

THE ELEPAIO

Journal of the
Hawaii Audubon Society



For the Better Protection
of Wildlife in Hawaii

VOLUME 33, NUMBER 5

NOVEMBER 1972

A NOTE ON NEWELL SHEARWATER ON KAUAI

By Robin W. Doughty *

Recent reports by Sincock and Swedberg (1969) and King and Gould (1967) throw light on the reproductive ecology, status and distribution of Newell shearwater or 'A'o (Puffinus puffinus newelli) on the Hawaiian Islands, particularly Kauai. From personal observation and a review of past literature, King and Gould suspected that several thousand birds breed in the inland valleys of Kauai and they believed the island without the predatory mongoose is a bastion of the shearwater. They indicated 12 places for which 10 - 25 birds had been recorded in recent years and 15 subsidiary localities. The Hanalei Plantation was listed in the secondary category (of 1-5 birds).

My observation of Newell Shearwater from the Hanalei Plantation in July 1972 offers additional information about the bird's distribution and numbers. On the evening of 28 July 1972 continuous watch was made of Hanalei Bay from the Plantation headland from 18:40 hours to 19:45 hours. The attention of two observers with 6 x 20 binoculars was focussed westwards across Hanalei Bay to Kolokolo Point (approximately 2.3 miles distant).

At 19:20 hours, eight minutes after sunset, a single shearwater was seen to fly inland across Hanalei Bay. By 19:33 nine birds had been counted. Between 19:33 and 19:43 42 more shearwaters had been readily picked out against the sky made bright by the setting sun. A total of 51 birds were seen heading inland at altitudes varying by several hundred feet. One bird was observed to move out to sea. No calling was heard.

From the Plantation headland it was not perfectly clear to which locality the shearwaters moved. Most birds appeared to fly towards the steeply incised Lumahai Valley and others into the equally remote Wainiha Valley. No more than half a dozen birds headed up the Hanalei Valley and came in from the sea near the Plantation headland. Most, it appeared, moved inland between Makahoa and Kolokolo Points. Clouds shrouded the highest inland peaks but did not extend seawards. Therefore, good views of birds against the sunset were possible.

The shearwaters moved inland singly and with rapid, direct flight. The first birds were observed to gain height as they flew in from the sea and to circle when inland before continuing into the interior until lost from view against the sombre colors of the steep-sided hills. Three birds circled while offshore, gained height and then flew rapidly inland.

Observations were discontinued at 19:45 because of failing light and a drop in activity. The single bird counted in two minutes after 19:43 was in marked contrast to the flurry of movement in the ten minute interval preceding it.

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Excerpts from Dr. Doughty's letter dated 28 August 1972: ...I spent a very profitable week on the island of Kauai and was particularly impressed with the seabirds. I have familiarity with Shearwaters from a stay on Skomer, Wales, and have taken part in many seabird watches along the North Sea Coast in England where I was brought up....

Literature Cited

John L. Sincock and Gerald E. Swedberg. 1969. Rediscovery of the Nesting Grounds of Newell's Manx Shearwater (Puffinus puffinus newelli), with Initial Observations. THE CONDOR 71:69-71 (reprinted in THE ELEPAIO 29 (June 1969) 105-8).

Warren B. King and Patrick J. Gould. 1967. The Status of Newell's Race of Manx Shearwater. THE LIVING BIRD 163-186 (summarized in THE ELEPAIO 28 (April 1968) 89-90).

U.S.G.S. Hanalei and Haena Quadrangles 1963 and 1965. Hawaii Island and County of Kauai 7.5 min. series (Topographic) 1/24000.

Testimony given before the Board of Agriculture on 11 April 1972 on "PROPOSED AMENDMENTS: REQUIREMENTS APPLICABLE TO THE INTRODUCTION OF A SPECIFIC CLASS, TYPE OR SPECIES OF ANIMAL: REGULATION 11" by Wayne Gagne

I would like to testify on behalf of the 130,000 member Sierra Club, a nationwide conservation organization with global concerns. We are in favor of the proposed amendments to Regulation 11 from the following three standpoints: 1) the extra protection it would give to the birdlife native to these islands 2) from a global standpoint, the pressure it puts on the excesses of the pet shop industry, to impede the flow of wild birds trapped in tropical areas especially for sale as cage birds in the United States and 3) from the standpoint of placing needed constraints on the traffic of introduced game birds for release in the State.

From the first standpoint, we are much concerned about escaped or released cage birds, for example, strawberry finch, blackheaded mannikin, saffron finch, green-cheeked Amazon parrot, white-eye, bush warbler, leiothrix, shama thrush, mockingbird, etc. that do or could compete with native birds and replace them, or indirectly affect our native birds, many of which occur nowhere else, by bringing with them parasites and pathogens which afflict the native birds. For, just as the Hawaiians were once decimated by smallpox brought here by seafarers, the native birds have been afflicted with malaria, bird pox, etc., that were brought here in introduced birds.

From the second standpoint, we welcome any regulations which would impede the sordid trade in tropical birds to be incarcerated for their lives in cages in American homes, especially we are concerned about the many species which are now trapped in the wild with no concern or knowledge as to whether they can maintain themselves in the face of this onslaught. Still vivid in my memory is the cage of finches the Chief of Plant Quarantine here showed me a couple of years ago that Quarantine had managed to intercept, which was destined for a Honolulu pet shop. It had come all the way from Africa so crammed with about a half a dozen species of wild finches, none identified, that there was a layer of dead ones several inches deep on the bottom of the cage and their water was simply a slurry of fecal matter. I bring up this memory because if cage bird fanciers could only imagine the criminal incidents such as this that occur a thousand times over, they surely should prefer to see birds free in their native lands and habitats where ever they occur. If people must confine things in cages, let it be those species that can be reared and propagated in captivity without endangering the existence of those in the wild.

We understand that one of the factors giving impetus to these proposed changes was the danger of introduction of Newcastle's virus disease, especially from the mainland where it is now decimating poultry flocks--in California alone to the tune of \$4 million per year. To give credence to your concern we have excerpted information from a recent book edited by John Davis and others entitled "Infectious and Parasitic Diseases of Wild Birds". In the chapter on Newcastle's disease they list wild bird species naturally and experimentally infected with this disease. Table I shows the released cage birds and game birds which are established in Hawaii which are naturally infected with Newcastle's disease virus (NDV). Similarly, Table II shows wild species experimentally infected with NDV.

Note that game bird introductions continue to be made by the State. The Afganistan white-winged pheasant was recently proposed for release in Hawaii. I also understand that bobwhite quail (Colinus virginianus) are brought here each year,

after only prefuntual examination, for field trials of bird dogs.

A paper by Lewin and Holmes in Pacific Science 25:372-381 (1971) demonstrates that introduced game birds, in this case those introduced to Puu Waawaa Ranch, Island of Hawaii, are quite capable of harboring and transmitting parasitic worms. In only the 7 species of game birds they analyzed, out of the 33 species liberated on the ranch, they found 11 species of parasitic worms, 4 species of which had never previously been found in the State, and all but one of the 11 were in all likelihood brought here in contaminated introduced birds. One of these worms is known to be a factor in another serious disease of poultry and turkeys—"blackhead" disease.

So, the potential is certainly here for the introduction and spread of more parasites and pathogens unless regulations can be tightened as much as possible and that we aim towards admitting essential introductions only. There is also the potential of reinfection of poultry flocks from escaped cage birds. I understand that Newcastle's disease was at one time present in the islands, at least as recently as 1951. It could be brought here again.

We continue to see the introduction and spread of exotic birds, among the more recent are the green-cheeked Amazon parrot, saffron finch, red-vented bulbuls, etc. Several of the older introductions such as the ricebird and linnet are taking their toll of sorghum on Kauai. Others will become pestiferous if agricultural diversification provides a suitable food source. This era of well meaning releases with real and potentially disastrous consequences to the economy must be brought to a halt. This will also take some of the pressure off the future survival of our own native birds.

In line with the intent of these regulations, we would like to see all non-domesticated animals also brought under these provisions. That way we could have avoided the recent hasty decision by the Board of Agriculture to allow the introduction of 9 species of African big game mammals to Molokai Ranch which has all the potential consequences we've outlined for bird introductions plus the capability of these animals to seriously alter native habitat of native birds by grazing, browsing and trampling.

The following Tables 1 and 2 are adapted from John W. Davis et al (1971) "Infectious and Parasitic Diseases of Wild Birds", pages 4 and 5 respectively:

TABLE I: Wild Species Naturally Infected with Newcastle's Disease Virus
Introduced to Hawaii and Established

* Lace-necked Dove.....	<u>Streptopelia chinensis</u>
English Sparrow.....	<u>Passer domesticus</u>
* Jungle Fowl.....	<u>Gallus sp.</u>
* Hungarian Partridge...	<u>Perdix perdix</u>
Peacock.....	<u>Pavo sp.</u>
* Domestic Pigeon.....	<u>Columba livia</u>
* Ringed Dove.....	<u>Streptopelia risoria</u>
* Ring-necked Pheasant..	<u>Phasianinus colchicus</u>

Natural Migrants to Hawaii

American Widgeon.....	<u>Mareca americana</u>
Canada Goose.....	<u>Branta canadensis</u> ssp.
Osprey.....	<u>Pandion haliaetus</u>

* Indicates species introduced for hunting purposes. (6 out of 8 total)

TABLE II: Wild Species Experimentally Susceptible to Newcastle's Disease Virus
Introduced to Hawaii and Established

* Bobwhite Quail.....	<u>Colinus virginianus</u>
* California Quail.....	<u>Lophortyx californica</u>
* Chukar Partridge.....	<u>Alectoris graeca</u>
English Sparrow.....	<u>Passer domesticus</u>
* Hungarian Partridge...	<u>Perdix perdix</u>
* Barred Dove.....	<u>Geopelia striata</u>
* Mourning Dove.....	<u>Zenaidura macroura</u>
* Domestic Pigeon.....	<u>Columba livia</u>
Java Sparrow.....	<u>Lonchura oryzivora</u>
Ricebird.....	<u>Lonchura punctulata</u>

* Ringed Dove..... Streptopelia risoria
 * Ring-necked Pheasant... Phasianinus colchicus
 * Lace-necked Dove..... Streptopelia chinensis
 ** Cattle Egret..... Bulbulcus ibis
 Natural Migrant to Hawaii

Canada Goose..... Branta canadensis ssp.

* Indicates species introduced for hunting purposes. (10 out of 14 total)

** Indicates species introduced for insect control.

Testimony on Proposed Amendment of Regulation 11, Division of Animal Industry, Department of Agriculture to chairman and members of State Board of Agriculture by William P. Mull, 11 April 1972:

...As a matter of general policy, the Hawaii Audubon Society is dedicated to the protection and preservation of native Hawaiian species of plants and animals. In light of historical experience and fact, we conclude that one of the most important factors in the high incidence of extinction and endangerment of native species of Hawaiian birds and their associated ecosystems is the impact of alien species of plants and animals introduced to these islands by modern men.

The proposed amendment of Regulation 11 appears to be an attempt to tighten up the regulation of importation of alien bird species into Hawaii. We strongly support any such efforts, whether for purposes of controlling the importation of alien birds for economic reasons or for ecological reasons.

Records indicate that close to 200 species and subspecies of alien birds have been introduced into these islands and released in the wild. Of these, perhaps one third have shown some capacity to adjust to local conditions to the extent that they have been observed to reproduce successfully in the Hawaiian environment to one degree or another.

The extent of the impact of these alien species of birds on the native ecology and agricultural economy of Hawaii has not been fully assessed, but it is becoming increasingly clear that they have done more harm than good in either case. The seedeaters have contributed to the spread of noxious alien plants to the detriment of native ecosystems and now are threatening successful production of agricultural grain crops. The insect and nectar eaters have shown a capacity to compete with native bird species for food and territory to the obvious detriment of these native species. All of these alien bird species have long been suspected of serving as hosts and vectors of pathogens to which native bird species have little or no resistance. Now the threat of Newcastle's disease to our domestic poultry industry places an additional onus on these alien bird species.

It is clear that we cannot insure "safe" confinement of alien birds introduced into Hawaii, along with their pathogens. It will take us a long time to absorb those we already have--if we ever do without serious effects on native ecosystems and domestic food-producing industries.

The only answer, in the overall interests of the people of Hawaii, is much stricter controls on or outright termination of the import of alien birds into Hawaii.

From HONOLULU ADVERTISER, 10 April 1972: Tighter Bird Laws Sought (Mae E. Mull's contribution) Passed--Decision announced 26 May 1972

The State Department of Agriculture has proposed stepping up Hawaii's quarantine laws to prevent the possible introduction of "exotic Newcastle" disease currently spreading through Southern California poultry farms.

Existing local poultry regulations require health certificates and vaccinations against this virulent disease for all birds except those imported by pet shops. But the agriculture department wants pet birds to also undergo health checks, since the disease may be transmitted by all types of birds.

From HEALTH FOR ALL (Hawaii Tuberculosis and Respiratory Disease Association publication) October 1972: Disaster in Birdland

Colds, flus, and all kinds of virus infections lay low millions of people.

They also do in animals. And birds.

Between last March and June, 61.5 million chickens and turkeys were given shots to prevent the spread of a virus that causes Exotic Newcastle Disease. The disease severely damages the respiratory, intestinal, and central nervous system. It is lethal to almost all species of birds. But not to humans.

Infected birds seem to have cold symptoms. They sneeze and gasp for breath. Their throats get clogged with phlegm. Later, their eyes become sealed shut, and soon paralysis sets in. Almost all infected birds die of the disease. Death occurs in two or three days.

The disease can be curbed by vaccinating susceptible birds, killing infected fowl, and putting quarantines on epidemic areas. In the last epidemic, 3.6 million infected fowl were killed. Entire areas in California and Arizona, where the epidemic mushroomed, were quarantined to stem the spread of diseased birds to other parts of the country.

Authorities believe the epidemic started in California where a pet bird dealer imported infected birds from South America last November. The disease itself was first detected decades ago in Indonesia. Since then, it has been reported in virtually every country throughout the world.

People, like farmers and veterinarians, who are in contact with infected birds can become infected themselves. But, fortunately, the disease is not serious for humans. The worst symptoms are sore, inflamed eyes....

Excerpts from the minutes of Hawaii Audubon Society general meeting, 17 April 1972:

...Mr. Kaigler gave the results of the state-wide Hawaiian Stilt Count conducted on April 12th by State and federal biologists and Audubon members. Kii Pond at Kahuku was bone dry. Punamano Pond nearby had 30 stilts. The total for the State remains below 1,000:

Niihau	360 (a high number for this island)
Kauai	47
Oahu	114
Molokai	4
Maui	419 (250 at Kanaha Pond & 169 at Kealia Pond)
Hawaii	20

964 Hawaiian Stilts

Mr. Kaigler spoke of the immediate need for water in Kii Pond at Kahuku which has been an important breeding area for three endangered species: Hawaiian Stilt, Hawaiian Coot and Hawaiian Gallinule. The U.S. Bureau of Sport Fisheries and Wildlife is negotiating with Campbell Estate for both water to be pumped into Kii and for either long-term lease or purchase of the Pond.

William Mull reported on the status of the Endangered Birds and Mammals Bill that passed the legislature and the defeat of the bill that would weaken the Animal Species Advisory Act of 1970. Robert Shallenberger reported on the testimony given for the Society at the public hearing of the Board of Land and Natural Resources in Maui on April 14th raising questions on the removal of one-half of Lanai from public hunting. The Lanai Company, owner of the land, proposes to restrict the area to private hunting and camping for commercial purposes.

Wayne Gagne reported on the status of the Molokai Ranch application to bring in nine different species of African and Indian game mammals for propagation and hunting purposes. The application was approved by the Board of Agriculture, but representatives of several conservation groups are meeting with Director Erskine to discuss the issue on April 18th.

Mr. Carey O'Nan presented the program for the evening with beautiful color slides of his recent trip to Africa, with emphasis on natural areas. Mr. O'Nan showed slides of several mammals in their natural, native habitat that are proposed for release onto the Molokai Ranch including the bushbuck, lesser kudu, greater kudu and the eland. The discussion continued on the possible effects of these mammals on an island ecosystem.

...

15 May 1972: ...William Mull reported on several conservation issues the Society has

been concerned with the previous month.

...No answer has been received from the federal Department of Transportation or the President's Council on Environmental Quality on the Society's critique of the wildlife section of the Reef Runway Final Environmental Impact Statement.

Kii Pond at Kahuku continues to be dry and the endangered stilt, coot and gallinule that nested successfully there last summer will miss a whole breeding season.

Mr. Mull discussed the implications for the Alaka'i (Swamp) Wilderness Preserve on Kauai if the proposed Koke'e Dam is constructed.

House Bill 2144 is awaiting action by the Governor. The bill would remove utility companies, including Hawaiian Electric, from the public hearing requirement when such companies apply for commercial use of Conservation District land.

Dr. Alan C. Ziegler briefly reported on the Animal Species Advisory Commission meeting held in Hilo on May 5th where local residents presented their views on the question of introducing axis deer as a game mammal for public hunting on the Big Island. Dr. Ziegler also mentioned that Mrs. Joan Aidem had found a new puzzling bone from an owl in the fruitful Moomomi Dunes of Molokai. This bone is much too long to be from the native owl, pueo.

Mr. Don Reeser, research biologist at Hawaii Volcanoes National Park, presented the program on Feral Animals Versus Native Plants in Volcanoes National Park with color slides, film and discussion. Pigs, feral cats as well as feral goats are a problem in preserving and restoring the native plant and animal communities within the Park. Endemic bird species historically resident in the Park, many of which are endangered, suffer loss of habitat from grazing and browsing by cattle and goats and rooting by pigs. Exotic plants also are spread by feral animals. The Park is planning to increase its control measures on the pig. The slides and films showed dramatic evidence of the bark stripping and destruction of plants in several Park areas through enclosure and exclosure experiments. Native plants exhibit strong ability to regenerate when feral goats are excluded. A new species of native bean plant has been discovered in one exclosure. Goat drives are a successful control measure and the deputy ranger (hunter) program has helped in reducing goats in accessible areas. In 1971 the hunters took out 1200 goats. But present control measures scarcely keep up with the annual population increase. A New Zealand forest ranger is here now demonstrating goat reduction with the use of trained dogs.

The National Park Service has initiated a three-year program for goat reduction and eventual exclusion that is largely dependent on funds for area fencing. The Park Superintendent gives high priority to goat removal and restoration of natural plant communities. In one experimental plot where goats are fenced-out the proportion of plants returning naturally is 60-70% native species. ...

The secretary suggested that a resolution on feral goats be sent to Hawaii's Congressional delegation. Following a discussion, a resolution was adopted without a dissenting vote. ...

19 June 1972: ...Mr Mull reported on several conservation issues of concern to the Society:

On May 16th Governor Burns signed into law Act 49 which sets up a conservation program for indigenous birds and mammals and endangered species.

The peninsula in Salt Lake has been filled in to the opposite side, creating two separate bodies of water. The Concerned Citizens of Salt Lake still hope to change the plan to completely fill in the lake, and the Governor's official review of the plan has not yet been made public. Twenty-three Hawaiian stilts and 36 Hawaiian coots were counted on the lake in the last few days. There is a strong possibility that coots are nesting on the fringes of the lake.

A letter was sent to the Governor requesting that he not approve House Bill 2144 which would remove the public hearing requirement for commercial use of Conservation District land by utility companies, including Hawaiian Electric Company. The Governor replied that the Society's position was being considered, but a few days later the bill was signed into law.

On May 26th the Society presented testimony at the last public hearing before the Board of Land and Natural Resources on three applications by Hawaiian Electric

Company for commercial use of Conservation District Land in the Koolau Range, protesting unnecessary land abuse, lack of long-range planning and outmoded power transmission practices.

The introduction of nine species of exotic big game mammals to the Molokai Ranch is undergoing reappraisal. The ranch has said it does not plan to use the animals for hunting purposes.

At the June 2nd meeting of the Animal Species Advisory Commission, Dr. Alan Ziegler distributed copies of the new Indigenous and Endangered Species Conservation Act to Commission members and discussed the Act in relation to the functions of the Commission.

Letters have been received from the President's Council on Environmental Quality and the Federal Department of Transportation in response to the Society's critique of the Wildlife Section on the Final Environmental Impact Statement on the Reef Runway. The Council is seeking more information on adequate replacement habitat for the endangered Hawaiian stilt and other shorebirds.

In response to a request from Superintendent Russell Cahill, Haleakala National Park, the Society has made a contribution of \$50 toward the DARK-RUMPED PETREL STUDY PROJECT being conducted this summer by a qualified student, Miss Karen Buxbaum, in Haleakala Crater.

The State Department of Agriculture has revised its Regulations 1 and 11. Now all imported birds, including cage birds, must pass the disease quarantine requirements.

Three officers of the Society have participated in the Environmental Education Workshops sponsored by the State Department of Environmental Quality Control.

A thank-you letter has been received from the Sierra Club Foundation for the \$400 the Society contributed to the Environmental Law Program conducted this summer in Hawaii by Life of the Land.

A major article, "Hawaii's Birds Are Flying Away", was published in the Honolulu Advertiser June 2nd with graphic tombstones for each of Hawaii's 23 extinct bird species and a discussion of the activities and goals of the Society.

Member Helen Devereux reported her observation of black-headed mannikins feeding young at Salt Lake. The numbers and range of the black-headed mannikin have increased significantly since a flock of about 25 were observed in the Honouliuli, Ewa District west of West Loch 1959. The introduction of this successful seed-eating exotic apparently is the result of unauthorized release(s) of cage birds. The mannikin has been sold by Honolulu pet shops at least since 1936. It has previously been reported from Waipahu and has the potential for becoming a serious pest to agricultural crops such as sorghum.

A report on the Keaa Forest Project has been received from Dr. P. Quentin Tomich of the Hamakua District Development Council, Honokaa, Island of Hawaii. The Keaa Forest has a good chance of being retained and protected, "as an example of Hawaiian lowland native forest, for its esthetic qualities, for educational purposes, for recreational use, and for scientific study." Dr. Tomich also wrote that "the Hawaiian hawk is found rather frequently at Keaa. Hawks seen in the forest as follows on 3 of 7 recent trips to the forest: December 6, 1971 (two), May 3 1972 (three), May 21, 1972 (two)." Also, "the Hawaiian hoary bat, like the hawk a rare and endangered species, is known to forage and rest in and near forest tracts of Hamakua Coast and most likely uses Keaa in its daily regime of feeding and roosting." ...

Dr. Frank Howarth, entomologist at the Bishop Museum, presented the program on "Bio-speleology in Hawaii"--the study of life adapted to living in caves or lava tubes. The relatively young lava tubes on these isolated oceanic islands provide a singular living space for evolutionary processes and adaptive radiation for endemic insects and other fauna. For the first time cave adaptations have been found in the lava tubes of oceanic islands, including loss of vision, loss of pigment and loss of appendages. Dr. Howarth and other scientists have discovered up to twenty new species of insects. Surprising adaptations have been made by species of tree hopper, plant hopper, water treader, ground beetle and wolf spider.

From ORYX, May 1972, page 313: A Good Slogan in Norway's national parks, "Leave only footprints...Take only photographs"

For Junior Members:

Letter from Bo Alexander to Mrs. Mae E. Mull:

...I'm going to Maui to visit my cousins who live on the slope of Haleakala. I like visiting them, because they like to drive up to the last cattle gate before reaching the state park, and then we walk down to the house. It's a nice hike. It takes about four hours. As we walk through the tall grass, pheasants and chukars fly all over. Also, lots of mockingbirds are around.

Last time we went we found a great big pit, and in it plastered on all sides were nests (I think). They were abandoned, and they were similar but larger than that of the chimney swift's.

We also go to La Perouse Bay where zillions and zillions of partridge and quail live. Also, lots and lots of dolphins and porpoises frolic in the bay.

You also wanted to hear about my bird raising project. Well, it's twelve birds in all. Three zebra finches, one canary, and eight parakeets. The finches and parakeets have nests and babies now. They haven't come out of their nest boxes yet, but they are coming. All of the birds I have except the canary were raised in my aviary.

Has anyone seen a swallowtail? About the middle of April 1972, I saw a black and white butterfly which was larger than the Monarch, then on 15 May a swallowtail came to my window at night and stayed with its wings folded until the morning. On 26 May, I saw it feeding on the periwinkle blossoms.

According to Mr. Harry Nakao, Deputy Chief, Entomology Branch, State Department of Agriculture, the swallowtail I saw in Kaimuki "is a recent immigrant, first reported in the State in April 1971 from Salt Lake, Oahu. Since then it has spread to most localities on Oahu. This colorful butterfly is commonly known as the Citrus Swallowtail and taxonomically as Papilio xuthus.

"As the name indicates, the caterpillars feed on leaves of citrus and closely related plants. It is widely distributed in the Orient, from India through to Japan; Formosa to the Philippines and in Siberia."

Does anyone have any information on this citrus swallowtail as to how it came to Hawaii? Whether it is pestiferous or beneficial? If harmful, what steps are being taken to control its spread and population?

This will be a wonderful project for one of you junior members to find out about this swallowtail and write to me as to its native habitat, food and breeding habits, and anything else you can find out about this new introduction into our ecosystem.

Also, as a junior member what do you expect from the Society? Or what can you do for the Society? How can you through the Society help others appreciate the unique Hawaiian ecosystem? Please send in your suggestions to Kojima, 725-A 8th Avenue, Honolulu, Hawaii 96816.

MAHALO

Field Notes from Rear Admiral John G. Moyer, 4311 Kahala Avenue, Honolulu, 8 Sep 1972:

The following account of a pair of white terns (Manuoku)/fairy tern, Gygis alba/ is submitted to you for information:

About 7 August a pair of white terns observed flying low and resting briefly on lower branches of a black maple tree over one of my driveways about 20 feet high. They flew around for about a week, periodically and on 14 August evidently one laid an egg in a kiawe tree about twenty feet above my other driveway. Both birds were seen at times, but always one bird was on the egg. About two hours in mid afternoon neither of them was seen.

On 7 September about 6:30 a.m. both birds were looking at the egg but not on it. About 10 or 15 minutes later I found the broken egg on the driveway. I recovered the embryo and on 9 September delivered it to Mr. Mull of your Society who said it should have been much larger after the 24 days of incubation.

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Let's hope next season will be successful, and eventually fairy terns will become an important attraction along DeRussy to Kahala shoreline. Mahalo for your contribution

Field Trip to Salt Lake, Waipio, Walker, West Loch, 10 Sep 1972 by William P. Mull

Seven members and guests left from Punchbowl Street next to the State Library at 8:15 a.m. on 10 September in hot, clear weather to look at shore and water birds in the Salt Lake and Pearl Harbor areas.

With two exceptions, the numbers and kinds of birds seen were not remarkable for those areas at that time of year. On Waipio Peninsula, we were surprised to find two mallards at Walker Bay and a Wilson phalarope at the settling basins.

One of the mallards at Walker Bay was the big drake with the deformed right wing, who has been a permanent resident there for some years. The other, a smaller, sleeker bird, was unbanded and appeared to be a drake in eclipse plumage. It was in close company with a pintail, also in eclipse. The pintail obviously was a legitimate wild migrant, but it is impossible to say whether the second mallard was a wild migrant or a stray from resident, domesticated mallard stock somewhere else on the island.

We watched the phalarope for twenty minutes, as it fed, preened and rested among stilts, golden plovers and ruddy turnstones on the mud surface of the settling basin, and then took flight when we flushed the flock. Its size, shape, behavior and field marks were definitive for the Wilson: long, needlelike bill, solid gray back and upper wing surfaces and solid white rump and upper tail surface. Although we get individual records of the Wilson phalarope in the main Hawaiian Islands every few years, it is not considered a regular migrant here and the sight of one is always a treat.

Salt Lake was a beautiful, placid sight with a scattering of shorebirds and waterbirds feeding along its edges in the morning light. But our impression of that bright scene was tarnished by the Sunday-idled earth-movers on the hill and the expanding earth-fill area in the makai section of the lake, and the knowledge that that habitat's days are numbered.

Following is a tabulation of our sightings for the day:

	<u>Salt Lake</u>	<u>Basins</u>	<u>Walker Bay</u>	<u>West Loch</u>	<u>Total</u>
<u>Black-crowned Night Heron</u>	-	-	5	27	32
<u>Cattle Egret</u>	1	300+	-	-	301+
<u>Mallard</u>	-	-	2	-	2
<u>Pintail</u>	-	-	1	-	1
<u>Hawaiian Coot</u>	42	-	7	8	57
<u>Golden Plover</u>	39	20	8	150+	217+
<u>Wandering Tattler</u>	5	-	1	2	8
<u>Sanderling</u>	-	2	-	2	4
<u>Ruddy Turnstone</u>	9	15	14	150+	188+
<u>Wilson Phalarope</u>	-	1	-	-	1
<u>Hawaiian Stilt</u>	21	140+	14	42	217+
Total	117	478+	52	381+	1028+

HOUSE FINCH NESTING IN NEW MEXICO

By Steve West

During the spring and summer of 1969 I was able to devote more time than usual to nesting surveys in the Carlsbad-Loving areas of Eddy County in southeast New Mexico. Although unusual nesting species were not found this season, a larger number of uncommon species were found than could normally be expected (e.g. Swainson Hawk, Roadrunner, Ash-throated Flycatcher and Pyrrhuloxia). Despite this, many common or fairly common ones were not even found nesting (e.g. Harris Hawk, Ladder-backed Woodpecker) while other common birds were found nesting in somewhat lower numbers (e.g. Western Kingbird, Mourning Dove, Bullock Oriole).

Particularly of interest to me was the increased nesting of the House Finch. That year I located 17 House Finch nests, twice what I normally find. Of the 17 nests located, 4 were in Carlsbad, 3 were in Loving and 10 were at the U.S. Potash Refinery, located 3.8 miles NE of Loving. Although this increase in nest finds surely doesn't reflect a statewide trend, I feel it at least shows a significant rise in the area. Despite this increase in nesting, the species had limited success that year.

Eight of these nests were useless to me because of their location. These nests were found at the potash refinery as high as 75 feet off the ground. I was only able to tell on these that there was nest activity, not the numbers of eggs or young or the success of the nest.

Of the remaining nine nests, (four in Carlsbad, 2 at the potash refinery, and 3 in Loving) success was noted in only two of these (22.2%). Predation, vandalism, weather conditions or desertion caused the failure of the remaining seven (77.7%).

Nests in which eggs or young were noted totaled eight. One unsuccessful nest was destroyed by bad weather before eggs were laid. The remaining eight nests held a total of 28 eggs, 16 of which hatched (57.3%), and of these 16, only eight were fledged from the nest. This represents, in terms of eggs to fledged young ratio, a success of only 28.6%.

Below is a table showing only the nests that I was able to obtain information on the location of the nests, the number of eggs, whether the nest was successful or not and the probable reason for it.

<u>Nest #</u>	<u>Location</u>	<u># of Eggs</u>	<u>Success</u>	<u>Unsuccess</u>	<u>Reason</u>
69-1	Carlsbad	4		X	predation by ants
69-2	Carlsbad	-		X	weather destroyed nest
69-3	US Refinery	2		X	cause unknown
69-4	Loving	4	X		
69-5	Loving	4		X	predation by ants
69-7	Carlsbad	3		X	weather destroyed nest
69-9	US Refinery	4	X		
69-10	Carlsbad	3		X	nest destroyed by vandals
69-14	US Refinery	4		X	nest deserted

Note: In the two cases of success, all four eggs were hatched and all four young were fledged.

I have submitted this field notes to THE ELEPAIO in hope that someone may help to shed some light on the following: Do small birds such as the House Finch normally have low nesting success or does it seem to be mainly limited to this species? What are the successes or failures of House Finch nesting in Hawaii? In none of the nests that I observed did I notice cowbird eggs. In fact, the only unnatural reason for failure was noted in nest 69-10 where the nest was destroyed by vandals.

Please share with other members any information you have on the nesting of the house finch by writing to Kojima, 725-A 8th Avenue, Honolulu, Hawaii 96816.

From 25 August 1972 HONOLULU STAR-BULLETIN page A-2: Kauai's Eagle is a Chicken-Plucker

Kalaheo, Kauai--Kauai's Golden Eagle has become a chicken thief. For many weeks it has been preying on Joe Rita's chickens in his leased pasture in upper Hanapepe Valley. Fourteen chicks and a hen disappeared in a week. And six or seven half-grown chickens have been picked off, one at a time.

"We have surprised him next to the chicken coop," said Rita, of Kalaheo. "He took off, leaving behind only the feathers, some bones and the fresh blood in the earth."

The eagle was first sighted in Waimea Canyon in February 1967. It was then about three years old. No one knows where it came from. At the time, it still lacked the colorful golden feathers of a mature four-year-old bird. It has been seen occasionally since then all over the Island.

Rita said it is brown and black. The features he picked up are brownish with white spots. Normally a Golden Eagle lives about 25 years. Its wing span is about eight feet.

"I complained to the rangers that their Eagle has been eating my chickens." Rita said. "They are not able to do anything about it, but they want to make sure I don't shoot the eagle."

The American Golden Eagle, which soars long distances between the United States and Mexico, was probably caught in a storm and carried out to the Pacific, fish and

game biologists suggested.

ALOHA to new members:

Gordon E. Kauffman, 3811 Radford Drive, Honolulu, Hawaii 96818
Herman Kind, 1003 Sheridan Drive, Lancaster, Ohio 43130
Lyndon Wester, 2640 Dole St., #B-12, Honolulu, Hawaii 96822

Amendment to the Constitution

At the October 1972 meeting of the Hawaii Audubon Society, the constitution of the Society was amended to read:

Article 5 of the By-laws:

Section 1. The dues for each fiscal year ending December 31, shall be as follows:

Regular	\$3.00
Junior (18 years and under)	1.00
Life	100.00

Section 2. When a new member comes into the Society within three months of the expiration of a fiscal year, the dues shall be credited to the following year.

Section 3. Special dues shall be assessed the members only after the approval of a quorum at a regular meeting.

HAWAII'S BIRDS, a field guide and a wonderful Christmas gift, is available for \$2.00. Send in your orders to Book Order Committee, Hawaii Audubon Society, PO Box 5032, Honolulu, Hawaii 96814.

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NOVEMBER ACTIVITIES:

- 12 November - Field trip to study shore 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, telephone 988-6798
- 13 November - Board meeting at McCully-Moiliili Library, 6:45 p.m. Members welcome.
- 20 November - General meeting at the Wakiki Aquarium Auditorium at 7:30 p.m.
Speaker: John Kjargaard
Topic: Student Originated Waihoi Valley, Maui, Native Ecosystems Project -- Summer 1972

HAWAII AUDUBON SOCIETY EXECUTIVE BOARD:

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