Pribilof Island natives, and the ability of the Federal Government to meet commitments related to the Interim Convention on the Conservation of the North Pacific Fur Seal; (b) consider the possible effects of the proposed action on the Bering Sea walrus population; and (c) identify research and monitoring programs needed to provide a basis for assessing the effectiveness of proposed mitigation measures and for assuring that OCS oil and gas activities do not adversely affect marine mammals or other components of the marine ecosystem. The Commission also noted that: a major oil spill in the southern part of the proposed lease sale area could pose a major threat to marine

mammal and other wildlife habitat in Unimak Pass and Izembek Lagoon; the effects of possible oil spills along a proposed pipeline to Iketan Bay should be considered in the impact assessment; and, because of the substantial level of seismic activity in the area, it would be desirable to establish a program, if one did not already exist, for assessing, monitoring and, as possible, predicting seismic events in the area.

Proposed OCS Lease Sales #72, #74, and #79
Gulf of Mexico

OCS Lease Sales #72, #74, and #79 are scheduled for May, August, and November 1983, and include all unleased blocks in the central, western, and eastern planning areas of the Gulf of Mexico. The offerings consist of approximately 39 million acres for Sale #72, 33 million acres for Sale #74, and 58 million acres for Sale #79.

The Commission, in consultation with its Committee of Scientific Advisors, reviewed and, by letter of 19 October 1982, provided comments on the Draft Regional Environmental Impact Statement (DREIS) for the proposed sales. In its comments, the Commission concurred with the Fish and Wildlife Service's Biological Opinion indicating that the proposed leasing and exploration activities likely would not jeopardize the continued existence of the West Indian manatee or result in the destruction of habitat critical to its survival, provided needed onshore support bases are located at existing facilities in Port Manatee, Florida, and the probability of an oil spill occurring during the exploration phase is essentially zero. The Commission questioned a number of statements and conclusions concerning the possible direct and indirect effects of the proposed action on local populations or subpopulations of bottlenose dolphins, and recommended that the Minerals Management Service consult with the National Marine Fisheries Service, if it had not already done so, to identify such additional information, lease stipulations, monitoring programs or other measures that might be needed to assure that bottlenose dolphins are not affected adversely by the proposed action. The Commission also noted that relevant studies were being conducted by the National Marine Fisheries Service and other organizations, and recommended that the Minerals Management Service consult with the National Marine Fisheries Service and these other agencies to determine whether and how programs might be coordinated or integrated to meet data needs more effectively and economically.

Proposed OCS Lease Sale #76
Mid-Atlantic

This lease sale tentatively is scheduled for March 1983 and consists of 4,325 blocks (approximately 24.6 million acres) of submerged OCS lands off the mid-Atlantic coast of the United States. The Commission was consulted during the planning phase for this lease sale and, as noted on pages 73 and 74 of its Annual Report for Calendar Year 1981, advised the Bureau of Land Management that: twenty-five species of marine mammals have been reported to occur in, or migrate through, the proposed lease sale area; six of these species are listed as "endangered" under the Endangered Species Act; the habitat requirements and habitat use patterns of these species are not well documented; and available information on the possible effects of disturbance, noise, oil, and other pollutants is insufficient to accurately predict how marine mammals and their habitats might be affected by exploration or development activities. The Commission recommended, among other things, that the Bureau consult with the National Marine Fisheries Service to identify information, lease stipulations, detection and monitoring programs, or other measures that may be needed to assure that marine mammals would not be affected adversely by the proposed action.

The Commission, in consultation with its Committee of Scientific Advisors, subsequently reviewed the Draft Environmental Impact Statement for Proposed OCS Lease Sale #76. This document reflected many of the Commission's earlier comments, but did not provide adequate descriptions or assessments of planned research programs and the possible effects of the proposed action on the endangered North Atlantic right whale population. Therefore, by letter of 20 September 1982, the Commission suggested that the DEIS be modified to provide: (1) additional discussion and analysis of the possible effects of the proposed action on the endangered North Atlantic right whale population; and (2) an expanded description of the research programs and administrative procedures that will be used to assure that the best possible environmental information will be available to lease managers.

Proposed OCS Lease Sale #78
South Atlantic

This lease sale, originally scheduled for January 1984, has been rescheduled for July 1983 and consists of 5,733 blocks (approximately 33 million acres) off the South Atlantic coast of the United States. As with OCS Sale #76, the Commission commented on this sale during the initial planning phases (see pages 74 and 75 in the Commission's Annual Report for Calendar Year 1981).

The Draft Environmental Impact Statement for Proposed OCS Sale #78 was forwarded to the Commission and others for review and comment on 20 October 1982. The document noted, among other things, that seven species of endangered marine mammals, including the West Indian manatee and six species of whales (right, humpback, sperm, blue, fin, and sei) occur in or adjacent to the lease sale area and that effects on these species were expected to be temporary, local, and minor except in the case of a disaster such as a large oil spill. The document listed non-endangered species of marine mammals that occur in or adjacent to the lease sale area, but did not indicate how these species might be affected by the proposed action.

The Commission, in consultation with its Committee of Scientific Advisors, reviewed the DEIS and, by letter of 13 December 1982, questioned whether available information was sufficient to conclude that possible impacts on right and humpback whales would be temporary, local, and minor except in the case of a disaster such as a large oil spill. The Commission noted that recent sightings and strandings of right whales suggest that calving and breeding may occur in or near the lease sale area, and recommended that the DEIS be revised and expanded to provide a more complete and accurate assessment of available information concerning the distribution, abundance, and movements of both right and humpback whales in and near the proposed lease sale area. The Commission also recommended that the Minerals Management Service consult with the National Marine Fisheries Service to determine: (1) whether all available sighting and stranding data had been considered when the NMFS re-evaluated its 14 July 1980 Biological Opinion concerning the possible direct and indirect effects of the proposed action on endangered cetaceans; (2) whether recent sightings and strandings of right whales in and near the proposed lease sale area warranted reassessment of certain conclusions provided in the Service's Biological Opinion; and (3) whether additional information, studies, monitoring programs, and lease stipulations are necessary to assure that right, humpback, or other endangered whales will not be affected adversely by the proposed action.

The Minerals Management Service's
Regional Studies Program

As noted above, the Minerals Management Service has been delegated responsibility for assessing and mitigating the possible adverse effects of activities and events, such as oil spills, associated with the exploration and development

of offshore oil and gas resources. To provide the biological, ecological, and technical information needed to meet this responsibility, the Service has established Regional Environmental Studies Programs which are administered by the Service's OCS Offices in New York, New Orleans, Los Angeles, and Anchorage. The Service also has contracted with the National Oceanic and Atmospheric Administration's Office of Marine Pollution Assessment to plan and administer the Alaska Outer Continental Shelf Environmental Assessment Program (OCSEAP).

To help the Service identify research requirements related to the conservation and protection of marine mammals, and the types of programs needed to best satisfy those requirements, the Commission: reviews and provides comments on regional studies plans, environmental impact statements, and requests for research proposals developed by the Service; participates in meetings of Technical Proposal Evaluation Committees convened by the Service to review research proposals; and helps plan and participates in meetings to review and coordinate relevant research programs being conducted or planned by the Minerals Management Service, the National Marine Fisheries Service, the Fish and Wildlife Service, and other Federal, state, and private agencies and organizations.

Pacific OCS Regional Studies Plan

By letter of 15 June 1982, the Pacific OCS Office of the Minerals Management Service requested that the Commission review its Draft Regional Studies Plan for Fiscal Year 1984. This plan, which is updated annually, describes past and current studies funded by the Pacific OCS Office to provide information required to predict, assess, and monitor the effects of OCS oil and gas development off California. It lists studies approved for funding in FY 1983, and indicates and ranks the studies being considered for funding in FY 84.

The Commission reviewed the draft plan and, by letter of 21 July 1982, suggested a number of ways whereby the plan might be strengthened and improved. Among other things, the Commission suggested that descriptions of several proposed sea otter-related studies be expanded to indicate how the study results would contribute to the objectives of the Southern Sea Otter Recovery Plan. The Commission also suggested that related studies being conducted or planned by the Fish and Wildlife Service and other organizations be reviewed to determine whether additional studies were necessary and, if so, how the studies should be designed to take maximum

possible advantage of the work being done by other agencies. Subsequently, the Commission reviewed and, by letter of 30 August 1982, suggested steps that could be taken by the Pacific OCS Office and the Fish and Wildlife Service to facilitate development of an interagency agreement concerning needed sea otter studies.

Workshop on Effects of OCS Development in the Gulf of Mexico

In response to the aforementioned types of uncertainties concerning the possible effects of offshore oil and gas development on marine mammals and other wildlife in the Gulf of Mexico, the Minerals Management Service contracted with the Fish and Wildlife Service early in 1982 to organize and convene a Workshop on the Effects of Offshore Oil and Gas Development on Marine Mammals and Sea Turtles in the Gulf of Mexico. The goals of the workshop were to identify: (1) ways in which cetaceans and sea turtles have been or could be affected, either directly or indirectly, by activities and events associated with offshore oil and gas development; (2) the types and specificity of data needed to predict, detect, and mitigate possible adverse effects; (3) the advantages and disadvantages of various methods that could be used to obtain needed data; and (4) specific research and monitoring programs which would be required to obtain needed data, including the necessary expertise, level of effort, equipment, and facilities.

The Commission helped plan and participated in the workshop, which was held in Biloxi, Mississippi, on 6-8 April 1982. Participants, representing a number of Federal and state agencies, research institutions, and private organizations, reviewed available information and concluded, among other things, that additional surveys and behavior studies were needed to assess the possible effects of OCS development on marine mammals in the Gulf of Mexico and that the studies should focus on assessing and monitoring local populations or subpopulations of bottlenose dolphins. Participants recommended that: a program be developed to monitor selected dolphin populations at periodic intervals; the existing marine mammal stranding network in the Gulf of Mexico be expanded; and every effort be made to coordinate related programs being conducted and planned by the National Marine Fisheries Service and the Minerals Management Service.

The final workshop report, expected to be completed early in 1983, will be reviewed by the Commission, in consultation with its Committee of Scientific Advisors, to determine whether additional steps may be needed to facilitate planning and coordination of marine mammal studies in the Gulf of Mexico.

Implementation of 1981 Amendments to the
Marine Mammal Protection Act

Marine mammals and the ecosystems of which they are a part clearly can be affected by oil spills resulting from exploration and exploitation of offshore oil and gas resources. They may also be affected by other aspects of offshore oil and gas-related activities, including noise. Studies conducted by the Alaska Department of Fish and Game in 1979, for example, suggest that ringed seals react to geophysical seismic activities used in oil and gas exploration by either abandoning or avoiding such areas of activity.

Under terms of the Marine Mammal Protection Act, such a response is defined as a "taking." In 1981, the Act was amended to provide, among other things, for authorizing the incidental take of marine mammals in association with activities in addition to commercial fishing and including offshore oil and gas exploration and development. These amendments are discussed in Chapter III of the Commission's Annual Report for Calendar Year 1981. Under the new Section 101(a)(5) of the Act, the Secretaries of Commerce and the Interior are directed to authorize such incidental take if it is determined that the total of such taking will have a negligible impact on the affected population of marine mammals, on its habitat, and on the availability of the population for subsistence uses in Alaska. The Secretaries must also prescribe regulations setting forth permissible methods of taking to minimize the effects on the population and its habitat and set forth requirements for monitoring and reporting on the incidental taking.

As a preliminary step toward implementing the new provisions of Section 101(a)(5) of the Act, the National Marine Fisheries Service, on 3 March 1982, published proposed regulations in the Federal Register. This proposal consisted of two parts: (1) a general scheme setting out the criteria and procedures for applications, review, and issuance of authorizations for applicable incidental taking; and (2) proposed regulations to govern the incidental taking of ringed seals in the course of seismic exploration activities in the Beaufort Sea.

The Commission, in consultation with its Committee of Scientific Advisors, reviewed the proposed regulations and recommended that they be adopted, with certain modifications and conditions. The National Marine Fisheries Service generally concurred with the Commission's recommendation and published

final regulations in the Federal Register on 18 May 1982. Subsequently, Letters of Authorization were issued to three applicants to take ringed seals incidental to seismic exploration activities in the Beaufort Sea.

On 13 October 1982, the Fish and Wildlife Service published proposed regulations, similar to those adopted by the National Marine Fisheries Service, to govern the incidental taking of marine mammal species under the jurisdiction of the Department of the Interior.

Seasonal Drilling Restrictions in the Beaufort Sea

In June 1980, the National Marine Fisheries Service advised the Bureau of Land Management, pursuant to Section 7 of the Endangered Species Act, that available information was inadequate to determine whether geophysical seismic operations or other activities associated with exploration and exploitation of offshore oil and gas resources in the Beaufort Sea would have adverse effects on bowhead whales or habitat critical to their survival. To minimize the possibility of impacts from oil spills and seismic operations, the Service recommended that drilling in the Beaufort Sea lease areas be prohibited each year from 1 November to 31 March, when clean-up would be difficult because of ice conditions, and that geophysical seismic operations be prohibited between August and October when whales might be present. On 30 July 1981, the National Marine Fisheries Service modified its Biological Opinion, recommending that geophysical seismic operations be prohibited from 1 September to 31 October east of Prudhoe Bay, and from 15 September to 31 October west of Prudhoe Bay, or whenever aerial surveys indicate that whales are present in the areas being surveyed.

On 28 January 1982, the Bureau of Land Management requested that the National Marine Fisheries Service reconsider its recommendations concerning seasonal restrictions on drilling and seismic operations. The Service reviewed available information and, on 1 April 1982, provided an amended Biological Opinion which recommended that: (1) exploratory drilling be prohibited in the Beaufort Sea lease area when bowhead whales are present (usually from 1 September to 31 October); (2) the presence of whales should be determined by aerial or other survey methods; (3) the Department of the Interior should take whatever steps are necessary to assure that the lease area is free from spilled oil when the whales arrive; (4) seismic operations should cease when whales are present in areas where they could be

affected; and (5) a program of noise evaluation and monitoring of whale behavior be considered to better determine the noise impact boundaries of drilling locations.

The North Slope Borough of Alaska questioned certain aspects of the National Marine Fisheries Service's amended Biological Opinion. The Borough also questioned the adequacy of the Minerals Management Service's plans for conducting aerial surveys to determine when bowhead whales were in or near areas where they might be affected by geophysical seismic operations. On 30 July 1982, the Borough requested that the Marine Mammal Commission review the proposed monitoring program.

The Commission, in consultation with its Committee of Scientific Advisors, reviewed the National Marine Fisheries Service's Biological Opinion and other documents related to the proposed monitoring program. On 15 September 1982, the Commission advised the National Marine Fisheries Service that it agreed with the Service's determination that regular aerial surveys appear to offer the only practical means for determining when whales are in or near areas where they might be affected by seismic or drilling operations. The Commission noted, however, that it was not possible, from the information available, to determine whether or how frequently individuals or groups of whales might be present but not detected in or near areas where seismic operations are being conducted. The Commission recommended that the National Marine Fisheries Service investigate, and take such steps as may be necessary to assure that the proposed monitoring program responded adequately to the recommendations in its 1 April Biological Opinion.

Many of the uncertainties concerning the adequacy of the proposed monitoring program could not be resolved prior to the beginning of the bowhead's fall migration. A program review was held on 14 December and, during this review, a number of deficiencies and problems were noted. To avoid similar problems in 1983, the Minerals Management Service plans to convene a meeting of all interested parties, early in 1983, to discuss and, if possible, agree on a program for determining when seismic operations should be stopped to prevent impacting bowhead whales.

CHAPTER VIII

MARINE MAMMAL MANAGEMENT IN ALASKA

As enacted by Congress in 1972, the Marine Mammal Protection Act provided that the Secretaries of Commerce and the Interior, in consultation with the Commission, could, on request, take certain actions that would lead to the return of management of marine mammal populations to the state in which they were found. On 31 January 1973, the State of Alaska submitted a request to the Secretaries for a waiver of the moratorium established by the Act and the return of management authority for ten species of marine mammals.

Ten years have now passed and, although Alaska briefly regained management of one species, the Pacific walrus, it presently does not have management authority for any marine mammals. The many difficulties and delays which resulted in this situation have been fully discussed in the Commission's past Annual Reports, particularly the Report for Calendar Year 1980. As was noted in that Report, early in 1979, there were encouraging signs that most of the issues delaying return of management to Alaska were nearing resolution. This progress was halted, however, in April 1979 by a U.S. District Court decision that, in effect, interpreted the native exemption clause of the Act to prohibit the State from regulating the subsistence take of non-depleted walrus. Subsequently, the State returned management of walrus to the Fish and Wildlife Service, and consideration of the State's request for return of management of this and other species was deferred until questions relating to the native exemption clause could be resolved.

This impasse concerning management of Alaska's marine mammal populations and return of management generally was one of the issues leading to efforts to amend the Marine Mammal Protection Act. In 1981, following hearings in both the House of Representatives and the Senate and after successful efforts by the Commission and others to develop a consensus among the various interested parties, Congress adopted a number of amendments to the Act which were discussed in detail in the Commission's Annual Report for 1981.

The amendments modified the provisions of the Act which allow the Secretaries of Commerce or the Interior to transfer management authority for a marine mammal population to a state if the state has developed and will implement a program which is consistent with criteria set forth in a new section of the Act.

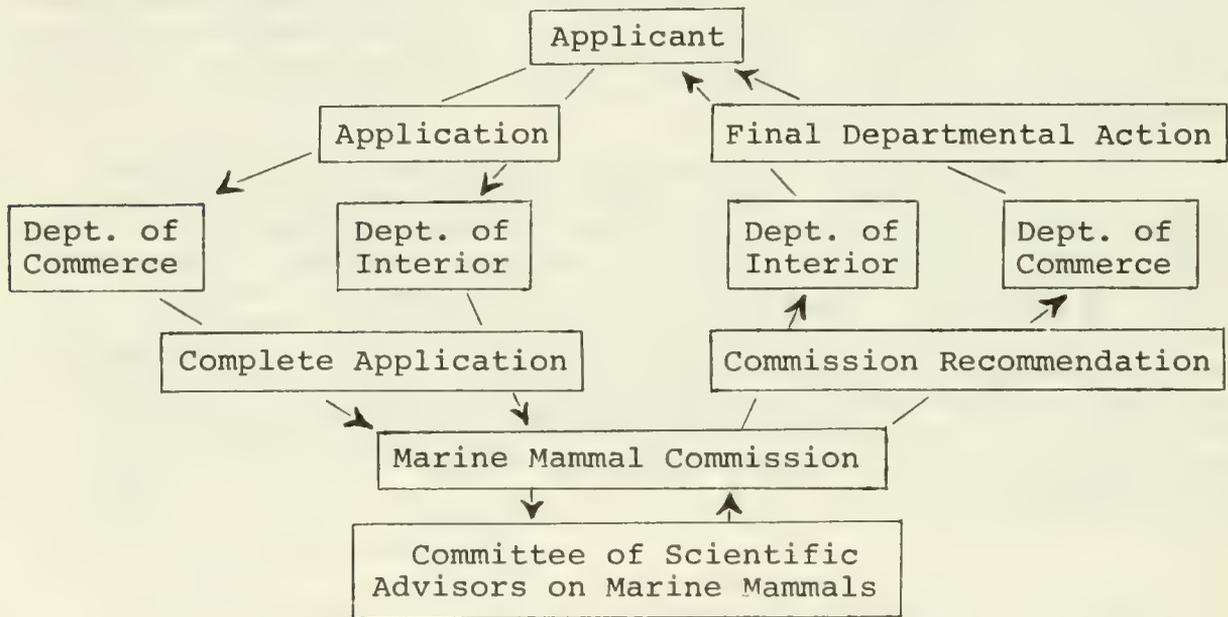
As regards the State of Alaska, the Secretary cannot transfer management authority to the State unless the State has, among other things, adopted a statute and regulations that ensure that subsistence use will be the priority consumptive use of the species. The amendments clearly indicate that the taking of marine mammals by Alaskan natives will be subject to an approved marine mammal management program of the State of Alaska.

On 12 May 1982, the National Marine Fisheries Service and the Fish and Wildlife Service jointly published proposed regulations to implement the new provisions of the law relating to return of management to the states. The Commission reviewed the proposed regulations in consultation with its Committee of Scientific Advisors and, on 9 July 1982, responded to the two Services, recommending that the proposed regulations be adopted, with modifications. Final regulations are expected early in 1983.

At the end of 1982, a new administration had just come into office in Alaska. There could, therefore, be no clear indication from the State as to how it might proceed with marine mammal management issues in Alaska. However, should the State decide to request return of management, it is important that Federal agencies have a solid information base and be prepared to act expeditiously. To help assure that appropriate people be informed, the Commission in 1982 contracted for an assessment of issues bearing on marine mammals in Alaska, and this will be completed early in 1983 (see Chapter II).

CHAPTER IX
PERMIT PROCESS

The Marine Mammal Protection Act places a moratorium, with certain exceptions, on the taking and importing of marine mammals and marine mammal products. One exception is the provision for the issuance of permits by either the Secretary of Commerce or the Secretary of the Interior, depending upon the species of animal involved, for the taking of marine mammals for purposes of scientific research or public display. Prior to the issuance of a permit, the application is reviewed by the Commission in consultation with its Committee of Scientific Advisors on Marine Mammals. The following is a schematic representation of this permit review process.



Application Review

The permit application and review process involves three stages: 1) receipt and initial review of the application at the Department, publication of a notice of receipt of application in the Federal Register, and transmittal to the Commission; 2) review of the application by the Commission

and transmittal of its recommendation to the Department; and 3) final processing by the Department, including consideration of all comments and recommendations of the Commission and the public, resulting in the approval or denial of the application. The total review time (initial receipt of application until final Departmental action) depends on many factors, including: the sufficiency of the information provided by the applicant; special actions, such as inspecting an applicant's marine mammal holding facilities, that may be warranted before reaching a decision; and the efficiency and thoroughness of those responsible for the review.

During 1982 the Commission made recommendations on 33 applications submitted to the Department of Commerce and six applications submitted to the Department of the Interior. The Commission's average review time for complete applications was 29 days (median, 25 days). Not included in the preceding statistics are recommendations on two applications which were still awaiting final action by the Department of Commerce at the end of 1982, and three applications which were under Commission review at year's end. The Commission, in consultation with its Committee of Scientific Advisors, also made recommendations on twelve requests to modify permits during 1982. The average time required for Commission review of these matters was 28 days.

For the 33 applications processed by the Department of Commerce during 1982, it took an average of 109 days (median, 73 days) from the date the application was received by the Department until final action was taken. The six permit applications submitted to the Department of the Interior were processed in an average of 85 days (median, 82 days). If calculated from the date of receipt of a complete application at the Services, the average processing times for the Departments of Commerce and the Interior were 74 and 75 days, respectively, compared to 60 and 86 days, respectively, in 1981.

Included in the preceding statistics are processing times for nine applications (8 to Commerce and 1 to Interior) which were received in 1981 but did not receive final action until 1982. All but one of these nine applications involved lengthy delays in order to obtain necessary additional information and clarification from permit applicants. Total processing time for these nine applications averaged 210 days (99 days from date complete) for the Department of Commerce and 103 days (61 from date complete) for the Department of the Interior. The 30 applications received in 1982 and acted on in 1982 by the Commission and the Services (25 Commerce; 5 Interior) required average processing times of: 28 days for Commission review; 77 days (66 from date complete) for final action by the Department of Commerce; and 81 days (78 from date complete) for final action by the Department of the Interior.

APPENDIX A

COMMISSION RECOMMENDATIONS: CALENDAR YEAR 1982

- 5 January Commerce, scientific research permit application, Brent S. Stewart.
- 5 January Commerce, scientific research permit application, Southwest Fisheries Center.
- 6 January Commerce, scientific research permit application, D. R. Ketten.
- 6 January Commerce, scientific research permit application, Manomet Bird Observatory.
- 14 January Commerce, commenting to the National Marine Fisheries Service on the draft Hawaiian Monk Seal Recovery Plan and recommending that the Recovery Team be asked to suggest priority tasks within the Recovery Plan outline and to provide estimates of the time, personnel, logistic support, and funding which would be required to complete each of the tasks identified in the draft outline.
- 19 January Commerce, scientific research permit application, Jeanette Thomas.
- 19 January Interior, scientific research permit application, John R. Fletemeyer.
- 17 February Commerce, scientific research permit application, Alaska Department of Fish and Game.
- 17 February Commerce, scientific research permit application, Randall S. Wells and Michael D. Scott.
- 2 March Commerce, scientific research permit applications, Reino Aventura and Richard L. Merrick.
- 4 March Commerce, commenting to the National Marine Fisheries Service on research activities and plans concerning the incidental take of Dall's porpoise in the course of Japanese salmon gill net fishing

and recommending that: a) the Service take such steps as may be necessary to increase the level of observer coverage of fishing activities; b) steps be taken to ensure that a reliable incidental take sample is obtained from the land-based fishery; c) the relationship between the incidental take permit and the Memorandum of Understanding with the Japanese be clarified; and d) a negotiating position for discussions with the Japanese be prepared for Commission review and comment.

- 5 March Commerce, scientific research permit application, Southwest Fisheries Center.
- 15 March Commerce, modification of scientific research permit, Point Reyes Bird Observatory.
- 22 March Commerce, scientific research permit application, Northwest and Alaska Fisheries Center.
- 24 March Commerce, scientific research permit application, Southwest Fisheries Center.
- 29 March Coast Guard, commenting on the possible use of a site adjacent to a warm-water refuge for manatees as a base of operations for Coast Guard vessels and recommending that the Coast Guard station not be moved from its present location to the proposed site.
- 31 March Interior, modification of scientific research permit, Alaska Department of Fish and Game.
- 31 March Commerce, public display permit application, Marineland Amusements Corp.
- 31 March Commerce, modification of public display permit, Point Defiance Zoo and Aquarium.
- 1 April Commerce, commenting to the National Marine Fisheries Service on the draft position papers for the 25th annual meeting of the North Pacific Fur Seal Commission and recommending: a) adoption of position papers concerning pelagic entanglement of seals and the 1982 harvest; b) that, if the Standing Scientific Committee of the North Pacific Fur Seal Commission proposes continuation of pelagic research, the Committee be asked to identify the types of studies which should be concluded in conjunction with that research to

assess and monitor lost or discarded fishing gear; and c) if the Service has not already done so, it take steps as may be necessary to complete certain analyses and make certain determinations referenced in the draft position papers.

- 2 April Commerce, commenting to the National Marine Fisheries Service on, and recommending the adoption of, proposed regulations implementing a scheme to govern the incidental take of marine mammals in association with activities other than fishing.
- 14 April Commerce, scientific research permit application, William F. Dolphin.
- 5 May Commerce, public display permit application, Oceanarium Jaya Ancol.
- 18 May Commerce, scientific research permit application, Southwest Fisheries Center.
- 26 May Commerce, scientific research permit application, LGL Alaska Research Associates.
- 2 June Commerce, scientific research permit application, Michael Graybill.
- 16 June Commerce, modification of scientific research permit, National Zoological Park.
- 16 June Commerce, scientific research permit application, Envirosphere Co.
- 21 June Commerce, public display permit application, Sea World Pty. Ltd.
- 24 June Interior, scientific research permit application, VTN Oregon, Inc.
- 24 June Commerce, public display permit applications, Tel-Aviv Delphinarium and Dinnes Memorial Veterinary Hospital.
- 30 June Commerce, modification of scientific research permit, Eleanor M. Dorsey.
- 30 June Commerce, modification of scientific research permit, National Zoological Park.

9 July Commerce and Interior, commenting to the National Marine Fisheries Service and the Fish and Wildlife Service on proposed regulations to provide for return of management of marine mammals to the states and recommending adoption, with certain modifications.

12 July Commerce, public display permit application, Durov Zoo Animals World.

12 July Commerce, scientific research permit application, Southwest Fisheries Center.

13 July Interior, scientific research permit application, Donald B. Siniff and Katherine Ralls.

16 July Interior, public display permit application, Izu-Mito Sea Paradise.

29 July Commerce, commenting to an Office of Coastal Zone Management contractor on a preliminary list of potential marine sanctuary sites for the Gulf of Mexico and recommending that: 1) the Big Bend Seagrass Beds site off northwest Florida be included in the agency's marine sanctuary "Site Evaluation List"; and 2) the boundaries of this site be extended to include summer and migratory habitat of the northwest Florida manatee population.

9 August Interior, scientific research permit application, Carle Foundation Hospital.

11 August Commerce, scientific research permit application, Bolt Beranek and Newman Inc.

16 August Interior, commenting to the Fish and Wildlife Service on the implications of the Convention on International Trade in Endangered Species of Wild Fauna and Flora on the proposed export of sperm whale oil by Portugal and recommending that the United States express its reservations about the proposed export, identify issues for consideration at the 1983 meeting of CITES parties, and review Portugal's sperm whaling activities for possible certification under the Pelly and Packwood-Magnuson Amendments.

20 August Commerce, scientific research permit application, Southwest Fisheries Center.

20 August Commerce, scientific research permit application, Richard H. Lambertsen.

20 September Interior, commenting to the Minerals Management Service on a Draft Environmental Impact Statement for OCS lease sale #76 in the mid-Atlantic and recommending that: the Minerals Management Service consult with the National Marine Fisheries Service to identify and undertake additional research and monitoring necessary to assure there would be no significant direct or indirect effects on endangered marine mammal populations and that the document be expanded by additional discussion and analysis of the endangered North Atlantic right whale population.

28 September Commerce, scientific research permit application, Warren M. Zapol and Robert C. Schneider.

1 October Interior, scientific research permit application, Carle Foundation Hospital.

6 October Commerce, public display permit applications, Marine Animal Productions Inc.

18 October Commerce, public display permit application, Marine Amusements Corp.

19 October Interior, commenting to the Minerals Management Service on a Draft Regional Environmental Impact Statement for OCS lease sales #72, #74, and #79 in the Gulf of Mexico and recommending that:
a) if there is any uncertainty as to the interpretation of manatee-related provisions in the amended Biological Opinion prepared by the Fish and Wildlife Service for this sale, the two Services should reinitiate consultations to clarify the Opinion's intent;
b) if it has not already done so, the Service consult with the National Marine Fisheries Service to identify lease stipulations, monitoring programs, and other measures needed to assure that bottlenose dolphins will not be affected adversely by exploration or development;
c) the Service consult with certain scientists cited in the report to assure that their study results are reported accurately; and d) if it

has not already done so, the Service consult with the National Marine Fisheries Service and other agencies or organizations conducting relevant studies to determine whether and how programs might be coordinated or integrated to meet data needs more effectively and at less cost.

- 25 October Commerce, modification of scientific research permit, Albert Erickson.
- 29 October Commerce, modification of scientific research permit, Donald B. Siniff.
- 9 November Commerce, public display permit application, Gulf Exhibition Corporation.
- 9 November Interior, commenting to the Fish and Wildlife Service on the issuance to Izu-Mito Sea Paradise of a permit for public display taking and recommending that the Service:
a) establish that the permittee is in compliance with regulations of the Department of Agriculture, Animal and Plant Health Inspection Service; and
b) advise the Commission as to the basis of certain determinations made in the process of approving the permit.
- 17 November Interior, modification of scientific research permit, Denver Wildlife Research Center.
- 18 November Commerce, modification of scientific research permit, Southwest Fisheries Center.
- 26 November Commerce, scientific research permit application, Susan Shane.
- 26 November Commerce, modification of scientific research permit, Brent S. Stewart.
- 1 December Commerce, scientific research permit application, Richard Flyer.
- 8 December Commerce, modification of scientific research permit, Richard H. Lambertsen.
- 8 December Commerce, scientific research permit application, Gregory Kaufman and Roger Wood.
- 13 December Commerce, scientific research permit application, Daniel P. Costa.

- 13 December Interior, commenting to the Minerals Management Service on a Draft Environmental Impact Statement on OCS lease sale #78 and recommending that the Service consult with the National Marine Fisheries Service to determine: (1) if all available sighting and stranding data were considered in reevaluating the National Marine Fisheries Service's Biological Opinion concerning the possible direct and indirect effects of the proposed action on endangered cetaceans, especially right whales and humpback whales; (2) if these data warrant reassessment of certain conclusions provided in that Biological Opinion; (3) whether additional information, studies, monitoring programs, and lease stipulations are necessary to assure that right, humpback, or other endangered whales would not be affected adversely by the proposed action; and (4) whether local populations of bottlenose dolphins or other non-endangered marine mammals might be affected adversely by the proposed action.
- 17 December Interior/Commerce, scientific research permit application, Mote Marine Laboratory.
- 20 December Interior, scientific research permit application, Bolt Beranek and Newman Inc.

APPENDIX B

REPORTS ON COMMISSION-SPONSORED RESEARCH ACTIVITIES
AVAILABLE FROM THE
NATIONAL TECHNICAL INFORMATION SERVICE (NTIS) *

- Ainley, D.G., H.R. Huber, R.P. Henderson, and T.J. Lewis. 1977. Studies of marine mammals at the Farallon Islands, California, 1970-1975. Final report for MMC contract MM4AC002. NTIS PB-274 046. 42 pp. (A03)
- _____, H.R. Huber, R.P. Henderson, T.J. Lewis, and S.H. Morrell. 1977. Studies of marine mammals at the Farallon Islands, California, 1975-1976. Final report for MMC contract MM5AC020. NTIS PB-266 249. 32 pp. (A03)
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LITERATURE RESULTING FROM COMMISSION-SPONSORED RESEARCH ACTIVITIES PUBLISHED ELSEWHERE

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