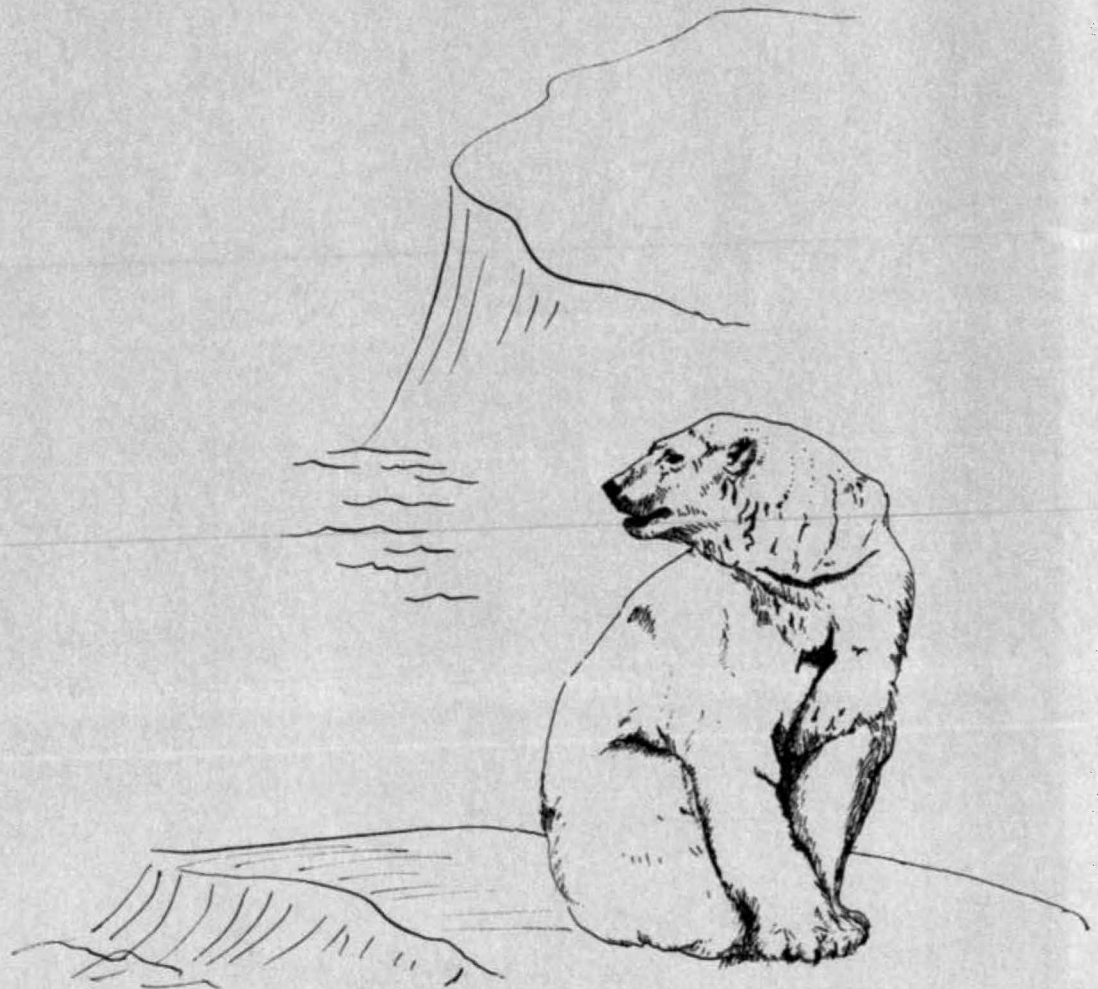


ADMINISTRATION AND STATUS REPORT OF THE MARINE MAMMAL PROTECTION ACT OF 1972

June 22, 1973 to June 21, 1974



Prepared by The U.S. Fish and Wildlife Service Washington, D.C. 20240 August 1974

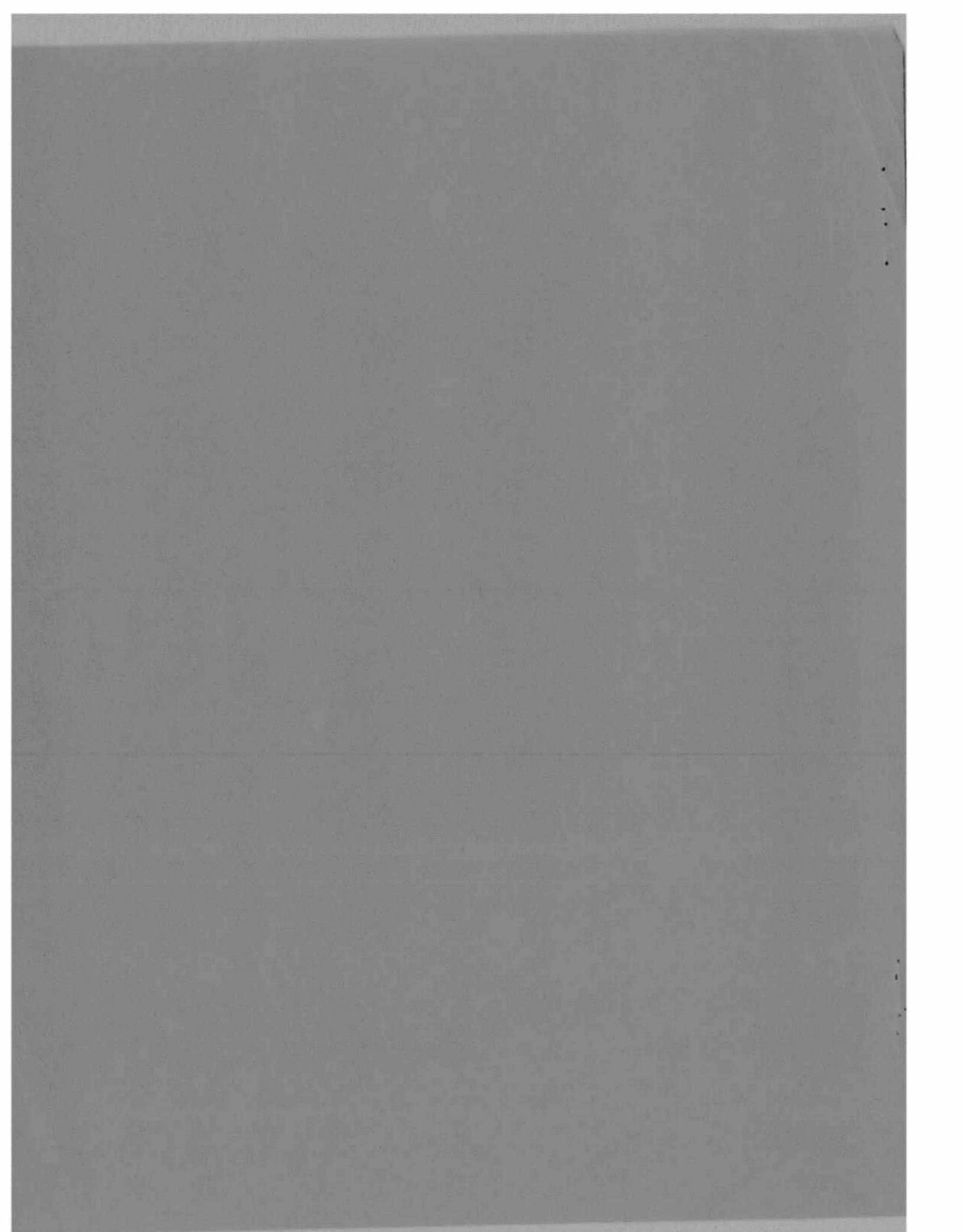


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Department of the Interior

Fish and Wildlife Service

Marine Mammals

Administrative and Status Report 1974

The following report of administrative actions and the status of marine mammals under the jurisdiction of the Department of the Interior is hereby published in the FEDERAL REGISTER in compliance with section 103 (f) of the Marine Mammal Protection Act of 1972 (Public Law 92-522).

The Department of the Interior, under section 3 (12) (B) of the Act, is responsible for the following marine mammals: walruses, polar bear, sea otter, manatees, and dugongs. This report is current as of June 21, 1974.

ADMINISTRATIVE ACTIONS

Final regulations were published in the FEDERAL REGISTER of February 25, 1974, to implement the Marine Mammal Protection Act of 1972.

These regulations provide rules and procedures regarding wildlife under the jurisdiction of the Department of the Interior, including definitions, prohibition on taking and scientific research and public display permits. Eleven permit applications were received during the period May 10, 1973 - June 21, 1974. Three of these were approved, three were rejected and five were pending final action.

Scientific research permits were issued to the University of Miami for the collection of up to thirty (30) manatees found dead, and to the U. S. Fish and Wildlife Service to immobilize and mark up to 125 polar bears. One public display permit was issued to Sea World, Inc. for the collection of eight (8) walrus pups. The walrus pups will be used to replace the twelve (12) walrus which were collected by Sea World last year, all of which were lost due to apparent dietary problems. The issuance of the Sea World permit was based primarily on the need for further investigation of the husbandry requirements of walrus.

The applications rejected were all for public display by various zoos. Two were rejected as they were blanket permit applications for marine mammals and the third, which was withdrawn, was a request to import manatees. The five pending permits include a request to import for public display, a polar bear skin; a request to import, for public display, two live polar bears; and three requests for scientific research. The applications for scientific research are to collect and tag walrus; to import skeletal parts of one polar bear, which is already dead; and to take walrus and sea otter as part of a continuing research project by the Alaska Department of Fish and Game.

SUMMARY

Status of Marine Mammal Permit Applications as of June 21, 1974				
Type Application	Number Received	Number Approved	Number Rejected	Number Pending
Scientific research --	5	2		3
Public Display -	6	1	3	2

Fish and Wildlife Service enforcement personnel reported a total of ninety (90) investigations of violations of the Marine Mammal Protection Act of 1972 as of March 30, 1974. Thirty-four of these cases were referred to the National Marine Fisheries Service, who had primary jurisdiction. The remaining were either acted upon or referred to States involved. Seven states reported a total of nineteen marine mammal investigations. These were primarily concerned with sea otters and manatees.

A close liaison has been established with the Marine Mammal Commission including procedures for review of permit applications and exchange of information. Fish and Wildlife Service personnel attended Marine Mammal Commission meetings in Seattle, Washington and San Diego, California.

In an effort to further strengthen overall coordination of this Departments' responsibilities, the Fish and Wildlife Service established and filled a Program Coordinators position in January and a Marine Mammal Coordinators position in May. The Marine Mammal Coordinator will serve as a focus and catalyst for all

marine mammal matters within the Department and will act as liaison with the Departments of Commerce and State, Marine Mammal Commission, State agencies, and interested conservation organizations.

During Fiscal Year 1974, Fish and Wildlife Service provided additional positions in Alaska for law enforcement and research, the two principal programs involved. The research on polar bears, sea otters, and walrus is being accelerated.

All affected states have been contacted regarding cooperative research efforts (section 109). Initial contact to facilitate early initiation of field work was in terms of contract research, with Fish and Wildlife Service providing all funding.

This has been supplemented by preparation (and anticipated early publication) of procedures for participation in "grant" type efforts. Thus far, response has been obtained only from Alaska (received in April) and their proposals are being reviewed.

From November 13 to 15, 1973, the five circumpolar nations--Canada, Denmark, Norway, the U. S. and the U.S.S.R.--met in Oslo, Norway and concluded an agreement for the conservation of the polar bear.

At the conclusion of the meeting it was signed by all the participants except the Soviet Union, which signed the Agreement on February 1, 1974. The Agreement is not only the first among the circumpolar nations, but the first for the conservation of that animal.

The Agreement provides a broad prohibition on the taking of polar bears, subject to an exception limited by the ability of hunters to penetrate into the Arctic from surrounding territories by the sole means which are, or have become, traditional for them; by dog sled or in some cases, snowmobile. The Agreement bans the use of aircraft and large motorized vessels. The generally accepted principles of polar conservation will continue to apply. In this respect, there is in the case of several of the polar nations a moratorium on the taking of polar bears.

Arrangements were made for research programs and international sharing and coordination of research results, the protection of polar bear ecosystems and control of international traffic in illegal polar bear skins.

A special task force composed of Fish and Wildlife Service and National Marine Fisheries Service representatives has been established to prepare an environmental impact statement concerning the waiving of the moratorium in regard to several species of marine mammals in Alaska. This study is being undertaken as a result of a request submitted by the State of Alaska in January 1973, for approval of State laws and regulation under section 109 (a) (2) of the Act, allowing a managed harvest of certain marine mammals.

STATUS OF MARINE MAMMALS

POLAR BEAR

(Ursus maritimus)

Distribution and Migration: Polar bears occur only in the northern hemisphere, nearly always in association with Arctic sea ice.

Centers of six geographically isolated polar bear populations that have been identified in the main polar basin are Wrangel Island-western Alaska, northern Alaska, northern Canada, Greenland, Spitsbergen-Franz Josef Land, and central Siberia. Separate populations also occur further south in Hudson Bay in Canada.

Bears are most abundant near the southern edge of the sea ice but do occur throughout most of the polar basin and have been recorded as far north as 88° N. latitude. They make extensive north-south movements related to the seasonal position of the southern edge of the ice. In winter, bears off Alaska commonly occur as far south as Bering Strait and occasionally reach St. Lawrence Island and even St. Matthew Island in the Bering Sea. In the summer, north of Alaska, the edge of the ice pack and bears commonly occur between 71° and 72° N. latitude. Pregnant females concentrate for winter denning and bearing young on large offshore Russian islands, northern Canadian islands, and certain of the Spitsbergen islands.

Abundance and Trends: Total population estimates, which range from a low of 10,000 by the Soviets to a high of 20,000 by the Norwegians, are based on broad assumptions and should be considered a very general abundance of bears off the Alaska coast and the magnitude of sustained long-term harvests suggest that the 20,000 figure may be low.

During the 1930's, and 1940's and 1950's, Alaska Natives harvested about 120 bears annually. Trophy hunting with the use of aircraft developed in the 1950's, and the average annual kill gradually increased to 250 for 1961-72. The number of bears reported per hour of flying by Alaska hunting guides did not show a trend during 1956-69, the period when guides provided reliable data. Sex composition for 1961-72, when 87 percent of the bears were taken with the use of aircraft, was 70-80 percent males. Selective hunting with use of aircraft reduced the percentage of mature males in the population. A high percentage of females with young in the population indicated a healthy rate of reproduction, however. Age composition of bears harvested west of Alaska during the aircraft hunting era did not show a trend. The average age of bears harvested north of Alaska declined in 1970 and 1971, reflecting high harvests in 1966 and 1967, and then increased in 1972 as a result of hunting restrictions and reductions in harvest after 1967. Harvests after passage of the Marine Mammal Protection Act of 1972,

which permits hunting only by Natives for subsistence or as a source of material for traditional articles of Native handicraft or clothing, were 7 in 1973 and approximately 40 in 1974. An increase in the number of bears was reported along Alaska's north-west and north coast in the winter of 1973-74, possibly because the Marine Mammal Act had sharply reduced harvests for two seasons. Some residents of the Arctic coast are now concerned that polar bears may become numerous enough to become a nuisance in some areas.

Russians believe that polar bear populations in the Soviet Arctic declined during the first half of the century and have now stabilized since hunting was stopped in 1956. Average annual harvests in Spitsbergen, about 300 prior to 1970, have been reduced to an estimated 5 or 6 by a 5-year moratorium on hunting. The harvest in Greenland is 125-150 bears per year. Annual harvests in Canada approached 600 during the early 1960's and are now about 500.

General Biology: Polar bears, other than family groups of females and young, are solitary most of the year. During the breeding season in late March, April, and May, males actively seek out females by following their tracks on the sea ice. Bears are polygamous; a male remains with a female a relatively short time and then seeks another female. Delayed implantation probably occurs.

Pregnant females seek out denning areas, generally in October. Known denning concentration areas occur on Russian, Canadian, and Spitsbergen islands. Bears den along sections of the Greenland coast and the north Alaska coast. Some denning occurs on heavy pack ice north of Alaska. Bears most commonly den under banks along the coast or rivers, or on slopes where snow drifts. A denning female commonly forms a depression in the snow and then enlarges a denning chamber as snow drifts over her. Young, weighing between 1 and 2 pounds, are born in December. A litter of two is the most common, one is quite common, and three is rare. The female and cubs break out of the den in late March or early April when cubs weigh about 15 pounds. They make short trips to and from the opened den for several days as the cubs become acclimated to outside temperatures. If the den is on land the family group then travels to the sea ice. In most sections of the Arctic, young remain with the mother until they are about 28 months old.

Females breed again at about the time they separate from their young so normally they can produce litters every third year. Females can first breed at 3 or 4 and males at 4 years of age, but some animals are older at first breeding.

Most bears do not live beyond 25 years. Mature females off the

Alaskan coast weigh 400 to 700 pounds and mature males 700 to 1,400 pounds. Animals west of Alaska are larger than animals north of Alaska. Polar bears feed primarily on ringed seals and also on bearded, harp, and bladdernose seals. They occasionally eat carrion, including whale, walrus, and seal carcasses, and small mammals, birds, eggs, and vegetation when other food is not available.

Approximately 60 percent of Alaskan bears harbor Trichinella spiralis, apparently obtained from eating seals and other marine mammals, garbage, and possibly carcasses of other bears. Polar bear liver is toxic if eaten because of high vitamin A content.

Ecological Problems: Long-term climatic trends probably have a major impact on bear populations. Warming trends restrict areas that are suitable for denning and feeding, and cooling trends favor expansion of populations.

Human development, especially that associated with oil and gas extraction, poses the greatest immediate threat to polar bears. Oil exploration and drilling in denning areas could cause bears to den in less suitable areas. Oil spills from offshore drilling or transporting of oil through ice covered waters could reduce insulating value of bears' fur and adversely affect the food chain below them. Ice would hinder or prevent containment of a spill, and currents could distribute oil over large areas.

Recent studies indicate that a significant number of bears have traditionally denned and produced young along Alaska's north coast. Increased human activity will perhaps cause fewer bears to come ashore to den and, therefore, they will den in less favorable sea ice sites or will desert land dens earlier than normal when cubs are less able to survive. The proposed gas pipeline from Prudhoe Bay, Alaska, to the MacKenzie Delta, Canada, could have serious impact on polar bear denning in and west of the Arctic National Wildlife Refuge. Mercury and low levels of DDT and PCB's have been found in tissue samples of all Alaskan bears checked for these contaminants.

Allocation Problems: In Alaska after about 1950, trophy hunting with aircraft largely replaced Native hunting from the ground for subsistence and sale of hides. Use of airplanes for hunting has been severely criticized in recent years, and some preservationists would like to stop even the small amount of hunting which Natives now do from the ground. On the other hand, non-Native residents of the Arctic coast believe they are being discriminated against because only Natives can hunt.

The U.S.S.R. believes that bear stocks off the Siberian coast have been reduced and restricts taking to a few cubs for zoos. Until recent years, Norwegian sealers killed bears as predators, Spitsbergen trappers used baited set guns to obtain hides for sale, and trophy hunters took bears from Norwegian boats in the summer.

The present feeling in Norway is that only a few residents of Spitsbergen should take bears, and set guns should not be used. In Greenland only Eskimos or long-term residents are permitted to harvest bears, primarily for subsistence and personal use of skins. The Canadian harvest has traditionally been by Eskimos for subsistence and to obtain skins for sale. Trophy hunting from the ground is starting in Canada and is being encouraged by managing agencies.

Regulations: In Alaska, past management practices to limit polar bear harvests established seasons, bag limits, and a permit system; protected young and females with young; and limited the number of hunts conducted by each guide. Two management areas were established, one to the west of Alaska and one to the north of Alaska. Residents were allowed to hunt bears at any time for food provided aircraft were not used. Hides and skulls of all bears taken had to be presented to the Alaska Department of Fish and Game within 30 days for examination, sealing, and removal of tooth for age determination. Alaska banned the use of aircraft for hunting polar bears after July 1972, and lengthened the season to encourage sport hunting from the ground.

The Federal Marine Mammal Protection Act of 1972 assumed management authority for polar bears and limited their harvest to Alaska coastal Eskimos for subsistence or for manufacture of traditional Native articles of clothing or handicraft. The Marine Mammal Act removed

restrictions on harvest of females with young and young by Natives. Marine Mammal Act regulations prevent polar bear skins from being tanned or sold to non-Natives, and skins from bears now being taken are being wasted.

The U.S.S.R. has not allowed polar bear hunting since 1956. Norway stopped set gun and trophy hunting in 1971 and enacted a 5-year moratorium in 1973 on all harvesting because recent studies indicate the Spitsbergen polar bear population is smaller than previously believed. In Greenland only Eskimos or long-term residents may take bears and must use traditional ground methods of hunting. In Canada, prior to 1968, Eskimos hunting from the ground took bears with few restrictions. The Northwest Territories, where most bears are taken, has now established polar bear hunting districts with quotas. Trophy hunters may purchase a permit from a district to take a bear from its quota, provided a resident is used as a guide.

In November 1973 the five polar bear nations drafted an agreement on conservation of polar bears which, when ratified, will allow bears to be taken only in areas where they have been taken by traditional means in the past, and will prohibit use of aircraft and large motorized vessels as an aid in taking. The agreement also calls for both national research and cooperative international research and management, especially on populations occurring on the high seas or within more

than one national jurisdiction; provides protection for ecosystems of which polar bears are a part; by resolution seeks special protection from hunting for denning females, females with cubs, and cubs; and by resolution asks for an international system of hide identification to better control traffic in hides.

Current Research Effort: The governments of Canada, Norway, Denmark, U.S.S.R., and the United States are conducting intensive long-term investigations. In most countries shorter term projects funded by universities and grants complement government programs. Research programs are coordinated internationally by the Polar Bear Specialist Group under the auspices of the International Union for the Conservation of Nature.

SEA OTTER

(Enhydra lutris)

Distribution and Migration: Populations in waters of the United States are resident (the sea otter is not migratory) along the west coast of North America from central California north to Prince William Sound and westward along the Aleutian Chain to Attu Island. In waters of the U.S.S.R. the sea otter occurs at the Commander Islands, along the southern Kamchatka Peninsula, and among the Kuril Islands. It seldom ranges offshore beyond the 30-fathom (180) depth curve.

Abundance and Trends: In 1956 the Alaska sea otter population, based on aerial surveys, was estimated to be about 25,000 animals and to be increasing exponentially at about 4 to 5 percent per year; the world population was estimated at 32,000 to 35,000 animals. After additional surveys in 1970, the Alaska population estimate was 50,000. In 1972, with refined techniques and additional surveys using a variety of methods, the Alaskan population was estimated to be 100,000 to 125,000 animals and still increasing. The Alaska Department of Fish and Game published a breakdown of sea otter population estimates according to Game Management units. The total estimates taken from this publication are 101,050 to 121,050 otters.

From a helicopter survey of Prince William Sound in June 1973, the Alaska Department of Fish and Game estimated that there were 5,000 sea otters and that the population was extending its range and increasing. The results of a similar survey made in early March 1974 are not yet available. A surface survey of some of the areas of Prince William Sound by the U.S. Fish and Wildlife Service at about the same time indicated between 7 and 8 pups per 100 animals other than pups.

The sea otter has received a high measure of protection by both Federal and State laws since 1911 and is not subject to aboriginal hunting. Prior to 1741, a large coastal Native population had exploited the sea otter for some thousands of years. Thus, within

its present range the sea otter today is probably more abundant than it has been for centuries.

Otters from Amchitka Island and Prince William Sound were transplanted to the following locations: Southeastern Alaska in 1965, 1966, 1968, and 1969 (total 413); British Columbia in 1969, 1970, and 1972 (total 89); Washington in 1969 and 1970 (total 59); Oregon in 1970 and 1971 (total 93); and the Pribilof Islands in 1959 and 1968 (total 64). All transplant figures are from J.S. Vania and are contained in unpublished reports of the Alaska Department of Fish and Game and annual reports of the Marine Mammal Committee of the American Society of Mammalogists, 1965-73. Among transplanted otters, young have been observed in Southeastern Alaska, British Columbia and Oregon.

The northwestern coast of Washington was surveyed from a helicopter in early May 1974 by the Fish and Wildlife Service. Only one adult sea otter was seen. Widely scattered individuals may have been overlooked, but conditions for observing were good. It is likely that few of the 59 animals translocated in 1969 and 1970 remain. Survival of transplanted sea otters ranged from poor to excellent, so the numbers of animals reported transplanted is of variable significance.

California population counts are as follows: about 150 in 1938, 638 in August 1957, 1,014 in August 1968 and 1,060 in January 1972.

Otters occur from Monterey Bay, California, south to Morro Bay and are extending their range north and south. Based on the 1972 count, the

total California population was estimated to be 1,200 to 1,500 animals. The sea otter population in mid-1973 was estimated to be about 1,600 to 1,800 animals that ranged from Santa Cruz on the north to just beyond Point Buchon on the south. These counts and estimates indicate that the population is extending its range and increasing.

General Biology: The sea otter is the largest member of the family Mustelidae, reaching a length of 148 cm and a weight of 45.5 kg. It becomes sexually mature at about 4 years of age and bears a single young, weighing approximately 2.3 kg, about every 2 years. The pup nurses for 10 to 12 months, but during this period often takes solid food gathered by the mother. The mother is very attentive to her young. Most of the young are born during the summer, but births and mating may occur at any season. Breeding behavior is promiscuous; mating male and female remain together for as long as 3 days. The dense underfur is about 1 inch long; the guard hairs are about 0.25 inch longer. A healthy animal may accumulate considerable body fat but there is no layer of blubber. The sea otter is, therefore, dependent for insulation from cool (35° to 50°F) marine waters on the air blanket retained among the 800,000,000 pelage fibers.

Mortality at Amchitka Island (the only area studied intensively) is greatest in winter and early spring. A dense population there depleted food organisms, and starvation occurred during stormy weather. Young

deserted by mothers during storms, accounted for 70 percent of the mortality. The remaining 30 percent were predominantly animals showing signs of old age. Most of the dead animals exhibited signs of starvation and enteritis. Internal parasites include Trematoda (4 spp.), Cestoda (2 spp.), Nematoda (1 sp.) and Acanthocephala (5 or possibly 6 spp.). A nasal mite, the only ectoparasite found, is common in harbor seals but occurred rarely in the sea otter; infestation from contacts on common hauling out places is suspected.

Ecological Problems: In several Aleutian Island areas the sea otter has overpopulated its habitat and depleted food resources; population declines were observed. Oil pollution of waters occupied by sea otters would be fatal to them. Pesticide residues have been found in California sea otters, but the effect on them is unknown.

Allocation Problems: There is conflict over management of the population off the coast of California, because the sea otter is a predator of the abalone. An organized group (Friends of the Sea Otter, Big Sur, California 93920) wants the population completely protected so that it can expand into its original range. Abalone fishermen, both commercial and sport, want the population controlled and limited to the refuge and areas where the abalone is not abundant.

From 1962 through 1969, the State of Alaska took 2,933 pelts for sale at auction, but the enterprise was of marginal financial success. No harvest of skins has been taken since 1969. The sale of 402 skins took

place on February 9, 1972.

Regulations: The sea otter is protected by the Marine Mammal Protection Act of 1972 (PL 92-522). In California it is listed as a completely protected animal.

Current Research and Funding of Sea Otter Studies: The State of Alaska employed one full-time biologist (Karl B. Schneider) from 1965 to 1973. The U.S. Fish and Wildlife Service employed one full-time biologist from 1955 to 1974. Another biologist was assigned in 1974. The California Department of Fish and Game employs one full-time biologist (Paul W. Wild) and an assistant (Jack Ames). This program began in 1968 and continues. The Owings Foundation, privately endowed, employs Judson Vandevere as a full-time sea otter naturalist.

ATLANTIC WALRUS

(Odobenus rosmarus rosmarus)

Distribution and Migration: The Atlantic walrus is found in open waters near ice in the Arctic and Atlantic Oceans. There appear to be two breeding groups: (1) Kara Sea to eastern Greenland and (2) western Greenland and eastern Canada. Most animals migrate south in winter and move north in the spring as the ice retreats. Stormy weather may occasionally force overland travel.

Abundance and Trends: No figures on numbers are **available** since 1967

when the estimate was 25,000. The average annual kill is estimated at 2,700 and the annual increment is believed to be between 12 and 20 percent. Any increase in kill would seriously jeopardize this subspecies. Herds in the Barents, Kara, and White Seas are reported to be close to extinction.

General Biology: This subspecies is smaller than the Pacific walrus with males averaging 680 kg and females 566 kg. Gestation period is thought to be 10 to 11 months with one young produced every other year. The young nurse for as long as 24 months.

Ecological Problems: Dredging or other disturbance of clam beds would probably threaten the primary food base of the walrus.

Allocation Problems: Eskimo hunters kill about 2,700 per year with the meat being used primarily for dog food and the tusks for carving figurines and tools. The number of animals lost after killing is probably high.

Regulations: Since 1956 the U.S.S.R. has prohibited all hunting except that necessary to meet the needs of the Eskimo people. Denmark limits the take to Greenland residents using craft under 40 tons. Hunting areas and dates are also specified. Canada limits killing to Eskimos and a few white residents.

PACIFIC WALRUS

(Odobenus rosmarus)

Distribution and Migration: The entire population winters in the seasonal pack ice of the Bering Sea. When the ice was at maximum extent in April 1972, concentrations of walruses were found north and south of the west end of St. Lawrence Island and in central Bristol Bay. Areas of sparse abundance surround the areas of concentration. Ice movements caused by currents of wind and water create leads and break up pack ice. Walruses are thus able to feed in these relatively shallow waters, generally less than 40 fathoms (240 feet) deep.

There may be two or more peaks in migration, depending on weather and ice conditions. From mid-May to early June most females and young move through Bering Strait with ice carried by strong currents. In mid-June large numbers of males move north. However, in 1954, about 1,000 adult and subadult males remained throughout the summer on and near Round Island in northern Bristol Bay. An estimated 1,500-2,000 were present there in June 1958, and 2,000 to 3,000 on shore plus additional animals in the water in 1966. Other haul-out areas may be used in winter. In 1962 and 1965 small numbers (100 to 150) were seen on beaches of Amak Island. Several thousand were hauled out on the east shore of Big Diomed Island in December 1966 and, at the same time, between 1,000 and 1,500 came ashore on the Puvuk Islands, south of St. Lawrence Island.

In the west, walruses haul out on Ruder Spit, Arakamchechen Island, and Cape Intsova in the Chukchi Sea. At one site on Cape Intsova, (1947) the first walruses were observed to come ashore on August 8, 1947, and by October 10, about 8,000 were hauled out.

During the northward spring migration into the arctic Ocean, the majority of walruses pass through the western side of Bering Strait and proceed westward to Wrangel Island. Here, three types of hauling grounds were identified: those used by mothers with young, those used by adult males, and those used by subadults. Few walruses move eastward into the Beaufort Sea.

Abundance and Trends: Prior to large-scale exploitation by whalers of European descent which began in about 1868, the Pacific walrus was estimated to number about 200,000 animals. The population may have fallen to a low of 40,000 to 50,000 in the 1950 to 1956 period. Beginning in 1960, aerial surveys of walruses were under taken. From data obtained on the five surveys (two in 1960, one each in 1961, 1968, and 1972), total estimates were computed by extending the number of animals observed in a 1-mile flight track to the estimated area occupied by walruses. From the 1960 surveys, the total population was estimated to range from 73,000 to 117,000. The 1972 surveys provided a median estimate of 135,000 walruses, and a range of 93,000 to 179,000. J.J. Burns has gathered much basic biological information from walruses taken by Eskimos. From these data, his estimate of the walrus population approximates the computed mean of the 1972 aerial survey.

He considers that the similar results obtained by the very different methods confirm a population of approximately 140,000 walruses.

Studies of his material, as well as a comparison of the 1960 and 1972 surveys, indicate that the population may still be increasing, but it will not continue to do so if the annual kill is increased.

Annual mortality rates, using Ricker's "catch curve," were estimated by various investigators to range from 11 to 15 percent. Among males from 14 to 33 years of age, the mortality rate was 14 percent. The hunter take of walruses in Alaska in 1973 was about average, 1,581 animals (1,240 adult males, 231 adult females, and 110 calves); the total kill, including those killed and lost, was estimated to be about 2,700 animals.

The take of walruses by the U.S.S.R. from 1968 through 1973 was 1,097, 960, 957, 860, 1,518, and 1,291. The number killed but lost is not included. The harvest cannot exceed 2,000, the present annual quota.

General Biology: Only one pinniped, the southern elephant seal, is larger than the Pacific walrus. An adult male walrus weighed 1,557 kg. The maximum standard length of 23 adult males was 356 cm. Among 26 adult females, the maximum weight was 1,062 kg. and the maximum length was 238 cm. From a sample of newborn young the maximum weight was 77 kg and the maximum length was 137 cm. Some females ovulate for the first time at age 5; others, more rarely, are delayed until age 8. Males become fertile at ages 7 to 8 years but are not physically mature

until they are at least 10 years old. The walrus is polygamous, with mid-season sex ratio of 5 cows to 1 bull in the main breeding area southwest of St. Lawrence Island. The gestation period, including a 3 to 3.5 month delayed implantation, is about 15 months. The young are usually born in May, during the spring migration northward. Each female bears a single calf and nurses it about 2 years. The females and young are very gregarious, males are gregarious outside the breeding season. Studies of cementum layers in canine teeth indicate that walruses often attain ages of 20 to 30 years, with maximum ages of 37 years for a male and 26 for a female.

Walruses, having a greater specific gravity than water, must rest on ice or land at fairly frequent intervals. By means of pharyngeal pouches that may be inflated, however, walruses are able to sleep while floating upright at sea.

Clams (six species identified) are important food species. The stomach contents of an adult male contained about 50 pounds of Mya truncata siphons and 35 pounds of Clinocardium nuttalli feet. Other food includes echinoderms, annelids, sipunculids, and priapuloids. Occasionally individual adult males turn to a diet of seal flesh.

Parasites and Diseases: Internal parasites recorded from walruses include the following: Trematoda (3 spp.), Cestoda (3 spp.), Nematoda (6 spp.), and Acanthocephala (4 spp.). All walruses except calves are infested with external parasites, including three species of sucking lice. A small percentage of adult male walruses become carnivorous and

feed on seal flesh. Probably it is this abnormal feeding behavior that accounts for trichinosis infection of from 1 to 10 percent of 1,060 male walruses sampled from four arctic regions. Incidence of uterine cysts and other disease conditions is low, as far as is known, and such diseases and abnormalities appear to be unimportant.

Ecological Problems: Dredging for gold and offshore drilling for oil in the Bering and Arctic Seas are activities now under consideration by industry. The extensive clam beds, which furnish the basic food resource of the walrus, are not yet subject to human exploitation. If dredging for clams is undertaken, the food base of the Pacific walrus could be seriously threatened. Also of concern is the frequent harassment of walrus by aircraft when they are hauled out in summer on the Walrus Islands State Game Sanctuary (Togiak Bay), Bristol Bay.

Allocation Problems: Siberian and Alaskan Natives kill 5,000 to 6,000 walruses annually for subsistence, and less than 50 were taken per year by trophy hunters and for display in marine aquariums. Loss of walruses during hunting ranges from 20 to 60 percent and averages about 50 percent because of inefficient Eskimo hunting techniques. Additional waste occurs in the utilization of the products of retrieved walruses. If ivory is the primary objective, utilization amounts to as little as 1 to 3 percent of the potential. When meat and hides are used, utilization is as high as 90 percent of the carcasses taken.

Regulations: Trophy hunting was stopped by the Marine Mammal Protection Act of 1972 (PL 92-522). Requested trophy hunting permits by guides under the hardship clause were not issued by the Secretary of the Interior. The taking of walruses by Native Alaskans (Eskimos and Aleuts) for meat, hides, and ivory which may be used to manufacture traditional artifacts for sale is permitted. PL 92-522 allows Natives to take an unlimited number of male and female walruses. The Alaska State law, which the Federal legislation invalidated, was more restrictive, it imposed a bag limit of 5 females per resident hunter with no limit on males.

Current Research and Funding of Walrus Studies: A walrus research program is being established by the U.S. Fish and Wildlife Service. F.H. Fay, U.S. Department of Health, Education, and Welfare, has worked part-time for many years on walrus studies. In the 1973 hunting season, the Alaska Department of Fish and Game maintained observers on St. Lawrence Island, Little Diomed Island, and King Island to monitor the kill. Studies have also been supported under the Sea Grant Program, University of Alaska.

AFRICAN MANATEE

(Trichechus senegalensis)

Distribution and Migration: The African Manatee occurs in coastal waters and in adjacent rivers along the coast of West Africa from the mouth of the Senegal River (16°N) to the mouth of the Cuanza River

in Angola. They have been reported from the Faleme, Cambia and Casamance rivers of Senegal and Gambia, and from the coasts of Guiana. Other rivers known to support manatees are the Sierra Leone, the Missunado, the St. Paul's and the Cavalla rivers. In Ghana, they are now apparently restricted to Lake Volta and the upper reaches of the Volta River. Manatees have been taken at Benin and Lagos, Nigeria, and are numerous in most of the larger rivers of southern Nigeria. They occur in the Niger River and are commonly known as far upriver as Idah, on the western border. They travel even further upriver, and have been noted in Segou, Mali, approximately 200 miles southwest of Timbuktu. Manatees also ascend the Benue River, a large tributary of the Niger. They have been reported in this waterway as far east as Numan (9°N 12 W). It is not thought that manatees occur in Lake Chad, although specimens have been collected from its principal tributaries, the Banningi, the Bahr Keeta and the River Shari. In Cameroon, they are found within the Korup Reserve and have been reported from the Mungo and Wouri rivers. It is also likely that they inhabit the Campo River in southern Cameroon. Specimens have been taken from the Rio Muni, Gabon and Ogooue rivers and may also be found in the Loeme River of Congo Brazzaville. In Zaire, T. senegalensis occurs in the lower Congo River, and also in the upper drainage of the Uele River, east to Kibali. The Loge, Dnade, Bengo and Cuanza rivers of Angola all reportedly contain manatees. No migrational movements have been noted for this species.

Abundance and Trends: No population estimates are available for this species. The African Manatee was reported as rare in the Senegal, Faleme and Casamance rivers of Senegal as early as 1900. Recent reports of manatee abundance in Senegal, Guinea and Portuguese Guinea are lacking. Manatees remain common enough in the Sierra Leone river estuaries today to be trapped for food, but no information is available on the current status of manatees along the coast from Liberia, to Nigeria. Manatees have been extirpated from the Mekrou River of Dahomey and the portion of the Niger River on the Niger-Dahomey border, although they are thought to still be numerous in most of the larger rivers of southern Nigeria. Populations seem to be stable in the lower Niger, the Benue River, and the Anambra system of creeks, but manatees are rare in the Izichi River of Nigeria. T. seneglensis has apparently been extirpated in Lake Chad and is classified as rare in the Cameroons. The lower reaches of the Congo River reportedly support considerable numbers, but populations have diminished in the upper rivers. In general, the manatee population of Zaire is much reduced. T. senegalensis is classified as a vulnerable species, but little data is available on the recent distribution or abundance of this animal.

General Biology: Externally, this manatee is indistinguishable from the West Indian Manatee. It is large, fusiform and nearly hairless, with paddlelike flippers and spatulate tail. Average adults measure from 2.5 to 3.4 m. in length and weigh from 400 to 500 kg. It has been hypothesized that breeding occurs during the late dry season in

weedy swamps and lagoons, but documentation has not been provided. The gestation period is unknown but is probably about one year. One is the usual number of young. Newborn calves are approximately 1 m. in length, and they are believed to remain with the parent cow for a long period of time. There is no further information available on reproductive or population biology of this species. African Manatees favor weedy swamps and mirigots. They are believed to be active throughout the day, but feed mostly at night. Their diet includes mangrove leaves, Cymodocea nodosa, Polygonum, and Eichornia crassipes, but they have also been reported feeding on Rhizophora, a terrestrial plant which often hangs over water. A 1.85 m. captive male consumed 12 kg. of vegetables daily. Upon reaching 2.4 m. in length, he regularly ate 17 to 18 kg. of vegetables, Elodea and legumes daily. The only information available on the social behavior of T. senegalensis is that groups of 4 animals, including half-grown calves have been observed.

The one internal parasite reported for the African Manatee is Chiorchis fabaceus, a trematode found in the large intestine. No diseases of this species have been reported from the wild, but one captive died as a result of acute enteritis. There is no evidence of predation on T. senegalensis by any species other than man.

Ecological Problems: Propellers and keels of boats striking submerged manatees may inflict mortal wounds. While there has been no

evidence presented indicating that this is a real problem in West Africa as it is in Florida, the Ijaw fishermen of the Anambra system of creeks in Nigeria, considered manatees a nuisance to their boat traffic. In 1932, they began trapping and killing manatees, and within three years, managed to exterminate the local population. Manatees inhabit the recently formed Lake Volta in Ghana and Lake Kainje in Nigeria, which are currently being swamped by growth of aquatic weeds. Use of herbicides on the weeds which are consumed by the manatees presents a potential threat to manatee. Pollution of waters in areas of human development would be expected to adversely affect the food sources of manatees. This species occurs within the Doro River Forest Reserve of Nigeria and in the proposed Korup and Campo Reserves of Cameroon.

Allocation Problems: The African Manatee has long been hunted throughout its range, largely for its meat. Nets, harpoons and guns are used in taking manatees and the hunting is usually done at night. Manatee hunting has been a regular occupation in the lower Congo, Angola and in northern Nigeria. No estimates are available as to the current take. An additional problem is the accidental netting of manatees in shark nets. These are set along many coastal areas of West Africa. T. senegalensis has been considered as a potential solution to the problem of aquatic weed control in man-made lakes and river systems. Experiments carried out on the West Indian Manatee indicate that successful weed control by manatees is feasible for limited areas only. It is likely that the use of manatees in conjunction with the alternative

mechanical weed removers, would provide the best means of control.

Regulations: The African Manatee is currently protected in Senegal, Guinea, Sierra Leone, Liberia, Ivory Coast, Ghana, Togo, Dahomey, Nigeria, Cammeroon, Gabon, Congo Brazzaville, Zaire and Angola.

Current Research: Silvia Sikes, of Benue-Plateau State, Nigeria, is currently involved in manatee conservation. She is being funded by a personal fellowship in manatee conservation from the University of Ibadan and is dispersing information to the forestry divisions of other Nigerian states to make them aware of this endangered animal. She is also gathering data on distribution in local rivers. Peter van Bree of Amsterdam is supervising a taxonomic study comparing T. senegalensis to T. manatus. The National Fish and Wildlife Laboratory of the U.S. Department of the Interior has compiled a report on the distribution, conservation and natural history of T. senegalensis.

AMAZONIAN MANATEE

(Trichechus inunguis)

Distribution and Migration: The Amazonian Manatee is strictly fluviatile, apparently being confined to the Amazon Basin and possibly the Orinoco drainage. In Brazil, it occurs in the Amazon River and the following tributaries: the Rio Tocantins, the Rio Xingu, the Tapajos, the Nhamunda, the Rio Madeira and the Rio Negro. They have also been reported in the Rio Branco, which is almost

continuous with the Essequibo and Rupununni rivers of Guyana during flooding, thus allowing manatees access to these rivers. It is thought that T. inunguis also inhabits the upper Orinoco and the Cano Casiquiare of Venezuela, but records are lacking. In Colombia, Amazonian Manatees may be found in the Amazon, the Putumayo River (west to Puerto Asis) and in the Caqueta River (west to the Araracuara rapids). They may also frequent the Apaporis River. Peruvian rivers supporting manatees are: the Rio Napo, the Rio Tigre, the Rio Maranon (as far as its confluence with the Rio Pastaza), the Rio Samiria and the Rio Pacaya. They also inhabit the Ucayli and Huallago River drainages, but are absent from both the Madre de Dios and the Purus systems. No information is available on migration of this species.

Abundance and Trends: Amazonian Manatees were formerly abundant in the Brazilian Amazon. Thousands of skins were brought yearly to Manaus for trade in the 1930's and 1940's. T. inunguis is consequently rare today in most of the Amazon and its tributaries. They are, however, still fairly common in some lakes on the lower Tapajos, and in the Nhamunda River. In general, this manatee is regarded as rare in Columbia. This species is nearer to extinction in Peru than any other mammal, although modest numbers do remain in the Rio Samiria and the Rio Pacaya. All reports indicate dramatic decline in numbers of Amazonian Manatees throughout their range. Population estimates are not available, but extinction has been predicted within the next few decades if local hunting pressures continue.

General Biology: T. inunguis is a large, fusiform, nearly hairless marine mammal with paddlelike flippers and a spatulate tail. It is distinct from the other manatee species (T. manatus and T. senegalensis) in both appearance and habitat. It is characteristically more slender in form with elongated flippers lacking nails, and it is marked by a unique white breast patch. This species is the only entirely fluviatile manatee. Adults may reach lengths of 2.8 m. and estimated weights are between 125 and 250 kg. Breeding apparently occurs throughout the year. The gestation period is thought to be about one year, and one is the usual number of young born. Newborn calves are less than one meter in length, and weigh less than 20 kg. Further information on reproduction, ontogenetic variation and population structure are lacking. Longevity in nature is unknown, but a captive pair survived for $12\frac{1}{2}$ years before they died.

Amazonian Manatees feed upon a variety of aquatic vegetation including Statotes, Potamogeton, Vallisneria, Ceratophyllum, Ulva, Myriophyllum and Zostera. Daily consumption of food plants has not been measured under natural conditions, but captive adults generally require 9 to 15 kg. of lettuce and vegetables daily. There is no documentation of any natural predation on T. inunguis, but jaguars, sharks, piranha, and caiman have been suggested as likely predators. The trematode, Chiorchis fabaceus, occurring in the large intestine, is the only internal parasite reported for this species. Bronchial disorders, pneumonia and skin problems have been noted in captives,

and one captive developed a case of osteomyelitis as a result of a harpoon wound.

Allocation Problems: Many Indian tribes of Amazonia have hunted manatees in the past, both for the meat, and for the hides which were used in making shields. Harpoons and nets were used in capturing the animals, but the final killing was done by driving wooden plugs into the nostrils causing suffocation. In the 1930's and 1940's, the Amazonian Manatee was commercially exploited for the skins, which were shipped to Portugal and Rio de Janeiro to be used primarily in the manufacture of machine belting and water hoses. A meat preparation called "mixira", consisting of meat boiled in its own fat, was canned and also shipped abroad. Thousands of manatees were slaughtered yearly. Protective legislation has since been enacted, and the present rate of exploitation is reportedly reduced. However, poaching continues and manatee meat still commonly appears in the markets of Colombia and Brazil. In Leticia, Colombia, a large manatee today is worth about 40 Col. pesos. The price has reportedly slumped in other areas.

Regulations: T. inunguis is totally protected in Brazil (1968), Venezuela (1970), Colombia (1969), Peru (1973), and Guyana (1961).

Current Research: Diana Magor is the only individual currently studying T. inunguis. She is based in Leticia, Colombia, and is collecting data on growth, distribution, and the natural history of the Amazonian Manatee.

WEST INDIAN MANATEE

(Trichechus manatus)

Distribution and Migration: T. manatus inhabits rivers, estuaries, and coastal areas of the tropical and sub-tropical regions of the New World Atlantic. It commonly ranges from southern Georgia to the northern coasts of Surinam, in South America; occasional stragglers have been reported from as far north as Currituck Sound, Virginia (37°N) and as far south as Goiana, Brazil (7°S). Within the U.S., the range of T. manatus is large confined to peninsular Florida and southern Georgia. On the west coast of Florida, the Suwannee River (30°N) is the northern limit of the manatee's range. They occur south of this river in a series of semi-isolated populations located along the coast and in adjacent rivers in Citrus County, in lower Tampa Bay, in Charlotte Harbor, and in the Everglades. The distribution on the east coast is nearly continuous, with manatees commonly occurring in the Intracoastal Waterway and the Indian River, and traveling well up the St. John's River.

In Mexico, manatees range southward from Veracruz, within the Bay of Campeche and on both sides of the Yucatan Peninsula. Distribution appears to be continuous along the coast from British Honduras to Costa Rica, whereas isolated populations only remain in Panama. These are located in Chiriqui Bay, the Changuinola River, the Sixaola River, and possibly the Cocle River. Colombian rivers which manatees inhabit are the Atrato, Leon, Suriqui, and the Magdalena and its

tributaries. They may also be found along the eastern coast of Colombia and in the Meta River. T. manatus frequents the lower Orinoco of Venezuela plus its tributaries, the Apure, Arauca, Payara, Capanaparo, and the Claro, as well as Lake Maracaibo. In Guyana and Surinam, manatees are found primarily in the rivers of the coastal plain. They have also been recorded from Jamaica, Cuba, and the Dominican Republic.

Manatees in Georgia and northern Florida apparently cannot withstand the cold winter temperatures. Some seek warm water springs or localities where factories discharge heated water into the rivers. There are twenty-five such warm water refugia used by manatees on the Atlantic and Gulf coasts. Arrival at these congregating sites usually begins in November; many animals remain for the winter, but there is continuous exchange of old and new members of the congregations. Summer observations of manatees at two northern Florida localities are common, whereas the animals are absent during the winter. This strongly suggests southward migration to avoid the cold. Offshore movements may also occur during all seasons.

Abundance and Trends: Aerial surveys of Florida coasts and rivers during 1972-73 indicate a manatee population numbering between 800 and 1,300. Numbers appear to be increasing along the west coast of Florida and are similarly increasing or stable along the Atlantic coast. Manatee numbers in Mexico are markedly reduced and reports are rare; however, their current local status appears to be stable. Likewise, populations in British Honduras seem to be decreased but stable.

Manatees are reported to be fast decreasing in Guatemala. Present status in Honduras and Costa Rica is unknown, and estimates for Nicaragua range from a few score to several hundred. Numbers are low in Panama.

Manatees are currently decreasing in many Colombian rivers and are extremely rare in the Santa Marta District and in the Llanos of eastern Colombia. They have been extirpated from Taganga Bay, the Canal de Dique, and the Cienaga de Guajaro. In Venezuela, manatees are considered neither abundant nor rare in the lower Orinoco Basin. Estimates of some thousands but not tens of thousands of manatees have been made for Guyana, but populations are reportedly reduced for both Guyana and Surinam.

It can be generally concluded that hunting pressures in Mexico, Central and South America have resulted in the present diminished manatee populations. However, hunting efforts have decreased somewhat in these areas, partially due to the scarcity of manatees, permitting remaining populations to stabilize.

General Biology: The West Indian Manatee is large, fusiform in shape, and thick-skinned with little hair. The forelimbs are modified paddles with rudimentary nails, and the spatulate tail is horizontally flattened. Adults range in size from 2.5 to over 4.5 m. in length and corresponding weights vary from 200 to 600 Kg. However, average adults are between 3 and 4 m. in length and weigh less than 500 kg. Sexual dimorphism

in size has not been documented. T. manatus has no definite breeding season; breeding occurs throughout the year. The cow is polyandrous, allowing several bulls to copulate with her during her relatively short period of receptivity. Mating has been observed in water about 2.5 m in depth as well as in shallows less than 1 m. deep. The gestation period is probably about 385 to 400 days and parturition is thought to occur in secluded shallows. Successful breeding has not occurred under captive conditions. One is the usual number of young; however, twins and a case of foster parenthood have been recorded. Newborn calves may measure over 1 m. in length and weigh between 11 and 27 kg. Suckling from the pectoral teats occurs underwater. Calves begin grazing at an early age, but nursing may continue for 1 or 2 years. Therefore, breeding probably occurs every 2.5 to 3 years. Manatees have been classified into the following age groups: calves, any young animal associating with a cow; juveniles, independent but not yet sexually mature; and adults, animals taking part in reproduction. Transition to adulthood is gradual and sexual maturity may not be attained until 4 or possible 6 years of age. Manatee longevity in the wild is unknown, but a captive has been successfully maintained in Florida for 23 years.

Manatees are asocial or weakly social. The only lasting bond is that between the cow and her calf. A possible exception is the estrus herd of bulls, which may last from one week to more than a month, during a cow's estrus cycle. Groups occasionally form and there is some social interaction seen in play and homosexual behavior, but these relationships are ephemeral only.

T. manatus is apparently arrhythmic with no specific daily patterns of behavior. Adults may spend from 6 to 8 hours daily in feeding. Manatees are wholly herbivorous, consuming a variety of food plants in the following order of preference: (1) submerged plants, (2) surface floating vegetation, and (3) emergents. Quantities of incidentally ingested insect larvae, amphipods, mollusks, shrimp, and other invertebrates probably provide necessary amounts of protein for the manatee. Captive adults consume 30 to 50 kg. of vegetation each day. It is thought that manatees must return to freshwater occasionally for drinking.

Internal parasites of T. manatus are trematodes (2 spp.) and nematodes (1 sp.). A single copepod (Harpacticus pluex) was also reported on the skin. Manatees in saltwater become covered with marine diatoms (Zygnema and Navicula) and barnacles, whereas animals remaining in freshwater develop a coat of algae (Lyngbya and Compsopogon). Manatees appear to be susceptible to pneumonia and other bronchial disorders when exposed to unusually low temperatures. To date, there is no documentation of predation upon the manatee by any animals other than man. Crocodilians, sharks, and piranha have been suggested as likely predators.

Ecological Problems: In the United States, wounds inflicted by motor boat propellers and keels pose a major problem and are thought to be the prime cause of manatee mortality. Water contamination by industrial effluents is responsible for the destruction of proper manatee habitat and food supplies. In upper Tampa Bay, the natural

submergent vegetation has been eradicated by this pollution, resulting in the absence of manatees in the upper bay. Dredging may also have detrimental effects, increasing the water turbidity to a point where submergent plants can no longer survive. Natant plants seem to thrive under these conditions, and in the absence of the preferred submergents, manatees do consume these natants. However, the floating plants present a problem to boat traffic and (as in the St. John's River) are sprayed with herbicides, such as 2-4-D, which are directly ingested by manatees. Oil spills from offshore drilling would also be expected to have detrimental effects on the manatee's food supplies. Vandalism, poaching, and accidental nettings are additional threats to the manatee.

Blue Springs Park (a winter congregating site) is the only locality in Florida with lowered boat speed limits and swimming restrictions for manatee protection. Manatees also inhabit the Everglades National Park. They are found within the Parque Nacional Isla de Salamanca of Colombia, but their occurrence in other foreign reserves or sanctuaries is unknown.

Allocation Problems: Manatees have long been hunted for their meat, hides, oil, and ivory. Although protective legislation is nearly complete, the meat is still sold openly in the markets of Colombia and Venezuela. T. manatus has been used successfully in small scale aquatic weed clearance projects in Guyana, Mexico, and Panama, but at this point, large-scale utilization of manatees for weed control

does not seem feasible, for large numbers of animals are required. The manatee has also been suggested for domestication for meat in the distant future. Current decimated populations, plus a low reproductive rate deem this project as unrealistic.

Regulations: Protective legislation for the manatee now exists in the following countries: U.S., British Honduras, Costa Rica, Panama, Colombia, Venezuela, Guyana, Cuba, Jamaica, Puerto Rico, Trinidad, Haiti, and the Dominican Republic.

Current Research: The National Fish and Wildlife Laboratory of the U.S. Department of the Interior will initiate a tracking and field study of T. manatus in Florida in July 1974. This project will be headed by Howard W. Campbell. E. Mondolf of Venezuela is compiling records of this species in his country to determine their local range and P. van Bree of Amsterdam is supervision a taxonomic study comparing T. manatus to T. senegalensis. The U.S. National Academy of Sciences and the National Science Research Council of Guyana are planning to jointly establish an international manatee research center in Guyana. They hope to direct their research towards reproduction, physiology, and nutrition of the West Indian Manatee. This project is currently in the early stages of planning.

DUGONG

(Dugong dugong)

Distribution and Migration: The dugong occurs in tropical and

subtropical waters of the Indo-Pacific. It is totally marine and is usually found in coastal waters from two to three fathoms in depth. Along the east coast of Africa it ranges from Egypt in the Red Sea, south to Delagoa Bay (26°S), Mozambique. This distribution is discontinuous due to local extirpation in certain areas. Dugongs have been reported from the Persian Gulf and they also range along the west coast of India, south of the Gulf of Kutch. They occur in Ceylonese waters and are present in the Andaman Islands, the Mergui Archipelago, Burma, Malaysia, the Moluas and Sumatra. They may still be found in the Ryuyu Archipelago, and specimens have been taken in Formosa and Hong Kong. The present range extends south and east to include Guan, the Palau Islands, the Carolines, New Britain, New Guinea, the Solomons, New Caledonia, and New Hebrides. In Australia, dugongs occur all along the northern coast from Perth (32°S), on the west coast, to Brisbane, in the east. They are absent from the Marshall, Gilbert, Ellice, and Fiji Islands.

Long distance migrations are unknown for this species, but local, offshore movements are apparent. These are correlated with the changing monsoon seasons and possibly with resulting shifts in abundance of food sources. During the season of rough seas and extreme winds, the animals move to shore, apparently seeking shelter. Such movements have been reported in east Africa, India, and the Philippines (where they are no longer present). Similar migrations have not been noted in Australia.

Abundance and Trends: No numerical estimates of dugongs are available, but populations are thought to be much reduced and continuing to decline throughout nearly all portions of the range.

Dugongs are more abundant in Kenya and the Somali Republic than elsewhere along the coast of Africa. They are now extremely rare in the Red Sea and the Gulf of Aqaba. They were once abundant enough in the Gulf of Mannar (between Ceylon and India) to support a large commercial dugong fishery. The only remaining remnants of this population are restricted to the region near the Mannar Peninsula of Ceylon, from Jaffna to Puttalam. Numbers have declined along the Sarawak coast of Malaysia, and few dugongs can be found today in the Ryuyu Archipelago. The only stable populations occur off the northern Australia coast, in Shark Bay, Broome, the Gulf of Carpentaria and along the northern coast of Queensland. These stocks appear to be maintaining themselves and may even be increasing. At present, dugongs do not occur in any marine parks, reserves, or sanctuaries.

General Biology: Dugongs are large fusiform marine mammals with flipperlike forelimbs and broadly notched, horizontal tail fluke. Adults range from 2.4 to 2.7 m. in length and corresponding weights are 230 to 360 kg. The thick, nearly hairless skin is deep slate in color and is usually marked with numerous scars and scratches. Dugongs were quite social in the past, occurring in large herds of several hundred animals. Today, groups of one to six animals are the usual number. Breeding apparently occurs throughout the year.

The gestation period is thought to be about one year and one is the usual number born. Twins rarely have been reported. Newborn calves are about 1.1 m. in length. Calves begin grazing within the first three months after birth, but continue to nurse for over a year, reaching a length of up to 1.8 m. Sexual maturity is attained when animals reach approximate length of up to 2.4 m. (estimated 2 to 3 years of age). Sexual dimorphism in size of adults is not evident. Longevity of the dugong in the wild is unknown, but a pair of captives were maintained successfully for 10 years.

Dugongs are largely herbivorous and rely primarily upon marine sea grasses of the families Potamogetonaceae and Hydrocharitaceae, occurring in waters which range from 21 to 38° C throughout the year. Brown algae (Sargassum) may also be consumed in significant amounts when sea grasses are locally in short supply. Dugongs reportedly prefer to feed at night or with the rising tide.

There are few observations of predation upon the dugong by animals other than man. Fishermen have claimed the shark is a predator, but in over 100 dugongs netted and drowned in Queensland, none ever showed any sign of attack by sharks or any other predators. Internal parasites include Termatoda (10 spp.) and Nematoda (2 spp.). Barnacles and green filamentous algae have been observed on dugongs but do not appear harmful. No diseases have been reported.

Allocation Problems: Man is the major threat to the dugong's

existence. Boat traffic in offshore areas may inflict mortal wounds. Increased marine fishery activities in the India-Ceylon area have resulted in accidental nettings, drowning substantial numbers of dugongs. Dynamiting for fish is also assumed to affect dugongs adversely. In Queensland, Australia, a shark netting program has resulted in large dugong mortality; similar netting programs exist in Africa.

Dugongs have been hunted throughout their range. Their meat is similar to veal or pork, and "keeps" for long periods of time. Average sized adults yield from five to eight gallons of oil similar to cod liver oil, and the hide makes excellent leather, especially suitable for sandalmaking. Tusks and bones are used as ivory and several body parts were once thought to have medicinal or aphrodisiac properties. Today, hunting pressures are much reduced, in part due to the decline of dugongs. In spite of legislative protection, however, poaching continues. In Australia, the aborigines and Torres Islanders may still legally hunt the animals. One village (250 people) caught an average of about 70 animals per year during the early 1960's.

Regulations: The dugong is totally protected in Egypt, Anglo-Egyptian Sudan, Ethiopia, Somalia, Kenya, Tanzania, Mozambique, Madagascar, South Africa, Natal, India, Ceylon, Sabah, Sarawak, the Philippines, Japan, Formosa, New Caledonia, and Australia. While protection is near complete, effective enforcement is virtually impossible.

Current Research: George Heinsohn is continuing his study of dugongs in Townsville, Queensland. Animals accidentally drowned in shark nets are providing population and reproduction data, as well as information on food habits. Robert Kater and Adrian Hillier are also reportedly studying dugongs in Kenya, but the nature of their investigations is unknown. The National Fish and Wildlife Laboratory of the U. S. Department of the Interior has assembled a report on the distribution, status, and natural history of this species. Surveys are planned for FY 1974-75 to determine dugong distribution in many areas of the Pacific where data are lacking.

References to publications and other information used in preparing the Marine Mammal Status Reports are available from the National Fish and Wildlife Laboratory, U.S. Fish and Wildlife Service, U.S. National Museum, 10th and Constitution Avenue, N.W., Washington, D.C. 20560.

Date:

JUL 29 1974


Deputy Assistant Secretary

Fish and Wildlife and Parks

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PART II



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

■

MARINE MAMMALS

Protection

Title 50—Wildlife and Fisheries

CHAPTER I—BUREAU OF SPORTS FISHERIES AND WILDLIFE, FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR

PART 18—MARINE MAMMALS

Regulations were published in the FEDERAL REGISTER of December 21, 1972 (37 FR 28173-28177) to implement the Marine Mammal Protection Act of 1972 (86 Stat. 1027). Although these were final rules, comments, suggestions and objections were invited for a sixty-day period until February 21, 1973. These comments, suggestions and objections resulted in the proposed rulemaking which was published in the FEDERAL REGISTER of August 16, 1973 (38 FR 22143). Comments were invited to November 1, 1973.

These regulations must be read together with the regulations published on August 15, 1973, 38 FR 22015 and January 4, 1974, 39 FR 1157. Those regulations provide procedures for all permit applications, for civil penalty proceedings, for the entry of wildlife through designated ports, and for other aspects of clearance. All of these regulations form Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations. The regulations, when read together, provide a comprehensive system of rules regarding wildlife under the jurisdiction of the Bureau of Sport Fisheries and Wildlife.

The deletions, additions and minor changes in this final rulemaking (i) reflect comments received, (ii) correct certain technical errors and omissions and (iii) provide clarity and uniformity.

The regulations of the Department of Commerce and Interior are virtually identical in format and substance.

The following changes have been made:

1. Section 18.14—Provides a method for establishing that a marine mammal was taken prior to December 21, 1972. The Act and these regulations do not apply to such marine mammals.

2. Section 18.23—This section now allows non-native agents to deal in marine mammal products as middlemen, where the product is being transferred between natives.

3. Section 18.26—There were several comments regarding the inclusion of the collection of marine mammal parts, such as walrus ivory or whalebone, in the definition of "taking," thereby prohibiting such collection without a permit. The definition of taking has not been modified, but a new provision is added to allow such collection if the items are registered with an agent.

4. Section 18.32—This section provided methods of applying for economic hardship permits. Since the economic hardship exemption provision expired on October 21, 1973, as provided for in the Act, this section has been deleted.

5. Section 18.33 and 18.34—Renumbered as §§ 18.32 and 18.33 to conform with the deletion of the Undue Economic Hardship § 18.32.

In addition to the changes discussed above, it has been determined to pro-

pose a list of items which qualify as "authentic native articles of handicrafts and clothing." However, since this would involve new material, which was not covered by the proposed rulemaking of August 16, 1973, it will be published as a proposal in the FEDERAL REGISTER in the immediate future, with opportunity for public comment.

The changes in these regulations suggested by the original notice of proposed rulemaking (38 FR 22143) and the changes adopted in this rulemaking involve primarily relaxations of various restrictions. Considering the long period during which the public has had actual notice of these changes, and considering the importance of making these rules effective as soon as possible for public convenience, it has been determined that there is good cause to make this rulemaking effective upon publication pursuant to 5 U.S.C. 553.

Effective date: These regulations become effective on February 15, 1974.

Date: February 15, 1974.

LYNN A. GREENWALT,
Director, Bureau of Sport
Fisheries and Wildlife.

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[Reserved]

AUTHORITY: Marine Mammal Protection Act of 1972, 86 Stat. 1027 (16 U.S.C. 1361-1407).

Subpart A—Introduction

§ 18.1 Purpose of regulations.

The regulations contained in this part implement the Marine Mammal Protection Act of 1972 (16 U.S.C. 1361-1407), which among other things, restricts the taking, possession, transportation, sell-

ing, offering for sale, and importing of marine mammals.

§ 18.2 Scope of regulations.

(a) This Part 18 applies solely to marine mammals and marine mammal products as defined in § 18.3. For regulations under the Act with respect to cetacea (whales and porpoises), pinnipedia, other than walrus (seals and sea lions), see 50 CFR Part 216.

(b) The provisions in this part are in addition to, and are not in lieu of, other regulations of this subchapter B which may require a permit or prescribe additional restrictions or conditions for the importation, exportation, and interstate transportation of wildlife. (See also Part 13 of this subchapter.)

§ 18.3 Definitions.

In addition to definitions contained in the Act and in Part 10 of this subchapter, and unless the context otherwise requires, in this Part 18:

"Act" means the Marine Mammal Protection Act of 1972, 86 Stat. 1027, 16 U.S.C. 1361-1407; Pub. L. 92-522.

"Alaskan Native" means a person defined in the Alaska Native Claims Settlement Act [43 U.S.C. section 1603(b) (85 Stat. 588)] as a citizen of the United States who is of one-fourth degree or more Alaska Indian (including Tsimshian Indians enrolled or not enrolled in the Metlakatla Indian Community), Eskimo, or Aleut blood, or combination thereof. The term includes any Native, as so defined, either or both of whose adoptive parents are not Natives. It also includes, in the absence of proof of a minimum blood quantum, any citizen of the United States who is regarded as an Alaska Native by the Native village or town of which he claims to be a member and whose father or mother is (or, if deceased, was) regarded as Native by any Native village or Native town. Any citizen enrolled by the Secretary pursuant to section 5 of the Alaska Native Claims Settlement Act shall be conclusively presumed to be an Alaskan Native for purposes of this part.

"Authentic native articles of handicrafts and clothing" means items made by an Indian, Aleut, or Eskimo which (a) were commonly produced on or before December 21, 1972, and (b) are composed wholly or in some significant respect of natural materials, and (c) are significantly altered from their natural form and which are produced, decorated, or fashioned in the exercise of traditional native handicrafts without the use of pantographs, multiple carvers, or similar mass copying devices. Improved methods of production utilizing modern implements such as sewing machines or modern techniques at a tannery registered pursuant to § 18.23(c) may be used so long as no large scale mass production industry results. Traditional native handicrafts include, but are not limited to, weaving, carving, stitching, sewing, lacing, beading, drawing, and painting. The formation of traditional native groups, such as cooperatives, is permitted so long as no large scale mass production results.

"Commercial fishing operation" means the lawful harvesting of fish from the marine environment for profit as part of an on-going business enterprise. Such term shall not include sport fishing activities whether or not carried out by charter boat or otherwise, and whether or not the fish so caught are subsequently sold.

"Endangered species" means a species of marine mammal listed as "endangered" pursuant to the Endangered Species Act of 1973, 87 Stat. 884, Pub. L. 93-295 (See Part 17 of this subchapter).

"Incidental catch" means the taking of a marine mammal (a) because it is directly interfering with commercial fishing operations, or (b) as a consequence of the steps used to secure the fish in connection with commercial fishing operations: *Provided, however*, That a marine mammal so taken must immediately be returned to the sea with a minimum of injury; and *Provided, further*, That the taking of a marine mammal which otherwise meets the requirements of this definition shall not be considered as incidental catch of that mammal if it is used subsequently to assist in commercial fishing operations.

"Marine mammal" means specimens of the following species, whether alive or dead, and any part thereof, including but not limited to, any raw, dressed, or dyed fur or skin:

Scientific name	Common name
<i>Ursus maritimus</i>	Polar Bear
<i>Enhydra lutris</i>	Sea Otter
<i>Odobenus rosmarus</i>	Walrus
<i>Dugong dugong</i>	Dugong
<i>Trichechus manatus</i>	West African manatee
<i>Trichechus inunguis</i>	West Indian manatee
<i>Trichechus senegalensis</i> ..	Amazonian manatee

NOTE: Common names given may be at variance with local usage, they are not required to be provided by the Act, and they have no legal significance.

"Native village or town" means any community, association, tribe, band, clan, or group.

"Pregnant" means pregnant near term.

"Subsistence" means the use by Alaskan Natives of marine mammals taken by Alaskan Natives for food, clothing, shelter, heating, transportation, and other uses necessary to maintain the life of the taker or for those who depend upon the taker to provide them with such subsistence.

"Take" means to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal, including, without limitation, any of the following: The collection of dead animals or parts thereof; the restraint or detention of a marine mammal, no matter how temporary; tagging a marine mammal; or the negligent or intentional operation of an aircraft or vessel, or the doing of any other negligent or intentional act which results in the disturbing or molesting of a marine mammal.

"Threatened species" means a species of marine mammal listed as "threatened" pursuant to the Endangered Species Act of 1973, 87 Stat. 884, Pub. L. 93-295.

"Wasteful manner" means any taking or method of taking which is likely to result in the killing or injuring of marine mammals beyond those needed for subsistence purposes or for the making of authentic native articles of handicrafts and clothing or which results in the waste of a substantial portion of the marine mammal and includes without limitation the employment of a method of taking which is not likely to assure the capture or killing of a marine mammal, or which is not immediately followed by a reasonable effort to retrieve the marine mammal.

§ 18.4 Other laws and regulations.

(a) (See 50 CFR 10.3 in regards to other Federal laws and regulations).

(b) Section 109 of the Act provides that on or after December 21, 1972, no State may adopt any law or regulation, or enforce any existing law or regulation, which relates to the taking of marine mammals or which in effect nullifies an exemption or exception created by the Act, unless such laws or regulations have been previously reviewed by the Secretary and determined by him to be consistent with the provisions of the Act and the regulations in this part. In no event, however, will the Secretary approve any State laws or regulations which:

(1) Purport to authorize a State to issue permits in situations which would require a Federal permit under the Act, unless and until appropriate Federal regulations have been issued under section 103 of the Act, and where appropriate, the Secretary has waived the moratorium on such taking or importation under section 101(a) (3) of the Act; or

(2) Purport to authorize a State to issue permits for scientific research or for public display (except that a State may, under authority of a general scientific research permit granted by the Secretary to it, assign individual scientific research permits to State employees or representatives of State universities or other State agencies, subject to the provisions of the general permit); or

(c) Any State may obtain a review and determination of its existing laws and regulations from the Secretary by submitting a written request to that effect to the Director accompanied by the following documents, unless otherwise specified by the Director:

(1) A complete set of laws and regulations to be reviewed, certified as complete, true and correct, by the appropriate State official;

(2) A scientific description by species and population stock of the marine mammals to be subjected to such laws and regulations;

(3) A description of the organization, staffing and funding for the administration and enforcement of the laws and regulations to be reviewed;

(4) A description, where such laws and regulations provide for discretionary authority on the part of State officials to issue permits, of the procedures to be used in granting or withholding such permits and otherwise enforcing such laws; and

(5) Such other materials and information as the Secretary may request or which the State may deem necessary or advisable to demonstrate the compatibility of such laws and regulations with the policy and purposes of the Act and the rules and regulations issued thereunder.

(d) In making a determination with respect to any State laws and regulations, the Secretary shall take into account:

(1) Whether such laws and regulations are consistent with the purpose and policies of the Act and the rules and regulations issued thereunder;

(2) The extent to which such laws and regulations are consistent with, or constitute an integrated management or protection program with, the laws and regulations of other jurisdictions whose activities may affect the same species or stocks or marine mammals; and

(3) The existence of or preparations for an overall State program regarding the protection and management of marine mammals to which the laws and regulations under review relate.

(e) To assist States in preparing laws and regulations relating to marine mammals, the Secretary will also, at the written request of any State, make a preliminary review of any such proposed laws or regulations. Such review will be strictly advisory in nature and shall not be binding upon the Secretary. Upon adoption of previously reviewed laws and regulations, the same shall be subject to a complete review for a final determination pursuant to these regulations. To be considered for preliminary review, all legislative and regulatory proposals must be forwarded to the Director and certified by the appropriate State official. In addition, they shall be accompanied to the extent available with the same materials required under paragraph (c) above, unless otherwise provided by the Secretary.

All determinations by the Secretary (other than as a result of preliminary reviews of proposed laws and regulations) shall be final.

(f) The implementation and enforcement of all State laws and regulations previously approved by the Secretary pursuant to this section shall be subject to continuous monitoring and review by the Secretary pursuant to such rules and regulations as he may adopt. Any modifications, amendments, deletions or additions to laws or regulations previously approved shall be deemed to be new laws and regulations for the purposes of these regulations and shall require review and approval by the Secretary before their adoption.

(g) Notwithstanding the foregoing, nothing herein shall prevent (1) the tak-

ing of a marine mammal by a State or local government official pursuant to § 18.22 of the regulations in this part, or (2) the adoption or enforcement of any law or regulation relating to any marine mammal taken or imported prior to the effective date of the Act.

Subpart B—Prohibitions

§ 18.11 Prohibited taking.

Except as otherwise provided in Subparts C and D of this Part 18, it is unlawful for:

(a) Any person, vessel, or conveyance subject to the jurisdiction of the United States to take any marine mammal on the high seas, or

(b) Any person, vessel, or conveyance to take any marine mammal in waters or on lands under the jurisdiction of the United States.

§ 18.12 Prohibited importation.

(a) Except as otherwise provided in Subparts C and D of this Part 18, it is unlawful for any person to import any marine mammal or marine mammal product into the United States.

(b) Regardless of whether an importation is otherwise authorized pursuant to Subparts C and D of this Part 18, it is unlawful for any person to import into the United States any:

(1) Marine mammal: (i) Taken in violation of the Act, or (ii) Taken in another country in violation of the laws of that country;

(2) Any marine mammal product if: (i) The importation into the United States of the marine mammal from which such product is made would be unlawful under subparagraph (1) of this paragraph, or (ii) The sale in commerce of such product in the country of origin of the product is illegal.

(c) Except in accordance with an exception referred to in Subpart C and §§ 18.31 and 18.32 of this Part 18, it is unlawful to import into the United States any:

(1) Marine mammal which was pregnant at the time of taking,

(2) Marine mammal which was nursing at the time of taking, or less than 8 months old, whichever occurs later,

(3) Specimen of an endangered or threatened species of marine mammals.

(4) Specimen taken from a depleted species or stock of marine mammals, or

(5) Marine mammal taken in an inhumane manner.

(d) It is unlawful to import into the United States any fish, whether fresh, frozen, or otherwise prepared, if such fish was caught in a manner proscribed by the Secretary of Commerce for persons subject to the jurisdiction of the United States, whether or not any marine mammals were in fact taken incident to the catching of the fish.

§ 18.13 Prohibited uses, possession, transportation, and sales.

Except as otherwise provided in the Act these regulations, it is unlawful for:

(a) Any person to use any port, harbor or other place under the jurisdiction

of the United States for any purpose in any way connected with a prohibited taking or any unlawful importation of any marine mammal or marine mammal products;

(b) Any person subject to the jurisdiction of the United States to possess any marine mammal taken in violation of the Act or these regulations, or to transport, sell, or offer for sale any such marine mammal or any marine mammal product made from any such mammal; or

(c) Any person subject to the jurisdiction of the United States to use in a commercial fishery, any means or method of fishing in contravention of regulations and limitations issued by the Secretary of Commerce for that fishery to achieve the purposes of this Act.

§ 18.14 Marine mammals taken before the Act.

(a) Section 102(e) of the Act provides in effect that the Act shall not apply to any marine mammal taken prior to December 21, 1972, or to any marine mammal product consisting of, or composed in whole or in part of, any marine mammal taken before such date. Such status may be established by submitting to the Director prior to, or at the time of importation, an affidavit containing the following:

(1) The Affiant's name and address;

(2) Identification of the Affiant;

(3) A description of the marine mammals or marine mammal products which the Affiant desires to import;

(4) A statement by the Affiant that to the best of his knowledge and belief, the marine mammals involved in the application were taken prior to December 21, 1972;

(5) A statement by the Affiant in the following language:

The foregoing is principally based on the attached exhibits which, to the best of my knowledge and belief, are complete, true and correct. I understand that this affidavit is being submitted for the purpose of inducing the Federal Government to permit the importation of _____ under the Marine Mammal Protection Act of 1972 (16 U.S.C. 1361-1407) and regulations promulgated thereunder, and that any false statements may subject me to the criminal penalties of 18 U.S.C. 1001.

(b) Either one of two exhibits shall be attached to such affidavit, and will contain either:

(1) Records or other available evidence showing that the product consists of or is composed in whole or in part of marine mammals taken prior to December 21, 1972. Such records or other evidentiary material must include information on how, when, where, and by whom the animals were taken, what processing has taken place since taking, and the date and location of such processing; or

(2) A statement from a government agency of the country of origin exercising jurisdiction over marine mammals that any and all such mammals from which the products sought to be imported were derived were taken prior to December 21, 1972.

(c) Bureau agents, or Customs officers, may refuse to clear marine mammals or marine mammal products for importation into the United States, pursuant to § 14.53 of this Subchapter, until the importer can demonstrate, by production of the affidavit referred in above or otherwise, that section 102(e) of the Act applies to all affected items.

(d) This section has no application to any marine mammal or marine mammal product intended to be imported pursuant to §§ 18.21, 18.31 or 18.32 of this part.

Subpart C—General Exceptions

§ 18.21 Actions permitted by international treaty, convention, or agreement.

The Act and these regulations shall not apply to the extent that they are inconsistent with the provisions of any international treaty, convention or agreement, or any statute implementing the same, relating to the taking or importation of marine mammals or marine mammal products, which was existent and in force prior to December 21, 1972, and to which the United States was a party. Specifically, the regulations in Subpart B of this part and the provisions of the Act shall not apply to activities carried out pursuant to the Interim Convention on the Conservation of North Pacific Fur Seals signed in Washington on February 9, 1957, and the Fur Seal Act of 1966, 16 U.S.C. 1151-1187, as, in each case, from time to time amended.

§ 18.22 Taking by State or local government officials.

(a) A State or local government official or employee may take a marine mammal in the course of his duties as an official or employee and no permit shall be required, if such taking:

(1) Is accomplished in a humane manner;

(2) Is for the protection or welfare of such mammal or from the protection of the public health or welfare; and

(3) Includes steps designed to insure return of such mammal, if not killed in the course of such taking, to its natural habitat. In addition, any such official or employee may, incidental to such taking, possess and transport, but not sell or offer for sale, such mammal and use any port, harbor or other place under the jurisdiction of the United States. All steps reasonably practicable under the circumstances shall be taken by any such employee or official to prevent injury or death to the marine mammal as the result of such taking.

(b) Each taking permitted under this Section should be included in a written report, to be submitted to the Director every six months, beginning December 31, 1973. Unless otherwise permitted by the Director, the report shall contain a description of:

(1) The animal involved;

(2) The circumstances requiring the taking;

(3) The method of taking;

(4) The name and official position of the State official or employee involved;

(5) The disposition of the animal, including in cases where the animal has been retained in captivity, a description of the place and means of confinement and the measures taken for its maintenance and care; and

(6) Such other information as the Director may require.

The reports shall be mailed to the Director, Bureau of Sport Fisheries and Wildlife, U.S. Department of the Interior, Washington, D.C. 20240.

§ 18.23 Native exceptions.

(a) *Taking.* Notwithstanding the prohibitions of Subpart B of this Part 18, but subject to the restrictions contained in this section, any Indian, Aleut, or Eskimo who resides on the coast of the North Pacific Ocean or the Arctic Ocean may take any marine mammal without a permit, if such taking is:

(1) By Alaskan Natives who reside in Alaska and such taking is for subsistence, or

(2) For purposes of creating and selling authentic native articles of handicraft and clothing, and

(3) In each case, not accomplished in a wasteful manner.

(b) *Restrictions.* (1) No marine mammal taken for subsistence may be sold or otherwise transferred to any person other than an Alaskan Native or delivered, carried, transported, or shipped in interstate or foreign commerce, unless:

(i) It is being sent by an Alaskan Native directly or through a registered agent to a tannery registered under subsection (c) of this section for the purpose of processing, and will be returned directly or through a registered agent to the Alaskan Native; or

(ii) It is sold or transferred to a registered agent in Alaska for resale or transfer to an Alaskan Native; or

(iii) It is an edible portion and it is sold in an Alaskan native village or town.

(2) No marine mammal taken for purposes of creating and selling authentic native articles of handicraft and clothing may be sold or otherwise transferred to any person other than an Indian, Aleut or Eskimo, or delivered, carried, transported or shipped in interstate or foreign commerce, unless:

(i) It is being sent by an Indian, Aleut or Eskimo directly or through a registered agent to a tannery registered under subsection (c) of this section for the purpose of processing, and will be returned directly or through a registered agent to the Indian, Aleut or Eskimo; or

(ii) It is sold or transferred to a registered agent for resale or transfer to an Indian, Aleut, or Eskimo; or

(iii) It has been first transformed into an authentic native article of handicraft or clothing; or

(iv) It is an edible portion and it is sold (A) in an Alaskan native village or town or (B) to an Alaskan Native for his consumption.

(c) Any tannery, or person who wishes to act as an agent, within the jurisdiction of the United States may apply to the Director for registration as a tan-

nery or an agent which may possess and process marine mammal products for Indians, Aleuts, or Eskimos. The application shall include the following information:

(i) The name and address of the applicant;

(ii) A description of the applicant's procedures for receiving, storing, processing, and shipping materials;

(iii) A proposal for a system of book-keeping and/or inventory segregation by which the applicant could maintain accurate records of marine mammals received from Indians, Aleuts, or Eskimos, pursuant to this section;

(iv) Such other information as the Director may request;

(v) A certification in the following language:

I hereby certify that the foregoing information is complete, true, and correct to the best of my knowledge and belief. I understand that this information is submitted for the purpose of obtaining the benefit of an exception under the Marine Mammal Protection Act of 1972 (16 U.S.C. 1361-1407) and regulations promulgated thereunder, and that any false statement may subject me to the criminal penalties of 18 U.S.C. 1001.

(vi) The signature of the applicant.

The sufficiency of the application shall be determined by the Director, and in that connection, he may waive any requirement for information, or require any elaboration or further information deemed necessary. The registration of a tannery or other agent shall be subject to the conditions as the Director prescribes, which may include, but are not limited to provisions regarding records, inventory segregation, reports, and inspection. The Director may charge a reasonable fee for such applications, including an appropriate apportionment of overhead and administrative expenses of the Department of Interior.

(d) Notwithstanding the preceding provisions of this section, whenever, under the Act, the Secretary determines any species or stock of marine mammals to be depleted, he may prescribe regulations pursuant to section 103 of the Act upon the taking of such marine mammals by any Indian, Aleut, or Eskimo and, after promulgation of such regulations, all takings of such marine mammals by such person shall conform to such regulations.

§ 18.24 Taking incidental to commercial fishing operations.

Persons may take marine mammals incidental to commercial fishing operations until October 21, 1974: *Provided*, That such taking is by means of equipment and techniques prescribed in regulations issued by the Secretary of Commerce. However, any marine mammal taken as an incidental catch may not be retained. It shall be the immediate goal that the incidental kill or incidental serious injury of marine mammals permitted in the course of commercial fishing operations be reduced to insignificant levels approaching a zero mortality and serious injury rate.

§ 18.25 Exempted marine mammals or marine mammal products.

(a) The provisions of the Act and these regulations shall not apply:

(1) To any marine mammal taken before December 21, 1972, or

(2) To any marine mammal product if the marine mammal portion of such product consists solely of a marine mammal taken before such date.

(b) The prohibitions contained in § 18.12(c) paragraphs (3) and (4) shall not apply to marine mammals or marine mammal products imported into the United States before the date on which notice is published in the *FEDERAL REGISTER* of the proposed rulemaking with respect to the designation of the species of stock concerned as depleted or endangered:

(c) Section 18.12(b) shall not apply to articles imported into the United States before the effective date of the foreign law making the taking or sale, as the case may be, of such marine mammals or marine mammal products unlawful.

§ 18.26 Collection of certain dead marine mammal parts.

(a) Any bones, teeth or ivory of any dead marine mammal may be collected from a beach or from land within ¼ of a mile of the ocean. The term "ocean" includes bays and estuaries.

(b) Marine mammal parts so collected may be retained if registered within 30 days with an agent of the National Marine Fisheries Service, or an agent of the Bureau of Sport Fisheries and Wildlife.

(c) Registration shall include (1) the name of the owner, (2) a description of the article to be registered and (3) the date and location of collection.

(d) Title to any marine mammal parts collected under this section is not transferable, unless consented to in writing by the agent referred to in paragraph (b) of this section.

Subpart D—Special Exceptions

§ 18.31 Scientific research permits and public display permits.

The Director may, upon receipt of an application and in accordance with the issuance criteria of this section, issue a permit authorizing the taking and importation of marine mammals for scientific research purposes or for public display.

(a) *Application procedure.* Applications for permits to take and import marine mammals for scientific research purposes or for public display shall be submitted to the Director. Each such application must contain the general information and certification required by § 13.12(a) of this Subchapter plus the following additional information:

(1) A statement of the purpose, date, location and manner of the taking or importation;

(2) A description of the marine mammal or the marine mammal products to be taken or imported, including the species or subspecies involved; the popu-

lation stock, when known, the number of specimens or products (or the weight thereof, where appropriate); and the anticipated age, size, sex, and condition (i.e., whether pregnant or nursing) of the animals involved;

(3) If the marine mammal is to be taken and transported alive, a complete description of the manner of transportation, care and maintenance, including the type, size, and construction of the container or artificial environment; arrangements for feeding and sanitation; a statement of the applicant's qualifications and previous experience in caring for and handling captive marine mammals and a like statement as to the qualifications of any common carrier or agent to be employed to transport the animal; and a written certification of a licensed veterinarian knowledgeable in the field of marine mammals that he has personally reviewed the arrangements for transporting and maintaining the animals and that in his opinion they are adequate to provide for the well-being of the animal;

(4) If the application is for a scientific research permit, a detailed description of the scientific research project or program in which the marine mammal or marine mammal product is to be used including a copy of the research proposal relating to such program or project and the names and addresses of the sponsor or cooperating institution and the scientists involved;

(5) If the application is for a scientific research permit, and if the marine mammal proposed to be taken or imported is listed as an endangered or threatened species or has been designated by the Secretary as depleted, a detailed justification of the need for such a marine mammal, including a discussion of possible alternatives, whether or not under the control of the applicant; and

(6) If the application is for a public display permit, a detailed description of the proposed use to which the marine mammal or marine mammal product is to be put, including the manner, location, and times of display, whether such display is for profit, an estimate of the numbers and types of persons who it is anticipated will benefit for such display, and whether and to what extent the display is connected with educational or scientific programs. There shall also be included a complete description of the enterprise seeking the display permit and its educational, and scientific qualifications, if any.

(b) *Review by Marine Mammal Commission.* Upon receipt of an application the Director shall forward the application to the Marine Mammal Commission together with a request for the recommendations of the Commission and the Committee of Scientific Advisors on Marine Mammals. In order to comply with the time limits provided in these regulations, the Director shall request that such recommendation be submitted within 30 days of receipt of the application by the Commission. If the Commission or the Committee, as the case may

be, does not respond within 30 days from the receipt of such application by the Commission, the Director shall advise the Commission in writing that failure to respond within 45 days from original receipt of the application (or such longer time as the Director may establish) shall be considered as a recommendation from the Commission and the Committee that the permit be issued. The Director may also consult with any other person, institution or agency concerning the application.

(c) *Issuance criteria.* Permits applied for under this section shall be issued, suspended, modified and revoked pursuant to regulations contained in § 18.33. In determining whether to issue a scientific research permit, the Director shall consider whether the proposed taking or importation will be consistent with the policies and purposes of the Act; and whether the granting of the permit is required to further a bona fide and necessary or desirable scientific purpose, taking into account the benefits anticipated to be derived from the scientific research contemplated and the effect of the proposed taking or importation on the population stock and the marine ecosystem. In determining whether to issue a public display permit, the Director shall consider whether the proposed taking or importation will be consistent with the policies and purposes of the Act; whether a substantial public benefit will be gained from the display contemplated, taking into account the manner of the display and the anticipated audience on the one hand, and the effect of the proposed taking or importation on the population stocks of the marine mammal in question and the marine ecosystem on the other; and the applicant's qualifications for the proper care and maintenance of the marine mammal or the marine mammal product, and the adequacy of his facilities.

(d) *Additional Permit Conditions.* In addition to the general conditions set forth in part 13 of this subchapter B, permits issued under this section shall be subject to the following conditions:

(1) Any permit issued under these regulations must be in the possession of the person to whom it is issued (or an agent of such person) during:

(i) The time of the authorized taking or importation;

(ii) The period of any transit of such person or agent which is incidental to such taking or importation; and

(iii) Any other time while any marine mammal taken or imported under such permit is in the possession of such person or agent.

(2) A duplicate copy of the issued permit must be physically attached to the container, package, enclosure, or other means of containment, in which the marine mammal is placed for purposes of storage, transit, supervision, or care.

(e) *Tenure of Permits.* The tenure of permits for scientific research or public display shall be designated on the face of the permit.

§ 18.32 Waiver of the Moratorium [Reserved].

§ 18.33 Procedures for issuance of permits and modification, suspension or revocation thereof.

(a) Whenever application for a permit is received by the director which the director deems sufficient, he shall, as soon as practicable, publish a notice thereof in the FEDERAL REGISTER. Such notice shall set forth a summary of the information contained in such application. Any interested party may, within 20 days after the date of publication of such notice, submit to the director his written data or views with respect to the taking or importation proposed in such application and may request a hearing in connection with the action to be taken thereon.

(b) If the request for a hearing is made within the 30 day period referred to in paragraph (a) of this section, or if the director determines that a hearing would otherwise be advisable, the director may, within 60 days after the date of publication of the notice referred to in paragraph (a) of this section, afford to such requesting party or parties an opportunity for a hearing. Such hearing shall also be open to participation by any interested members of the public. Notice of the date, time, and place of such hearing shall be published in the FEDERAL REGISTER not less than 15 days in advance of such hearing. Any interested person may appear in person or through representatives at the hearing and may submit any relevant material, data, views, comments, arguments, or exhibits. A summary record of the hearing shall be kept.

(c) As soon as practicable but not later than 30 days after the close of the hearing (or if no hearing is held, as soon as practicable after the end of the 30 days succeeding publication of the notice referred to in paragraph (a) of this section the director shall issue or deny issuance of the permit. Notice of the decision of the director shall be published in the FEDERAL REGISTER within 10 days after the date of such issuance or denial. Such notice shall include the date of the issuance or denial and indicate where copies of the permit, if issued, may be obtained.

(d) Any permit shall be subject to modification, suspension, or revocation by the director in whole or in part in accordance with these regulations and the terms of such permits. The permittee shall be given written notice by registered mail, return receipt requested, of any proposed modification, suspension, or revocation. Such notice shall specify:

(1) The action proposed to be taken along with a summary of the reasons therefor;

(2) In accordance with 5 U.S.C. 558, the steps which the permittee may take to demonstrate or achieve compliance with all lawful requirements; and

(3) That the permittee is entitled to a hearing thereon, if a written request for such a hearing is received by the Direc-

tor within 10 days after receipt of the aforesaid notice or such other later date as may be specified in the notice to the permittee. The time and place of the hearing, if requested by the permittee, shall be determined by the director and a written notice thereof given to the permittee by registered mail, return receipt requested, not less than 15 days prior to the date of hearing specified. The director may, in his discretion, allow participation at the hearing by interested

members of the public. The permittee and other parties participating may submit all relevant material, data, views, comments, arguments, and exhibits at the hearing. A summary record shall be kept of any such hearing.

(e) The Director shall make a decision regarding the proposed modification, suspension, or revocation, as soon as practicable after the close of the hearing, or if no hearing is held, as soon as practicable after the close of the 10

day period during which a hearing could have been requested. Notice of the modification, suspension, or revocation shall be published in the FEDERAL REGISTER within 10 days from the date of the Director's decision. In no event shall the proposed action take effect until notice of the Director's decision is published in the FEDERAL REGISTER.

**Subpart E—Depleted Species of Stocks
[Reserved]**

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