

## REPORT OF THE COMMITTEE ON CONSERVATION 1973-74

Traditionally this report has centered on problems and accomplishments in avian conservation within the United States and to some degree, Canada. Last year's report deviated from this by providing a special report on bird conservation problems in Middle America. This year we are again returning to regions of U.S. and Canadian influence. In so doing we will, in some cases, go back 2 years to pick up where the 1971-72 report left off.

### AVIAN CONFLICTS WITH INDUSTRIAL AND POPULATION GROWTH

Many conflicts between maintenance of native bird populations and industrial and human population growth combined with demands for high living standards are readily apparent while others need analysis now while information is still available, that is, before the destructive action. One matter of serious concern is seabird kills by salmon gillnet fisheries, a subject that is presently surfacing. The following discussion of it is preliminary; more complete data are expected in the form of published reports. This committee feels the problem is of such potential magnitude that A.O.U. members should be aware of it.

The Danish salmon gillnet fishery off West Greenland has been responsible for the incidental death of about one-half million Thick-billed Murres and an insignificant number of other seabirds annually. Hunting losses on the Greenland coast account for an additional three-quarter million birds annually. Deaths from natural causes, from oil pollution, and from an unknown amount of hunting on the Newfoundland coast will undoubtedly bring the total kill well above 1.5 million birds, the annual production of this species in the western North Atlantic (Tull et al. 1973, *Nature* 237: 42-44). An agreement between the U.S. and Denmark will curtail Denmark's gillnet salmon catch progressively until 1976, when only an inshore catch of 1100 tons will be permitted.

In the North Pacific, the Japanese salmon gillnet fishery, operating since 1952, could have an even more destructive effect on seabirds, considering three fisheries having a combined annual catch 100 times the Danish West Greenland catch of the last few years. The three Japanese fisheries are: the mothership fishery, operating west of 175° W and north of 46° N; the land-based fishery, operating west of 175° W and south of 46° N; and the coastal fishery, made up of 1380 short-haul vessels, operating off Hokkaido. The relative salmon catches of these three fisheries is on the order of 1:1.34:0.65. The Japanese salmon fishery is restricted to waters west of 175° W by agreement with the U.S.

Data recently collected on U.S. and Japanese research vessels from the mothership area and from an area east of it to 165° W give, for the first time, an estimate of the actual magnitude of the incidental seabird kill from the Japanese salmon gillnet fisheries. Bird kills from the other two areas may be estimated by the relative salmon catch figures for the areas, assuming seabird densities and species' composition are similar.

An estimate of the total kill of seabirds in the mothership area may be made by calculating the bird mortality per length of gillnet set by research vessels, multiplied by the total length of gillnets set by the 369 catcher-boats of the Japanese mothership fishery. About 2900 miles of nets are set and retrieved daily during the ca. 65-day fishing season. The estimated annual mortality in the mothership area as calculated above is from 75,000 to 250,000 birds. The lower figure is based on data from 10 cruises west of 175° W. The higher figure is based on data from 20 cruises, including those in the first figure, west of 165° W. Assuming similar seabird densities in the areas of the land-based and coastal fisheries, the estimated annual mortality is between 214,500 and 715,000 birds. Data from Japanese research vessels have shown bird catch rates per unit length of gillnet set are similar to the higher estimate from U.S. vessels. It must be stressed that seabird densities are not known to be similar for the three areas in question, so that projection of bird kill figures from one area to all three is highly speculative.

In the mothership area and adjacent seas to the east, in addition to murre (58% of birds killed), significant numbers of shearwaters (27%), puffins (9%), and fulmars (5%) are killed, as are lesser numbers of small alcids, albatrosses, and storm-petrels. The murre and puffins taken in the mothership area are of U.S. and Russian origin, while the shearwaters come from New Zealand, Australia, and Chile. In the coastal fishery area Japanese and Russian alcids are taken. Our knowledge of the populations of the species comprising the bulk of the kill that has been taking place for 20 years is still insufficient to suggest whether their annual reproduction can tolerate such losses. Prohibition of fishing within 100 miles of North Pacific seabird breeding islands would help to decrease losses of alcids of U.S. origin, but would not help the shearwaters from the Southern Hemisphere.

Data and calculations on the gillnet kills were obtained through the cooperation of F. Fukuhara, G. A. Sanger, and R. Bakkala, National Marine Fisheries Service, Northwest Fisheries Center, Seattle, Washington.

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The problem of seabird kills from oil spills can be expected to become more critical. Alaska in particular needs more attention. James G. King summed this up in the winter 1973 issue of "Alaska Conservation Review" as follows: "The indications are that the discovery of large amounts of oil on the continental shelf of Alaska is just a matter of time. Oil production and transportation means oil on the water. . . . We now have perhaps our last chance to describe the nearly pristine North Pacific avifauna before the advent of intensive oil activity." Alaskan biologists have for several years been pointing out the magnitude and fragile nature of their state's seabird colonies, but to date no government-sponsored program has appeared to quantify or monitor this resource effectively, despite obligations under the Migratory Bird Treaty Act and National Environmental Policy Act. To help meet this deficiency, the Pacific Sea Bird Group was recently formed. This organization is working toward coordination and development of standard techniques and

reporting formats for seabird colony censuses, pelagic observations, and beached bird surveys along the Pacific coast. Anyone wishing to join the group or wanting information should contact George J. Divoky, 1412 Airport Way, Fairbanks, Alaska 99701. The work of this group is of course particularly timely not only from the standpoint of future oil discoveries, but also in view of the transport by sea of the Alaska pipeline oil from Valdez. The question of how much mortality Alaskan seabirds can sustain from the combined effects of fish nets and oil spills and still maintain their numbers must be dealt with now.

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The Pacific Sea Bird Group, in their Policy Statement No. 1 of 1 May 1974, also brings to our attention a critical situation in the Gulf of California where Mexico is not protecting its island nesting colonies of storm-petrels, pelicans, cormorants, boobies, frigatebirds, gulls, terns, tropicbirds, and alcid from an increase in tourism, educational cruises, boating, and other human disturbances. Oil pollution from a proposed deepwater port and pipeline and increasing pollution from agricultural chemicals are also considerations in this area.

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While the need for adequate population monitoring of seabirds is especially critical, a similar need is apparent for other groups. The U.S. Fish and Wildlife Service and Canadian Wildlife Service breeding bird surveys are beginning to provide some interesting data on common and widely distributed species, but they do not provide adequate data on specialized species or subspecies of limited or localized distribution such as some of the raptors, White-faced Ibis, Upland Sandpiper, and western subspecies of the Snowy Plover, Long-billed Curlew, and Yellow-billed Cuckoo. Such birds may be slipping away as environments deteriorate without our being aware. The kind of inventory effort now being directed to waterfowl and other game species needs to be applied to many other bird groups.

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A highly controversial issue between conservationists, scientists, and industrial interests developed over control efforts, if any, to be directed against the Douglas fir tussock moth (*Orgia pseudotsuga*) on several hundred thousand acres of national forest, state, Bureau of Indian Affairs, and private timberlands in northeastern Oregon, southeastern Washington, and Idaho. Defoliation caused by the moth was dramatic. Industry, the U.S. Forest Service, and regional political figures mounted a strong pro-DDT campaign based on alleged economic losses to be sustained if DDT was not used. The matter became a political issue, and evidence presented at hearings and elsewhere that materials other than DDT could be used effectively was discarded. After turning this DDT proposal down for 1973, the Environmental Protection Agency granted approval for emergency use of DDT here in 1974. Between 9 June and 25 July, over 420,000 acres were treated at an application rate of  $\frac{3}{4}$  pound of DDT per

acre. The effect of this massive application of DDT on birds and other fauna is being studied, but results were incomplete at the time of this writing. The last major use of DDT on western public lands was in 1965.

It is ironic that about the same time this decision was announced, approximately 25 falcon specialists were assembled at Greenwich, Connecticut, to discuss future actions on behalf of the Peregrine Falcon. The consensus of this group was that reintroductions of Peregrine Falcons to the wild on an operational basis would be futile until such time as concentrations of pesticides such as DDT in the environment were substantially lower. The approved use of DDT for the tussock moth does not provide the much needed example to Latin American countries that continue to use it on a large scale.

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Controversy continues over the future of four islands off the coast of Puerto Rico. A portion of Culebra Island, long a U.S. Navy bombing range, is sought for full civilian use. Without human disturbance, seabird colonies on this island have flourished. The future of the colonies is in question if public access and development occurs. Mona Island, proposed for a superport earlier in the year, now appears safe from that threat, but Mona and its satellite island, Monito, and nearby Desecheo, are proposed as replacements for Culebra as target areas. Both Mona and Monito should be national wildlife refuges. Together they support some endemics. One of special concern is the Mona Island Yellow-shouldered Blackbird (*Agelaius xanthomus monensis*). They also support substantial nesting colonies of Red-footed Boobies and Magnificent Frigatebirds. Desecheo has suffered disturbance of its seabird colonies by introduced monkeys, and thus has the least to lose from bombing.

#### FEDERAL LEGISLATIVE AND REGULATORY ACTIONS

The National Environmental Policy Act of 1969 is proving to be the most significant piece of U.S. conservation legislation to be enacted. Federally funded projects that would have significant impacts on the environment are undergoing reviews, and must be accompanied by environmental impact statements. The effect of alternative management plans, including maintaining a status quo, are assessed in the light of aesthetic, economic, natural, scientific, environmental, and other human values. Environmental impact statements, when adequate, clearly expose the consequences of contemplated actions upon birds and other wildlife. Some statements have been inadequate, in part for lack of input from the scientific community, in part because the agencies themselves or the contractors preparing the statements lack expertise. Fortunately, increasing numbers of agencies are becoming aware of the environmental consequences of their actions because of this law, and are hiring professionals in various disciplines to prepare statements and assess those of others. Alternative actions to those that would cause the greatest environmental damage are often selected over initial proposals. Merely the need to go through the process and expose a project's environmental con-

sequences keeps some projects from the proposal stage. Consequently, there are those, both in and out of government, who would like to scuttle the Act, and who see, with the energy crisis, an opportunity to do so. The National Environmental Policy Act must have public participation to function. Members of the A.O.U. are urged to participate in the process of public review of draft statements that pertain to their areas of knowledge.

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A broadened and more effective Endangered Species Act became law (PL 93-205) on 28 December 1973. It is an extension of the Endangered Species Acts of 1966 and 1969, which provided official recognition of the irreversibility of extinction.

The new law calls for a combined list of native and foreign species under two, instead of one, degrees of threat. One, called "endangered," means threatened with extinction. The second category, called "threatened," means threatened with endangerment. The new law further refines the listing process by providing for listing by any geographical area so long as it constitutes a significant part of an animal's range. This allows recognition of an endangered or threatened population regardless of the status of the animal elsewhere.

The listing process requires a complicated, formal, time-consuming review by affected and learned organizations, agencies, governments, and scientists, and must go through the "Federal Register" two or more times. It encourages petitions for listing or delisting from any party or interest, and requires such petitions to be acted upon if substantial, supportive evidence is presented.

All federal agencies and any project that is federally funded are subject to Section 7 of this law, which is perhaps its strongest and most significant part. Section 7 prohibits any federal action that would have an adverse impact on critical habitat of any listed species. It directs federal agencies to utilize their resources to benefit listed species. Still another important feature of the law relates to federal cooperation with the states. It provides incentives for cooperative agreements with the states for programs to benefit endangered and threatened species. To qualify for a cooperative agreement, a state must have an adequate endangered species program of its own and legal authority to regulate such species. Most states are consequently engaged in preparing and enacting endangered species laws of their own. Some already have such laws, but many of these are not adequate.

The new law, like any far-reaching action, is beset with problems in interpretation and will take several years to implement fully. Neither federal nor state agencies are adequately staffed or funded to handle it.

Its provisions for public scrutiny extend even to scientific permits. Projects involving marking, taking, etc., of endangered or threatened species for scientific or propagative purposes must be outlined in the "Federal Register" followed by a 30-day waiting period for public review. This has already caused a year's delay in some needed research programs dealing with annual reproductive cycles.

No new species have been added to the list of endangered species, and no

species have been listed as threatened under the new law. Agencies responsible for this are just "tooling up." No procedure for the systematic review of taxa of even native U.S. species and populations that might be endangered or threatened has been proposed. The review process to date has centered on emotion-ridden or glamor species that receive widespread publicity.

Still on the interpretative side, it is going to be interesting to see to what degree Section 7 of the Act relating to actions by federal agencies that adversely affect endangered and threatened species is enforced and how critical habitats are defined. As the new law applies to officially listed endangered or threatened animals and plants of any phylum at a population level, many proposed construction projects, including energy projects, can be expected to affect one or more taxa. This new law could become as important to conservation as the National Environmental Policy Act, but not until taxa and populations that are endangered or threatened are listed.

The Lacey Act is one of the oldest conservation laws in the United States. Among its provisions is one to protect humans and certain resources of the United States from injury caused by imported vertebrates, molluscs, or crustaceans by regulating the importation of species deemed injurious. This provision has not been effective by regulation. Species can be imported until an injury the act intended to prevent has occurred. Such species have then been placed on a so-called "dirty" or "injurious species" list and further importations have been subject to regulation after such species may have escaped and become a problem.

On 20 December 1973 the Department of the Interior proposed in the "Federal Register" 38 (244): 34969-76 that the importation of all species, other than those on a so-called "clean list," would require a permit that could be issued for scientific, educational, zoological, or medical purposes. This proposal is being strongly opposed by the pet industry. The problems that have resulted from escaped or purposely released alien species are well-known.

A second try at proposed federal regulations to handle falconry appeared in the 4 April 1974, issue of the "Federal Register" 39 (66): 12413-17. Modification of the appendix to the Migratory Bird Treaty with Mexico, effected 10 March 1972, placed raptorial birds under federal jurisdiction. The practice of falconry in these days of raptorial shortages is a controversial subject, especially in California and British Columbia. The proposed regulations are still under review, and regulations as finally adopted should be out when this goes to press. Individual states can, of course, provide more restrictive regulations than the Federal Government.

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Waterfowl losses from lead shot ingested while feeding in heavily hunted wetlands are well established, and it is generally accepted that lead poisoning, both lethal and sublethal, is a drain on waterfowl, though not adequately quantified. Experiments that started in 1950 have convinced the U.S. Fish and Wildlife Service that soft steel, while not totally satisfactory, should be sub-

stituted for lead for waterfowling. Since the hunting season of 1972-73, hunters have used steel shot experimentally on selected public hunting grounds, and during the 1974-75 season this will be extended to 26 areas. The USFWS published a Draft Environmental Statement (DES 74-76) on 19 July 1974, proposing a gradual phase in of steel shot and phase out of lead for waterfowl hunting. It suggests steel shot or other approved pellets be mandatory for waterfowl hunting in the Atlantic Flyway starting in 1976, the Mississippi Flyway in 1977, and the two western flyways in 1978.

Steel shot does not have the penetration power of lead at ranges beyond 40 or 45 yards. Ammunition manufacturers have promoted their products on claims of long-range killing power—a trend that must be reversed with steel shot and should never have been condoned anyway because of high crippling losses at such ranges from poor pattern density. Steel shot may damage the barrels of pre-1945 and some foreign shotguns. This shot is presently available in 12 gauge only, and is more expensive than lead. Ammunition manufacturers appear “cool” to steel. Some state wildlife departments such as Maryland support the use of steel, others such as California oppose it. As crippling losses can be higher with steel shot and lead poisoning is serious only in places where shot does not sink into the soil, it has been asked why the USFWS did not consider using steel shot only in those regions where lead poisoning is a problem.

#### CANADIAN LEGISLATIVE AND REGULATORY ACTIONS

The Senate and House of Commons of Canada enacted the “Canada Wildlife Act,” 27 July 1973. It provides that the Minister of the Department of Environment (a) undertake, promote, or recommend measures for the encouragement of public cooperation in wildlife conservation and interpretation; (b) initiate conferences and meetings respecting wildlife research, conservation, and interpretation, (c) undertake programs for wildlife research and establish and maintain laboratories; (d) establish advisory committees; and (e) coordinate and implement wildlife policies and programs in cooperation with provincial governments. Wildlife is defined as any nondomestic animal.

Section 9 of the Act concerns endangered wildlife. The Federal Government may, in cooperation with one or more provincial governments having an interest therein, take such measures as the Minister deems necessary for the protection of any species of nondomestic animal in danger of extinction.

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As a result of instructions from the Cabinet, Canada has formed an Interdepartmental Committee on the Environment for implementation of a federal environment assessment, review, and protection process. The Minister of the Environment is required to ensure that projects, procedures, and activities in which the Government of Canada has an interest are subject to environmental assessment and that the findings of such assessments result in designs and procedures that will protect or enhance the natural environment. The

Minister will also establish a procedure for cooperation with provinces in undertaking assessments on projects of mutual concern. The Federal Government has accepted the "polluter pays" principle as the basis for its pollution control programs. Application of this principle to environmental assessments requires the government to recover environmental assessment expenditures made in support of industrial projects in which the Federal Government has an interest, and to apportion among federal departments and agencies residual expenditures incurred on their behalf.

#### INTERNATIONAL ACTIVITIES

An international agreement designated as "The Convention on International Trade in Endangered Species of Wild Fauna and Flora," held in Washington, D.C. in March 1973 was perhaps the biggest step taken on behalf of the world's wildlife. Approximately 80 nations participated; the agreement has been signed by 43 and can go into effect 90 days after ratification by the tenth nation. This is expected to occur sometime in 1975. The U.S. was first to ratify it, and Canada is expected to ratify it in 1975 following consultation with the provinces. The Convention will completely restrict commercial trade among participating nations in critically endangered species and products derived from them. Less threatened species carry various trade restrictions. Appendix A of the Convention lists 113 species of birds to be kept out of all international trade.

#### STATE LEGISLATION AND PROJECTS

Some state game departments are finally becoming wildlife departments and are undertaking responsibilities for all forms of wildlife instead of confining activities to game species. California, Texas, New Jersey, Wisconsin, and Washington are among those states that are making substantial progress. Before states can undertake more nongame work, legislatures must provide funds from other than hunting and fishing license monies. Most have failed to do this. Federal funding for endangered species authorized by the new Endangered Species Act for states that can provide matching funds and have adequate endangered species programs may prove to be an incentive to state legislatures to break precedent and provide general funds for nongame species.

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Few states have undergone more degradation of the natural landscape than Florida, and it is here fortunately that the state's natural scientists are engaged in a cooperative effort to inventory, define, and list plants, animals, and habitats for which there is concern. The inventory was inspired by the Florida Defenders of the Environment, and is headed by a coordinating committee composed of chairmen of seven committees representing major taxa. The committee on birds, chaired by Herbert W. Kale, has identified 68 species of birds needing special treatment; 10 of these are considered en-



dangered. Scientists in other states are undertaking similar actions but not on this scale. With more state legislation to protect endangered species and their habitats, such as California's, these projects will go well beyond just identifying those species needing help.

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In January 1974 California enacted legislation designed to eliminate wildlife losses posed by many open oil sumps in oil-producing areas; these number 1600 in a nine-county area in the San Joaquin Valley alone. The National Audubon Society estimated that 100,000 birds/year became mired and died in the state in oil-water mixtures to which they were attracted.

#### HABITAT PRESERVATION

Funding restrictions reduced U.S. Government acquisition of wildlife habitat below original plans, but notable progress has been made. New national wildlife refuges were established and older ones added to. Included were the first purchases for four major new refuges on estuaries of the Pacific coast: the San Francisco Bay Refuge ultimately to include 23,000 acres and the Humboldt Bay Refuge ultimately to include 7800 acres, both in California; the Lewis and Clark Refuge at the mouth of the Columbia River in Oregon ultimately to include 10,000 acres; and the Nisqually Refuge at the southeastern corner of Puget Sound in Washington ultimately to include 3800 acres.

In the prairie states approximately 130,000 acres of small wetlands were purchased or leased by the Fish and Wildlife Service as Waterfowl Production Areas during fiscal years 1973 and 1974. During this same period, the Service purchased its first lands on the main islands of Hawaii for endangered Hawaiian waterbirds. Over 1000 acres were obtained on Kauai, a significant amount by Hawaiian standards. In Texas the Attwater's Prairie Chicken National Wildlife Refuge, which was initiated by the World Wildlife Fund, was established. It will include about 10,000 acres of the best remaining habitat for this endangered subspecies, but will not in itself restore this bird to nonendangered status because numerous small tracts of habitat on private lands in over a dozen counties are still in jeopardy. During fiscal years 1973 and 1974, the U.S. Fish and Wildlife Service acquired by purchase or lease about 200,000 acres of land at a cost of about \$28,000,000 for ducks and geese, endangered species, and wildlife oriented recreation. Unfortunately no source of funds is readily available to purchase or save much needed habitat for nonendangered, nongame wildlife.

The National Wildlife Refuge System now includes 356 refuges covering 30.7 million acres and over one million acres in small wetlands in the prairie states known as Waterfowl Production Areas. Although the rate of growth of federal, state, and private purchases is impressive, additions have not offset losses and many key ecosystems and wildlife habitats remain in jeopardy. Examples include some of the remaining native Hawaiian forest types, which contain a number of endangered birds.

Held up by a jurisdictional dispute is the proposed transfer of numerous offshore California rocks from the Bureau of Land Management to the U.S. Fish and Wildlife Service for refuge purposes. The proposal, several years in the making, was published in the 4 January 1974, issue of the "Federal Register" 39 (3): 1080. But the State of California has requested the rocks be transferred to the state, and oil and mining interests have objected to the refuge proposal; a stalemate now exists. The rocks have outstanding colonies of murrelets, cormorants, and storm-petrels. Similar offshore rocks along the Oregon and Washington coasts have been national wildlife refuges for years.

Private conservation organizations are becoming increasingly effective in preserving key tracts of habitat. For example, the National Audubon Society has acquired 700 acres along 3 miles of the Platte River in Nebraska within a vital Sandhill Crane staging area. Although protecting only a small portion of over 60 river miles used by the cranes, this "foot in the door" approach will hopefully lead to preservation of more of this area. The proposed national wildlife refuge in the same area is stalled for the moment awaiting some necessary approvals. The same area is the only major stopping place for Whooping Cranes between the Aransas Refuge in Texas and Canada.

Inclusion of an area into the National Wildlife Refuge System does not assure its continued viability. An important western waterfowl area, the Stillwater Wildlife Management Area in western Nevada, a joint federal-state project and adjoining Carson Lake have been left nearly dry. Beginning in 1949 over \$1,000,000 was spent developing and restoring the Stillwater Area, which has supported major populations of Whistling Swans, Redheads, Canvasbacks, Avocets, Black-necked Stilts, White-faced Ibis, and associated waterbirds. Now because of commitments of water to irrigation, the Pyramid Lake Indians, and other areas, the once promising Stillwater Area and Carson Lake remain nearly dry. As a result the 3000-pair White-faced Ibis rookery that thrived here in 1973 was nonexistent in 1974. The only other major western rookery of this species is in the Great Salt Lake area.

Progress toward establishing refuges or otherwise preserving habitat in the Trust Territories of the Pacific Islands is occurring after years of delay. The U.S. Fish and Wildlife Service has assigned an individual to look into endangered species identification and preservation there. In 1974 Rose Island, a coral atoll in American Samoa, and Baker, Howland, and Jarvis Islands, totaling about 1740 acres in the Central Pacific, became National Wildlife Refuges.

An excellent example of progress at the state level is a situation that developed in Washington several months ago. Protection Island on the Washington coast contains a Rhinoceros Auklet colony of 18,000 birds, the largest along the Oregon or Washington coasts. The island was recently subdivided into lots for homes, and it appeared the colony was doomed. With help of The Nature Conservancy, 54 acres representing 60% of the colony were purchased for \$250,000 by the Washington Department of Game. Even the U.S. Fish and Wildlife Service would have difficulty making such a purchase

because its funding has been limited largely to migratory game birds, endangered species, and projects specifically authorized and funded by Congress.

Critical decisions will soon be made regarding dispositions of vast acreages of land in Alaska under the Native Claims Act. The final outcome of this could have major continental impacts on birds. The Act allows Alaskan natives to select 40 million acres of federal land in Alaska by December 1975. It also directs the Secretary of the Interior to study up to 80 million acres of "national interest lands" for possible inclusion in the National Park, Forest, Wildlife Refuge, and Wild and Scenic Rivers Systems. Final decisions on additions to these systems rest with Congress. On 17 December 1973, Secretary of the Interior Rogers C. B. Morton sent his proposal to Congress. It would add approximately 32 million acres each to the National Park and National Wildlife Refuge systems and nearly 20 million acres to the National Forest System. This would double acreages in the Park and Refuge Systems, and remove these lands from existing Bureau of Land Management administration. It would thus help secure them from other than well-planned commercial uses and preserve their natural values.

Although this sounds commendable, we take special note of the fact that Secretary Morton proposes some important pieces of waterfowl habitat go into national forests rather than wildlife refuges and parks as originally planned by his staff. This includes about 8.2 million acres in the Upper Yukon and Koyukok River drainages first scheduled for the refuge system. Waterfowl habitat originally to have gone to the National Park Service includes an area in the Upper Copper River. Inclusion of these habitats in national forests subjects them to mining, lumbering, and hydroelectric power developments. Hopefully Congress will see fit to modify Morton's proposal to protect these vital areas as wildlife refuges and parks.

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A Canadian Wildlife Service program, initiated in 1966 to preserve endangered migratory bird habitat across Canada, has established 24 National Wildlife Areas totaling 37,000 acres in 7 provinces. This program is aimed at rescuing from agricultural drainage wetlands that are of particular value to waterfowl. Some of the areas are breeding habitat, others staging habitat, and still others coastal wintering habitat. This program appears to be much like the National Wildlife Refuge program of the United States.

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The committee regrets space limitations prevent reporting on many other bird conservation problems and projects that were brought to its attention.

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