

THE ELEPAIO

Journal of the
Hawaii Audubon Society



For the Better Protection
of Wildlife in Hawaii

VOLUME 32, NUMBER 1

JULY 1971

ENDANGERED SPECIES LISTS, RARITY, AND EXTINCTION *

By Harry A. Goodwin and Eley P. Denson, Jr.

FEDERAL LEGISLATION TO PROTECT endangered species of native fish and wildlife was enacted in 1966. New legislation designed to help protect endangered species in foreign countries, by making importations illegal, was passed in 1969. These two acts, most of whose features combined are known as the Endangered Species Conservation Act of 1969, plus the prohibition by laws antedating 1966 of the importation of any wildlife taken illegally in other countries, may be looked upon as examples that must be followed by most other nations if a large number of kinds of wildlife are to survive in the world of tomorrow.

This legislation on the part of the United States fortunately has attracted much publicity, and at the same time has raised many questions. We would like to express our views on the questions asked most commonly.

What are the endangered species lists?

The Secretary of the Interior is required by the Endangered Species Conservation Act to publish two lists of species of wildlife in danger of extinction, and to review and update them periodically. Responsibility for preparing these lists has been assigned to the Office of Endangered Species in the Fish and Wildlife Service.

The first list, covering only native fish and wildlife which are in danger of extinction in the United States, was issued initially in 1967. One hundred and one species or subspecies were on the latest edition of this list, issued October 13, 1970. The second list, required by the 1969 legislation, covers foreign species threatened with worldwide extinction, and was first issued on June 2, 1970. The only species native to the United States on the second list are those which we share with other countries, because the main purpose of this list is to designate species which cannot be imported.

What is an endangered species?

The Fish and Wildlife Service has adopted the definition: "An endangered species or subspecies is one whose prospects of survival and reproduction in the wild are jeopardized. Its peril may result from one or many causes--loss of habitat, environmental degradation, overexploitation, predation, competition, or disease." It is in danger of becoming extinct.

Numbers per se are not a part of the definition of "endangered." Being endangered is not always synonymous with being rare. Black-footed ferrets probably were always scarce throughout their range, but they were not endangered before the West was settled. Tule elk are rare, but the few herds are too widely separated

* Reprinted from the ATLANTIC NATURALIST, Spring 1971, Volume 26, Number 1, pages 3-6, by special permission from the Audubon Naturalist Society.

to be eliminated by disease or natural disaster, and under the State of California's competent management they are unlikely to become extinct. Brown pelicans are still relatively common on the California coast, because the adults are long-lived, but they are endangered because pesticides have prevented them from successfully rearing young for several years. In the spring of 1969, wildlife agencies in nine southern States estimated their alligator populations to be at least 230,000, and possibly even as many as 540,000. Hardly a rare animal--yet it was believed to be endangered at that time because of the rate at which it was being decimated by poachers.

How does an animal become listed?

The views of national and international conservation organizations, State and foreign fish and wildlife managing agencies, trade organizations, and individual scientists are sought in making up the lists. Their recommendations are reviewed and evaluated by specialists most familiar with the respective species. Suggestions from the public are welcome, but all too often well-meaning persons urge the inclusion of species without supplying data to support their recommendations. Such suggestions often cite popular newspaper and magazine articles that cannot be considered as sources of reliable data. Letters without substantiating factual data use up scarce manpower and time available for constructive work on endangered species. Rational decisions on the endangered lists must be based on data, not on popular vote and emotion.

What causes extinction?

Extinction is a natural process which has been occurring for billions of years. Hundreds of thousands of species which once roamed the earth are gone. We do not know why many of these species disappeared. But today, man's rapidly growing population and his activities and technology threaten many species whose future a few decades ago seemed secure. Fisher, Simon, and Vincent in *WILDLIFE IN DANGER* (Viking Press, 1969) describe how the rate of extinction has accelerated since about 1600.

Man has affected wildlife adversely in many ways, mostly unintentionally. Arctic foxes, introduced by trappers onto the Aleutian Islands, almost wiped out the Aleutian Canada geese. Birds imported into the Hawaiian Islands carried avian malaria and resultant extinction to several native species. Plains wolves were trapped, poisoned, and shot out of existence in the 1920's because they preyed on livestock. Destruction of forest habitat caused extinction of the Maue parakeet in Puerto Rico, and contributed to the demise of the passenger pigeon, Carolina parakeet, and ivory-billed woodpecker in the United States. Wells sunk to provide irrigation water will result in lowered water tables in the dry Southwest, and could mean the end for a number of species of fish found only in small desert springs. Pesticides seriously threaten several kinds of birds, such as the brown pelican, peregrine falcon, and bald eagle.

What legal protection is there for endangered species in this country?

Over 25 native endangered species are protected on national wildlife refuges, and several other endangered animals are found in national parks. Lands are being acquired for others.

Most native endangered species are protected from hunting or trapping by State laws dealing with the management of fish and wildlife. A few States have passed laws specifically protecting creatures which are endangered within their boundaries, but that may be relatively safe in some other States. Poaching seriously affects a few species. It is a Federal offense to transport or sell in interstate commerce fish and wildlife taken contrary to State or foreign law. The majority of endangered birds are migratory species protected by Federal law; however, Congress wrote into endangered species legislation that designation as an "endangered" species does not provide automatic total Federal protection for resident fish and wildlife.

Would more laws help or be effective?

A common belief seems to be that if laws were passed which would prevent sportsmen from shooting animals, or prevent furriers from using their skins, that the majority of our wildlife would then automatically be safe from extinction. Nothing could be further from the truth. Very few of the endangered species are sought by sportsmen, or are of interest to furriers.

The future of the Indian tiger, or our own mountain lion, would not be assured, even if trophy hunting were stopped forever, if fur coats and rugs went completely out of fashion, or if government programs to reduce damage by predators were abandoned.

In the "developing" countries, wildlife and rapidly expanding human populations often conflict seriously. Elephants and buffalo flatten crops. Lions, leopards, and tigers prey upon livestock and sometimes humans. Leaders of developing countries often remark that the needs of people must be met before those of wildlife. You can hear the same argument in this country from Chambers of Commerce, and engineers advocating big reservoirs that would wipe out winter range for big game, etc. Under such circumstances, it is small wonder that some tribesmen and native villagers tend to regard wildlife as a nuisance or actual threat, to be eliminated if possible.

Before a species will be saved, there must be general agreement that it is desirable to do so. Each wolf cannot have a game warden to protect it. There are people, both in this country and abroad, who are disinterested in, or actually opposed to, preserving wildlife, particularly large predators. We know ranchers who favor removal of all coyotes or eagles from their livestock ranges. Even woodpeckers, squirrels, and mockingbirds are regarded as pests by some. An editor of a large national magazine with whom we discussed the subject was incredulous that over 5,000 people were sufficiently concerned to write to the Department of the Interior advocating protection for wolves following airing of the television program, "The Wolf Men," in November, 1969. An acquaintance of ours remarked, "If there are 1,000 wolves in Minnesota, that is 1,000 too many." Another held that elimination of bald eagles would be an acceptable result of the use of DDT if it meant the saving of a single human life.

In the face of public opposition, Prohibition (the Volstead Act) was unenforceable, and laws to protect wildlife are also futile without public support. Sentimental pleas, especially from outsiders, carry little weight, for instance, with persons farming on a subsistence level, or even with many fairly well-to-do individuals! The pleas may even be resented.

If we cannot curb the traffic in drugs, how can we expect that any law will prevent ranchers from setting out traps and poisons on the western plains? Would a prohibition by the United States against its citizens hunting overseas dissuade an Indian villager from dosing a bullock carcass with insecticide in order to kill a tiger that feeds on his stock? Would a ban on the importation of zebra skins persuade an African stockman to manage a herd of zebra in order to have a regular supply of meat and hides, or would it encourage him to replace zebras with cattle? Game departments in developing countries responsible for overall management of wildlife derive most of their revenue from fees paid by visiting hunters, and receive little if any of the substantial expenditures made by tourists who visit only parks. If use of wild animals were to be prohibited, who would pay salaries of personnel needed to manage wildlife, if it is to survive outside of parks? Would there be any economic incentive for landowners to maintain wildlife outside of parks.

What is needed?

Most people are motivated by what they believe to be their own best interest. A wildlife species with a tangible value to man stands a better chance of survival. Well-being of society is produced by both tangible and intangible values. The full responsibility for conservation on private lands must be lifted from the individual landowner and/or manager, who can be forced by economic considerations to eliminate wildlife and/or its habitat. Society must share the responsibility, since society profits.

The National Environmental Policy Act, and other recent legislation, indicate we are on the way to what Aldo Leopold wrote of so long ago--a national land ethic. This important Act may well form an environmental "Bill of Rights." In it, the Congress recognizes that "...each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment." Not until this joint, total responsibility is fully recognized and accepted world-wide will there be hope for a better environment and for saving endangered wildlife.

Are you concerned about Hawaii's ecosystem? Others are.

NEW HAMPSHIRE AUDUBON NEWS, Volume 5, No. 4, December 1970, page 3:

More Endangered Species:

The Department of Interior added documentation recently to what wild animals already know--the environment is deteriorating. The Department announced that three more mammals, eight more birds, and eleven more fish are now threatened with extinction in the United States.

These latest additions bring the Department's endangered species list to a record total of 101 species: fourteen mammals, fifty birds, seven reptiles and amphibians, and thirty fish....

Several species now being added to the list are birds of the Hawaiian Islands, where habitat is being lost at a rapid rate. Loss of habitat has also forced several fish species onto the endangered list.

The additions are as follows: MAMMALS: 1. Hawaiian hoary bat, 2. Morro Bay kangaroo bat, 3. Salt marsh-harvest mouse; BIRDS: 1. Brown pelican, 2. Arctic peregrine falcon, 3. California clapper rail, 4. Large Kauai thrush, 5. Molokai thrush, 6. Hawaii 'akepa, 7. Maui 'akepa, 8. Oahu creeper; FISH: 1. Lahontan cutthroat trout, 2. Mohave chub, 3. Pahrnagat bonytail, 4. Woundfin, 5. Kendall Warm Springs dace, 6. Tecopa pupfish, 7. Warm Springs pupfish, 8. Pecos gambusia, 9. Unarmored threspine stickleback, 10. Fountain darter, 11. Watercress darter.

Contributors: Mrs. Donald P. Russell &
Miriam N. Davis

ORYX, Volume X, No. 6, December 1970, page 349: Tackling Hawaii's Problems

"The list of native species threatened with extinction in Hawaii includes all the mammals, all freshwater fishes, half the land molluscs, a quarter of the insects and of the ferns, 300 species of flowering plants and 36 per cent of the birds; another 36 per cent have already been exterminated." This appalling catalogue comes from the IUCN /International Union for Conservation of Nature/ Bulletin, reporting a Smithsonian Institution Colloquium held in Washington last May to focus attention on the situation. The island's native animals and plants are among the world's unique, most diversified and scientifically significant. The major destructive factor is, of course (where is it not?), the destruction of habitat, especially the few remaining virgin forests, by land development, building and commercial forestry. Hawaii also has several of the other classic causes of wildlife decline: introduction of exotic species, pesticides and pollution. And the remedies are equally classic: reserves to protect the wildlife, research to provide the facts for sound management, planning to avoid irreversible damage, control over the import of exotics and, last but far from least, education. A major meeting in Hawaii was planned for December to bring together those involved in the task of saving Hawaii's wildlife and to hammer away at getting done some of the vital things that everybody has known for years ought to be done.

HONOLULU STAR-BULLETIN, 19 October 1970, page D-20: Rare Wildlife Added to List: Isle Bat, 5 Birds Endangered by Helen Altonn

The Hawaiian bat and five native Island birds have been added to the "red

book"--as biologists call the U.S. Interior Department's list of rare and endangered wildlife.

But the inclusion of the six species in the new list isn't as ominous as it may seem, according to Paul Breese, wildlife chief of the State Fish and Game Division.

The five birds are the large Kauai thrush, the Molokai thrush, the Hawaii 'akepa, the Maui 'akepa and the Oahu creeper.

Breese said the two 'akepa have long been rare and endangered but somehow were overlooked when previous lists were submitted to the Interior Department.

He said the Molokai thrush is merely changing categories--from extinct to rare and endangered. It had been considered lost, because the last one seen was in 1936. However, Noah Pekelo, Jr., a fish and game warden, spotted three of the birds in the Molokai mountains a few years ago.

The status of the other two birds--the Kauai thrush and the creeper--was changed on the basis of the criteria for the endangered list rather than a difference in their numbers, Breese said.

He said the Hawaiian bat was included in the updating of the list largely because of fewer sightings by Quentin Tomich, a specialist on mammals with the Health Department at Honokaa on the Big Island. However, Breese commented, "It's very difficult to measure the change in the population because there are so few of them to measure."

The Hawaiian bat (called 'Ope'ape'a) is a subspecies of the hoary (snowy) bat which lives in western North America and it is possibly the rarest bat in the world. It is the only land mammal which arrived in Hawaii under its own power. Scientists have described the flight as "probably the most remarkable mammalian flight of all time."

The Interior Department, in releasing the latest list of rare and endangered species, commented on the "swift deterioration" of Hawaii's environment.

Breese said the list now totals 23 extinct birds (one less than before with the removal of the Molokai thrush) and 29 rare and endangered species. He pointed out, however, that most of the extinct birds were gone by the middle of the last century and their disappearance is not due to the bulldozing of the past decade.

"Most of the rapid deterioration has been in the lowlands where it has particularly affected the wetland birds such as the Hawaiian stilt and Hawaiian gallinule," Breese said.

"We have embarked on an active program in cooperation with the U.S. Fish and Wildlife Service to save amounts of existing lowland areas." Most of the destruction of wetland areas has been due to urbanization, he said.

In the case of the forest birds--which include all five on the new endangered list--he said, "The causes of extinction are obscure and little known by scientists.

"We feel a major reason--perhaps the major factor--is the possibility of introduced bird diseases against which the native forest Hawaiian birds would have little immunity."

He said the State and federal wildlife biologists also are working together to evaluate forest lands on all islands occupied by rare and endangered birds.

"We are preparing elaborate maps and trying to pinpoint the range of the birds with as much accuracy as possible with the idea of attempting to secure greater preserves for them," Breese said. "We are not wringing our hands," he added. "We have programs underway...and we are trying to look at the total picture."

WILDLIFE, The Environmental Barometer, prepared by Wildlife Management Institute, distributed by U.S. Department of the Interior, Bureau of Sport Fisheries and Wildlife.

Habitat determines wild populations

Fish and wildlife are highly sensitive to environmental change. Alter stream temperature or flow, drain wetlands, channel natural water-courses, clear forests or make other changes that limit their food, water, or shelter and fish and wildlife are immediately affected.

The composition and condition of fish and wildlife populations serve as a barometer of the quality of the environment for man, because he too must have clean water, fertile fields, and healthy forests. Consequently, proper use of our nation's land and water resources is in the interest of man and of the fish and wildlife he enjoys.

Nearly every wild fish, bird or mammal has a comparatively narrow range of environmental elements that determines its survival. These may be divided broadly into food, water, and cover. But, every species' need for each of these essentials differs to some degree from those of others.

Some desert animals, like the kangaroo rat, require little or no obvious water supplies; they have become adapted through evolution to obtain their moisture requirements directly from plants. At the other extreme, waterfowl and aquatic mammals, like the muskrat and beaver, need an abundance of water--not only for drinking but as part of their cover requirements and to promote the growth of their essential foods. Some species, like the pronghorn antelope, must have open grassland; others, like the deer, thrive in mixtures of brushland and young forest.

Climate, topography, and geology in a given area are basic influences on the composition of the plant community, and the nature and abundance of the local plants, in turn, govern the kinds of wild animals that the area can support.

Man-made changes in the environment need not be destructive of wildlife in general, although they may alter radically the composition of the wildlife population. Felling an isolated woodlot and replacing it with corn, for example, will eliminate gray squirrels but may improve conditions for pheasants. Flooding the entire cornfield would drive out pheasants but create useful habitat for ducks and muskrats. Altering or maintaining the environment to favor the needs of certain wild species, in fact, is a basic technique of wildlife management.

Man--a major environmental factor

Some environmental changes, however, may be extremely damaging to all wildlife. Excessive pollution, repeated uncontrolled forest fires, and farming and forestry practices that destroy soil fertility and the diversity of the plant community can create wildlife deserts.

When the balance between wildlife and its habitat is recognized, it is possible to understand why some species that never were hunted extensively became extinct while others that have been hunted intensively are among our most abundant species. The white-tailed deer, for example, is many times more abundant today than it was in 1900, and in most places more numerous than in 1600. Few of the birds and mammals listed as rare and endangered by the U.S. Bureau of Sport Fisheries and Wildlife ever were hunted. Most are victims of pollution, landfilling and clearing and other massive man-made environmental changes that have destroyed one or more essential elements in their habitat.

The transformation of America from wilderness to an urban-dominated landscape has brought great changes in the composition of the native wildlife. Species like the woodland caribou and ivory-billed woodpecker, which require habitats supplied only by wilderness, inevitably declined. But their places usually were taken by other species better adapted to an environment shaped by man, but, like the starling, not always as well liked by man.

When desirable wildlife begins to disappear from a given area, in spite of legal protection, it is an indication that something is wrong with the environment. And the effects on human beings may extend far beyond the loss of esthetic and recreational values.

The basic needs of wildlife are essentially the same as those of man. Most species of wildlife are products of a clean, fertile, and productive environment. They must have adequate food, clean water and protection from the elements if they are to survive. So must man.

Wildlife needs variety in its habitat in order to exist. So, too, does man, but perhaps on a larger scale.

Even the most urban-oriented citizen, who rarely ventures from the asphalt and concrete of modern Metropolis, needs a constant supply of uncontaminated water,

meat from ranches and rangelands, produce from farms, fish from seas and estuaries, and paper pulp from forests. Although he may not think of them in such terms, these far-flung natural and cultivated areas are essential parts of the habitat of modern man.

The lands and waters that produce these commodities also harbor the bulk of our wildlife, and their capacity to support fish, birds, and mammals is a good indicator of their capacity for meeting the basic needs of man.

Wild lands have human values

Most modern Americans are only beginning to recognize their close bonds with the natural world. A sign of this is found in changing attitudes toward swamps, marshes, and tidal estuaries. Until recently, these wetlands, cherished only by sportsmen and naturalists, generally were considered worthless until drained or filled. Unfortunately too many people still consider that their highest economic use is to serve as dumping grounds for the solid and liquid wastes of cities and industries.

The effects of this negative attitude have been apparent to sportsmen and wildlife scientists for many years. Marshes that once teemed with songbirds, shorebirds, waterfowl and a variety of mammals, their waters clouded by noxious bacteria and algae, now support little but starlings and rats. Many wetlands have disappeared completely under the avalanche of human expansion.

So what?

Are not housing and factory sites, airports and highways, and even convenient dumps more valuable to people than a few ducks, herons, muskrats, and songbirds? Perhaps to a few, but today's outcries of concern make clear that people are seeking effective ways to halt the accelerating destruction of their environment.

Unspoiled tidal marshes rank in economic productivity above the best prairie croplands. Marsh-rimmed estuaries are vital to the more important commercial marine fishes and to crabs, shrimps, and shellfish. Continued destruction of tidal wetlands threatens a major source of human food and the livelihoods of many people. A study of tidal bays and estuaries in Massachusetts revealed the presence of 84 species of fish at some stage in their life cycles.

Inland ponds, potholes, and marshes--vital breeding grounds for waterfowl and natural refuges for many other forms of wildlife--also have important economic values. In many places they are essential functioning units of the natural recharging of underground water supplies--vital to local agriculture, industry and human existence.

Oil spills and their immediate effects on wildlife have stirred great public indignation in the past few years. But run-away oil slicks are only the more obvious signs of a far greater problem.

Much of the pollution that originates on the land finds its way to the seas--pesticides carried by the air or washed into rivers, chemical wastes from factories, detergents from laundries and kitchen sinks, untreated sewage, water-soluble solids dumped offshore, carbon dioxide from heating plants, and lead and carbon monoxide from motor vehicles and aircraft.

Pollution--a threat to wildlife and man

The effects of this constant and increasing contamination of the air and oceans are already apparent. Some wild species have declined dramatically. The brown pelican has all but disappeared as a breeding species on much of the Pacific Coast and around the Gulf of Mexico. There has been a sharp decline in the nesting success and numbers of bald eagles and ospreys in eastern United States. All of these birds feed heavily on fish, which absorb the persistent pesticides and store them in their tissues. DDT is considered a major culprit in the decline of these birds, as it is in the virtual extinction of the peregrine falcon in eastern North America.

A chilling threat--not only to wildlife but to all life is seen by some scientists today in the cumulative effects of pollution on the oceans. Marine phytoplankton are the bases of food chains in the seas. Without these microscopic

plants, all ocean life from the smallest shrimp to the largest whales would perish. Moreover, phytoplankton have approximately three times as much gross capacity for converting carbon dioxide to usable oxygen as all land plants combined. Their present abundance is essential, these scientists believe, to maintain the oxygen content of the atmosphere at a level that will support life.

But phytoplankton are extremely intolerant of acidity and trace elements, which are common in most pollutants, including pesticides. When carbon dioxide--a near universal by-product of human activity--is absorbed by sea water in quantities beyond those that marine plants can readily convert to oxygen, it creates an acid condition that kills the phytoplankton. Trace elements in other pollutants cause the death of more. If too many die, according to this sobering theory, the oxygen content of the atmosphere will fall, and Earth will become another dead planet.

The trend can be reversed

How far down the line the world has progressed toward this grim end, no one is sure. But the rising quantities of carbon dioxide in the atmosphere and the fact the DDT has been found in the tissues of Arctic polar bears, Antarctic penguins, and many wild species between the poles are warnings of a possible trend in that direction.

The trend can be reversed, if Americans and people of other nations have the will, intelligence, and prudence to act promptly and vigorously to cure the Earth's environmental ills. Wildlife that is threatened by air and water pollution and by the destruction of essential vegetation, soil erosion, and a general degradation of the environment can be saved.

By saving wildlife man may save himself.

The following is from page 1 of the National Wildlife Federation's Wildlife Conservation Stamp Album 1971: WILDLIFE--Who Needs It?

...Can we really put a dollar sign on anything as all-encompassing as nature? A monetary symbol can never express the beauty of a forest, the delicacy of a flower or the evocative effect of a thrush's song.

Man is only one creature out of one million named forms of animal life living on this earth, from one minute one-celled protozoa to huge blue whales one hundred feet long. He finds it difficult to see any value in the protozoa while he puts mosquitoes definitely on the debit side of the ledger. The worth of the blue whale he can assess exactly--right down to the last barrel of whale oil. Many biologists, however, prefer to think that every one of the million creatures, even the protozoa and mosquitoes, have some function, some reason for being, even though it may not be evident to us. They speak of the "balance of nature, and envisage a world in which each animal and plant fits like a cog in a smoothly-working machine.

Each animal that exists today is the end result of hundreds of millions of years of evolution. As the inheritors of the earth, it is our responsibility to see that no species is pushed out of existence. And ultimately, we need wildlife--all of us.

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From Spring Habitat stamps:

...Wildlife makes the world an exciting place, and wildlife may help people save our blighted environment. The disappearance of wild creatures is the first sign that our environment is changing. The Musk Ox and the Bighorn Sheep may vanish from the face of the earth because of our polluted countryside. How long can man survive in the polluted environments of our countryside and cities that are health hazards to all living things?...

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AMERICAN FORESTS, February 1971, Volume 77, Number 2, page 7: Mike Frome

Each individual should realize the power of his own life and never sell it short. The great use of his or her life should then be spent for something that outlasts it.

This isn't easily done in the area of conservation (or any other area of social action, I suppose), where few have the courage to buck the tide of inertia and complacency with more than lip service. It takes an angry, or at least determined, man to develop a clear vision of some special phase of the environmental crisis, then to dig hard for the facts and present them to his fellow citizens. He must have faith that when they know the score Americans will respond. He must have abiding faith, above all, in himself and be unwilling to sacrifice his principle for expediency....

Any comments? Please write to Kojima, 725-A 8th Avenue, Honolulu, Hawaii 96816.

Field Notes from Mr. & Mrs. Joseph E. McNett:

...While on Maui we saw a bird which we think might be a good one. A Cinnamon Teal was on Kanaha Pond on March 17th and 18th. We saw it in good light and were certain of its identity....It was small, dark cinnamon-red with a rather large blue patch on fore-edge of the wing. We have observed Cinnamon Teal in California and knew it immediately....Other birds observed were mockingbird, shoveler, golden plover, black-bellied plover, sanderling, pintail, ruddy turnstone, and of course Hawaiian stilt....Also there was a white goose there. We were not able to identify it....It appeared to have dark legs and beak....

If any of you can identify the goose, please write to Kojima, 725-A 8th Avenue, Honolulu, Hawaii 96816.

From Mary Roberts, 29 March 1971: Red-whiskered Bulbul

As suspected by me, a pair of bulbuls has claimed my yard (Makiki Street above Wilder Avenue) for nesting. Both male and female brought material to a croton close to my garage. After each completion of weaving the bird let out a piercing cry and then flew off again. I have stood directly by my car not more than four feet away from them without seemingly causing them any apprehension. The female is now sitting on the nest and is being fed by the male.

*I wish I could give you the information you wanted on the nest building and breeding of the bulbuls, but was unable to get too near to watch the different stages of development as at first both parents were extremely nervous and I was afraid they might give up their project.

I wrote you a few days after they started building, and their single baby left the nest on the 20th. It landed in a hibiscus bush by my living room window where it stayed all day and was fed by the parents affording me an excellent view. It was round as a butterball and had a tiny black crest on its head, but no tail. Since their nest was flooded by a downspout during the heavy rains, I can't help wondering if the parents coaxed it out of the nest a little prematurely. Even now the parents seem to have a bad time making it continue its flying lessons. It did manage to get into a tree across the street and apparently is still there as the nervous parents are constantly in attendance.

I now have the nest. It is neat and small, very different from the Kentucky Cardinal's..../nest measurement $3\frac{1}{2}$ " wide by 2" deep neatly woven with grass and paper bark (Melaleuca leucadendra) in a croton bush 6 feet from the ground--donated to Bishop Museum, 24 May 1971/

By the way, a friend from Pacific Heights reported seeing a pair, and a friend in Manoa Valley has a pair. With one baby to a pair, however, they may not multiply too quickly, considering the mortality rate of little birds.*Letter dated 26 April 1971

From Hildegard Kaigler, 21 June 1971: Fairy Tern

The second nesting attempt of the tern in DeRussy seems to be a failure too. The tern has been observed sitting for 45 days.

Helen Stooddy saw an exchange of the parents over the egg.

We never saw the egg exposed this time and often saw several terns in the tree. Once I observed 7 terns in the vicinity.

On 17 June another tern was seen in the next monkeypod tree and has been observed sitting at the same spot--it appears to be sitting on an egg.

COLOR SLIDES OF HAWAIIAN BIRDS

The Hawaii Audubon Society really should have on file a good collection of color transparencies of all of the birds of Hawaii. And we should have, in particular, slides of our endemic species which are admittedly quite hard to come by. We have had to reject requests for such pictures in the past from a number of publishers of professional books and articles or suggest slides of sea- and shore birds rather than the forest birds because we do not have such a file and do not know who has. And of course, we can use slides ourselves in our own programs and publications. We are, therefore, hereby requesting all members and friends who might have good, professional, color transparencies of their own of any of the birds of Hawaii, endemic or introduced, migratory or permanent, rare or common, that they would like to contribute to a permanent collection to be established by the Hawaii Audubon Society to do so. Of course, we do not really expect to receive your most treasured originals as a donation, but we will be happy to have duplicates made of those that we need and would appreciate being granted permission to use them in any way that would benefit the Society. Any used in publications will naturally be credited to the photographer. All originals will be returned to the owner, after duplicating if desired, as will all of those that we receive in excess to our needs. All contributions will certainly be greatly appreciated.

Charles G. Kaigler

ALOHA to new members:

Mrs. Carol Boe, 45-543 Pakualua Place, Kaneohe, Oahu 96744.

Susum Fujii, 5241 Makalena St., Honolulu, Hawaii 96821.

Derral Herbst, Botany Dept., University of Hawaii, Honolulu, Hawaii 96822.

Walter R. Steiger, 3378 Keahi St., Honolulu, Hawaii 96822.

New edition of the HAWAII'S BIRDS, a field guide, is now available for \$2.00. Send in your orders to: Book Order Committee, Hawaii Audubon Society, P.O. Box 5032, Honolulu, Hawaii 96814.

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JULY ACTIVITIES:

- 11 July - Field trip to Poamoho to study forest birds. Bring lunch, water, and if possible, your car. Transportation cost (\$1.00) to be paid to the drivers. Meet at the State Library on Punchbowl Street at 8:00 a.m. Leader: William P. Mull, 988-6798.
- 12 July - Board meeting at McCully-Moiliili Library, 6:45 p.m. Members welcome.
- 19 July - General meeting at the Waikiki Aquarium Auditorium at 7:30 p.m.
Speaker: Pete (Ernest G.) Holt
Topic: On and Off the Beaten Path (color slides)

HAWAII AUDUBON SOCIETY EXECUTIVE BOARD:

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