

THE ELEPAIO

Journal of the
Hawaii Audubon Society



For the Better Protection
of Wildlife in Hawaii

VOLUME 29, NUMBER 5

NOVEMBER 1968

NOTEWORTHY RECORDS OF WATERBIRDS FROM OAHU*

By Roger B. Clapp and Robert L. Pyle

As members of the Pacific Ocean Biological Survey Program we observed shorebirds and waterfowl at various areas on Oahu during the spring and fall of 1967 and the spring of 1968. A number of observations and collections made during this period seem worth reporting because they were of species of rare or accidental occurrence, not only on Oahu, but in the entire central Pacific. In addition, the collections comprise the only specimen-verified records of Semipalmated Plover, Knot, Least Sandpiper and Black Tern, known hitherto only from sight records, some of them poorly documented. The sight records included herein, Garganey Teal and Wilson's Phalarope, are presented to document further, or to extend, the few previous records of these species.

Species List

Garganey Teal (Anas querquedula)

On 23 March 1967 Clapp saw a drake Garganey in breeding plumage on a small pond on the north side of the abandoned airstrip at Kahuku. The teal, readily identified by its small size and by its brown head with white post-ocular stripe, was seen in good light through a 7 x 50 binocular at about 30 yards. When Clapp attempted to get closer, some 30 other ducks in the pond (Pintails, Baldpates, and Shovelers) flushed and scared the Garganey which flew inland and was not seen again. This bird may have been the one reported from Kahuku on 12 March 1967 by Gauthey (1967a).

On 3 March 1968 we observed another drake Garganey on a small mud flat just west of the north end of the old airstrip on the Waipio Peninsula (about 1.7 miles northwest of Waipio Point). We examined the teal from about 75 yards through a 30x telescope. It was in extremely worn and faded breeding plumage and was roosting with a drake Blue-winged Teal and about a dozen Shovelers. When the Garganey flushed, it circled the area, flying with the Blue-winged Teal rather than with the Shovelers, and alighted again, allowing further observation from about 50 yards.

There are three other well-documented records from the central Pacific but two of them probably refer to the same bird. A drake in breeding plumage was seen by King (1961) 28 February 1961 on a small pond near Hilo, Hawaii, and one was seen in the same area 20 March 1961 by Walker (1961). In addition, two juveniles, a male and a female, were collected by Pacific Program Personnel 17 September 1963 on Sand Island, Midway Atoll (Clapp and Woodward, 1968).

Semipalmated Plover (Charadrius semipalmatus)

We saw a Semipalmated Plover 28 September 1967 on the mud flat of the upper settlement basins on the Waipio Peninsula (about 0.5 miles east of the Waipahu dump).

*Paper No. 42, Pacific Ocean Biological Survey Program, Smithsonian Institution, Washington, D.C. 20560

Clapp collected the plover (USNM 543344) which proved to be a very fat immature female that had recently completed molt in the rectrices and remiges. It was still molting body feathers from juvenal to winter plumage.

Although these plovers have been reported frequently from the Hawaiian area in recent years and are apparently regular, if uncommon, migrants, the present specimen is apparently the only one that has been collected in the main Hawaiian Islands.

Knot (Calidris canutus)

On 7 April 1968 we saw a Knot roosting with a flock of about 250 Golden Plovers at the northwest end of the east half of the abandoned airstrip at Kahuku. The bird was subsequently collected by Clapp. The specimen (USNM 543341) is a very fat immature female that had molted almost completely into its first breeding plumage.

The only other Knots reported from the central Pacific were a single individual, apparently in winter plumage, seen 29 October 1961 at Kahuku, Oahu, by W.M. Ord (Ord, 1962); a female collected 15 March 1965 by Pacific Program personnel on Southeast Island, Pearl and Hermes Reef, and a bird in breeding plumage seen by Pacific Program personnel 28 August 1965 on Sand Island, Midway Atoll (Clapp and Woodward, 1968).

Least Sandpiper (Erolia minutilla)

Clapp collected a female Least Sandpiper 17 March 1967 at the southeast end of the same airstrip at Kahuku. The sandpiper was roosting in a large mixed flock of Golden Plovers, Ruddy Turnstones, Wandering Tattlers, and Sanderlings. The specimen (USNM 543064) has new rectrices and remiges but has only partially attained breeding plumage on the back and wing coverts.

Sight records of Least Sandpipers were reported from the Hawaiian Islands on five other occasions but these records may have involved no more than four individuals. One was reported present at Kanaha Pond, Maui, 11 November 1963 (Anon., 1963) and Kridler (1965a, 1965b) reported that he saw two there on 11 January, two on the following day, and one on 28 April 1965. More recently L. Pyle (1967) noted that a putative Least Sandpiper was seen at Kahuku, 21 January 1967. This bird and another unidentified "peep" on 12 March 1967 (reported by Gauthey [1967a]) were observed by R. Pyle who believed they were Least Sandpipers. It seems likely that both records may have been of the same bird and that it was the one later collected by Clapp.

In any case, the present record constitutes the first specimen record of the Least Sandpiper from Hawaii and the central Pacific.

Wilson's Phalarope (Steganopus tricolor)

On the morning of 21 August 1967 Clapp saw a single Wilson's Phalarope in the upper settlement basins on the Waipio Peninsula. The bird was standing near a flock of Ruddy Turnstones and was examined from about 50 yards through a 20x telescope. The darkish legs, needle-like bill, almost uniform gray upperparts with wings lacking a white wing stripe, white underparts, and white rump all served to identify the bird.

During the afternoon Clapp and Philip C. Shelton returned to the area to collect the bird. At this time three Wilson's Phalaropes were seen repeatedly flying over the settlement basins with several Golden Plovers. Although they landed once and were re-examined through the telescope Clapp was unable to collect any of the phalaropes which eventually flew off toward the mountains.

Wilson's Phalaropes were reported only thrice previously from the central Pacific. One was seen 13 September 1964 by Ord (1964) on the salt beds on the Waipio Peninsula and Kridler (1966b) reported seeing one in fall plumage 11 August 1966 at Kanaha Pond, Maui. Gauthey (1967b) reported that he saw one at Waipio, 29 July 1967 but gave no other details. Perhaps the bird that Gauthey reported was one of those seen subsequently by Clapp.

Black Tern (Chlidonias niger surinamensis)

On 17 September 1967 Clapp and Philip C. Shelton saw a small tern as it flew over the upper settlement basins on the Waipio Peninsula. Two days later Clapp collected a Black Tern, probably the same bird, in that area. The specimen (USNM 543065) is a moderately fat unsexed immature that still retains the brown-tipped back feathers of the juvenal plumage. The darker gray rump feathers clearly indicate that the specimen belongs to the New World race, C. n. surinamensis rather than to the light gray-rumped Old World race, C. n. niger.

Three Black Terns have been reported previously from the central Pacific. Kridler (1966a) noted two Black Terns in winter plumage at Kanaha Pond, Maui, 18 November 1965. He also stated that W.M. Ord and others had seen one four days earlier on the Waipio Peninsula, Oahu, but he gave no further details. Thus the present specimen constitutes the third occurrence of this species in the main Hawaiian Islands and the only specimen record from the central Pacific.

We are indebted to Pacific Program personnel Richard C. Crossin, David I. Hoff, John H. Fitch, Ralph W. Schreiber, and Philip C. Shelton who supplied transportation when it was otherwise unobtainable.

LITERATURE CITED

- Anon. 1963. Birds of the month. Elepaio, vol. 24, p. 38.
 Clapp, R.B. and P.W. Woodward. 1968. New records of birds from the Hawaiian Leeward Islands. Proc. U.S. Nat. Mus., vol. 124, pp. 1-39.
 Gauthey, J.R. 1967a. Field trip to Waipio Peninsula and Kahuku to study shore birds, March 12, 1967. Elepaio, vol. 27, p. 106.
 Gauthey, J.R. 1967b. Field trip to Waipio Peninsula and Kahuku to study shore birds, September 10, 1967. Elepaio, vol. 28, pp. 44-45.
 King, B. 1961. Field notes in Hawaii. Elepaio, vol. 22, pp. 1-3.
 Kridler, E. 1965a. Some winter bird observations on Maui, 1964-1965. Elepaio, vol. 25, pp. 77-80.
 Kridler, E. 1965b. Bird observations on Maui. Elepaio, vol. 26, p. 40.
 Kridler, E. 1966a. Waterbird observations at Kanaha and Kealia Ponds, Maui, 1965. Elepaio, vol. 26, pp. 88-89.
 Kridler, E. 1966b. Waterbird observations on Kanaha Pond, Maui--summer of 1966. Elepaio, vol. 27, p. 32.
 Ord, W.M. 1962. Field notes. Elepaio, vol. 22, pp. 53-55.
 Ord, W.M. 1964. Field trip, shore bird hike, September 13, 1964. Elepaio, vol. 25, pp. 47-48.
 Pyle, L. 1967. Observations at Kahuku, Oahu. Elepaio, vol. 28, pp. 6-7.
 Walker, R.L. 1961. Field notes from the island of Hawaii. Elepaio, vol. 22, p. 7.

BIRDS OF THE TOKELAU ISLANDS PUBLISHED IN NOTORNIS

A paper by Max C. Thompson and C. Douglas Hackman, of the Pacific Ocean Biological Survey Program, Smithsonian Institution, Washington, D.C. entitled Birds of the Tokelau Islands, has been printed in the June 1968 issue of Notornis, quarterly journal of the Ornithological Society of New Zealand, (Volume 15, number 2, pages 109-117.) It is based on visits by the two authors and four companions, Lawrence N. Huber, Ralph D. Kirkpatrick, Richard W. Merrill, and Paul W. Woodward, to the three Tokelau atolls 26 February to 4 March 1965. These atolls, from north to south, are: Atafu, Nukunono (also spelled Nukunonu) and Fakaofo (also spelled Fakaofo). The party spent a total of 138 hours on the islets of the three atolls, concerning which and their climate and vegetation short notes are given.

Records are given concerning 20 species of birds: 11 seabirds, the Red-tailed and White-tailed Tropicbirds, the Brown and Red-footed Boobies, Lesser Frigatebird, Black Noddy, Brown Noddy, Blue-gray Noddy, Black-naped Tern, Sooty Tern, and White Tern; 8 shore or migratory birds, Reef Heron, an unidentified duck, Golden Plover,

Ruddy Turnstone, Sanderling, Bristle-thighed Curlew, Wandering Tattler, and New Zealand Long-tailed Cuckoo; and one land bird, the Pacific Fruit-pigeon.

Numerous specimens are cited, including those in the American Museum of Natural History, obtained by the Whitney South Sea Expedition in 1924. This is the first extensive or comprehensive account of the birds of this mid-Pacific, Polynesian island group, which is administered by New Zealand.

E. H. Bryan, Jr.

EXOTIC NON-GAME BIRD INTRODUCTIONS--PRO AND CON*

By Paul M. Scheffer

A few weeks ago, there was an interesting Associated Press news release in a Honolulu newspaper. It was an account of the proposed introduction of roadrunners into Florida. In traveling through the Southwest desert area, a member of a well-known women's service club had learned that roadrunners ate snakes. The organization was now sponsoring a move to import these birds to eradicate all of the venomous snakes in Florida.

While we do not question the altruistic motives of the Florida women's organization, it would be a gross understatement to say that the ladies lacked an understanding of some very significant biological principles that govern both predator-prey relationships and the geographical distribution of wildlife species.

My assignment today is to represent the viewpoint of the National Audubon Society on the matter of exotic non-game bird introductions. Although I am not a staff member of that organization, it is my pleasure to handle this assignment as a personal favor to Charles Callison, Executive Director.

I am not an authority on the subject of exotic non-game bird introductions. Since non-technical people have been largely responsible--directly or indirectly--for the introduction of this class of wildlife into various parts of the United States, a qualified technical expert has yet to distinguish himself in this field. Not so in the area of exotic game bird introductions, however. Much work has been done with this kind of wildlife, and the biologists in the field are well known.

Most of you are now visiting a state in which the non-game bird populations are already made up of more exotic species of land birds than native species. After several years of an informal ecological study on both the exotic and native birds in Hawaii, perhaps some of my observations on the matter of foreign bird introduction will be of interest.

The National Audubon Society is opposed in principle to the introduction of exotic forms of wildlife--including non-game species of birds. This is a policy that can be broadly interpreted, and I am sure that it was so intended. It is questionable whether or not a categorical statement can be made to the effect that all non-game bird introductions are aesthetically, economically or ecologically unsound.

It may seem easy to some to determine the aesthetic values of an exotic bird. The bird either has a song, plumage color, or some other unique value that seems, to some individuals, worth the effort and expense of moving it to a new land, or it doesn't. The criteria for determining economic values or problems are not so simple, and certainly not so dependable. The European Starling brought to the East Coast of the United States for sentimental reasons, for example, is now a nationwide economic liability.

From the standpoint of the ecological soundness of bird introductions, we have certain well-established, time-worn, natural principles to fall back on that are being strengthened through experience.

Now, I would like to explore a little further with you the natural principles that have a direct bearing on the matter of exotic bird introductions. If the Biologists will bear with me for a moment, I am going to paraphrase two well-known fundamental principles of animal ecology.

The National Audubon Society policy on foreign bird introductions has in part,

at least, been developed from two closely-related, natural principles. With modifications to establish a basis for our discussion, these principles are stated thus:

The first principle: In nature, each ecological niche is, in time, occupied by a stabilized population of but one species of bird that achieves compatible community relationships with all other native forms of wildlife.

The second principle: It is impossible for two or more birds with similar niche requirements to occupy simultaneously the same habitat strata for an indefinite period.

We know that there are a number of forces that tend to modify these simple yet basic laws of nature. A temporary change in the suitability of the shallow water habitat occupied by avocets may be created in a western pond, for example, by a prolonged drought. As the playa becomes covered by grasses and forbs, the area originally occupied by avocets, now provides an environment that is more adapted to horned larks. Eventually, as the pond is again flooded, the avocets will replace the larks.

Similar temporary changes are brought about by fires, floods and other forces. A more permanent alteration of habitat circumstances results from major changes in land use. In the latter instance, there is always a corresponding natural change in the birdlife.

The point to be made here is that whenever one species of bird is displaced either by a temporary or permanent alteration of its habitat, there is almost always another species of bird that is more adapted to the new environment ready to move in.

Before you agree with me on that point, let us see what has happened in Hawaii. From an ecological standpoint, the consequences of destruction or alteration of the forest bird habitat in Hawaii are not at all comparable to similar environmental changes on the mainland.

At the time of discovery in 1778, the land bird population of Hawaii was, with two possible exceptions, made up of forest-adapted species. Possibly Pueo, the owl (Asio flammeus) and 'Io, the Hawaiian hawk (Buteo solitarius) also ranged over the open lands or human settlements to feed on the rats.

The history of land development in Hawaii is the same story that can be told about many of the originally forested areas on the mainland. Much of the Hawaiian Islands was heavily forested from the coastline to the mountain tops. As the koa and 'ohi'a trees were cleared for sugar cane, pineapple, and other agricultural uses, the forest line receded up-slope to about the 2,400-foot elevation level. This is the upper limit of soil temperature tolerance of sugar cane. In some areas, extensive clearing for pasture has continued even up to the 5,000-6,000-foot elevation.

The Hawaiian honeycreepers (Drepaniidae) and other endemic birds went with the trees. The Drepanids, in particular, appear to exist in a very delicate relationship with their unique type of native forest habitat; they appear to be unable to withstand an environmental change of any kind.

Picture now, the early agricultural era of Hawaii: fields of sugar cane, pineapple, rice and cleared pasture without birds. The birds that were eventually to occupy this new environment were still in Australia, New Zealand, Africa, Asia and North and South America. Soon they began to arrive in Hawaii--first by sailing vessel, and then by steamship. Today the pet shop shipments arrive by jet plane. And game cocks! Our Honolulu airfreight depots sound like dawn-breaking-over-a-barnyard every weekend as the imported roosters are shifted around for air shipment to the various island fighting pits. Few, if any, of these ever escape, however, to occupy the brushland habitat niches! This is particularly true for the losers!

To return to a point that I started to make: nowhere on the mainland would it be necessary to import non-game birds to occupy habitat vacancies resulting from a major change in land use. This could only happen in a circumstance of complete isolation such as we have on the tiny land masses of Hawaii.

All of the land birds that you may have observed around the Waikiki parks and lawns are exotic introductions. In fact, unless you plan to spend some time in the native forest lands, you will not see the Honeycreepers or other land species endemic to Hawaii.

The ancient Polynesians turned the first foreign bird loose in Hawaii about 1,200 years ago. This was the jungle fowl. This bird still exists on Kauai--the only island in the main chain that is not plagued with the predacious mongoose.

Domestic pigeons were reported to have been introduced into the Islands in 1796. From then on, everyone has been in the act. No official records of bird imports was kept until comparatively recent years. Early newspaper accounts tell us that there was much interest in bird introductions during the period 1853 to 1867. Ship captains leaving Honolulu were encouraged to return with foreign birds and plants. The promiscuous importation of birds was continued until the Hawaii Board of Agriculture and Forestry was established in 1904. But in spite of the regulations that have been on the books for more than 60 years, unauthorized releases of cage birds and other birds into the wild are still being made. Such introductions are generally classified as "accidental."

Last winter I published a list of 56 introduced or escaped species of land birds that were reported to be in the State at that time. Thirty eight of this number were non-game species; 26 species of this type of bird are considered to be well established. I will list a few of the most common ones that are not of North American origin:

Songsters

Brazilian cardinal (Paroaria cristata)
 Leiothrix or Pekin nightingale (Leiothrix lutea)
 Skylark (Alauda arvensis)
 Chinese thrush (Garrulax canorus)
 Shama thrush (Copsychus malabaricus)
 Japanese bush warbler (Cettia diphone)

Beneficial

Indian myna (Acridotheres tristis) This is one of our most common aliens. It feeds on lawn and field insect pests.
 Cattle egret (Bubulcus ibis) A State Department of Agriculture introduction for the control of cattle and pasture insect pests.

Pests

We are fortunate in Hawaii not to have bird pests of any significant economic importance. Ricebird (Munia nitoria) depredations were common in the rice fields up until a few years ago. Rice is no longer grown in Hawaii. The ricebird is still a pest, however, on other seed crops.

Some complaints on non-game bird damage are registered each year by the truck gardeners, orchid growers, and fruit growers. It seems that some of our imported songsters are also fond of sprouted lettuce, orchid buds or papaya.

It may be of interest to note here that while the house sparrow is identified as an agricultural pest and residential area nuisance on the U.S. mainland, it is considered a rather useful bird in Hawaii. This does not suggest that we want to experiment with the European starling, however!

Observations and field studies have been made on the native Hawaiian birds by ornithologists and other scientists since late in the last century. It is believed that there is considerable factual evidence now at hand to support these conclusions:

1. There has been a direct competition for living space between the native and introduced species of land birds. The lower elevations of the native bird habitat are occupied by at least twenty species of introduced foreign birds. At least two of the latter kinds of birds travel with the 'apapane (Himatione sanguinea), 'i'iwi (Vestiaria coccinea), 'amakihi (Loxops virens) and other Drepanids throughout their entire range. These birds are identified as the Japanese white-eye (Zosterops japonica) and the red-billed leiothrix (Leiothrix lutea). The white-eye and leiothrix are well adapted from sea level to timberline.

2. Native bird populations were apparently greatly reduced by avian malaria and bird pox, following the accidental introduction into Hawaii of the mosquito-vector of these diseases in 1829. It is known that extinction of the entire

populations of some of the endemic bird species also occurred at this same time....

There is some evidence to support a hopeful belief that at least a few native species of birds are building up an immunity to the avian diseases.

3. Perhaps the strongest argument advanced for introducing new species is that various land uses have diminished native populations and that understocked habitats or empty niches exist. We should ask ourselves, however, whether the most productive effort is not in the restoration or protection of environmental quality rather than trying to fill degraded niches.

There is much yet to be learned in Hawaii about the compatibility of introduced birds and the native birds. As a part of the National program concerned with endangered wildlife species, a well-planned research program is now underway. One phase of this study will be to determine more precisely, if possible, the consequences of conflict between these two classifications of birds.

About two years ago, the Hawaii State Legislature passed an act that funded a program for the importation of non-game birds (ACT 203 - 6/28/65). The Act states that a primary benefit of the program would be the biological control of insects. Except as the ecological complementarity of the species involved is thoroughly understood, such control effects are questionable. Benefits of additional colorful plumage and beautiful song are also mentioned. It is my understanding that the Fish and Game Division now has this program underway.

In conclusion--the objective of the National Audubon Society policy on exotic bird introductions is to protect the integrity of the native ecosystems throughout their area of influence.

We do not have to look back further than the English starling to realize the complete unsoundness and danger of hit-or-miss bird transplants. We no longer live in an age when we can afford to bring additional competition for human food resources upon us by deliberately introduced birds. Nor do we wish to see our native birds displaced by alien species.

Should a positive need develop for an exotic bird, we have ecological principles that will serve as guidelines in determining the biological soundness of the introduction project. Consideration must also be given to agricultural economics and other hazards that may be involved.

But one should not take an exotic bird in hand and leap one of the hurdles that I have just described, without making certain that he can clear all of the other obstacles. And if he hasn't contracted ornithosis by that time, it may or may not be safe to release the bird into the new environment.

*Paper prepared for presentation at the Western Association of State Fish and Game Commissioners' Conference, Honolulu, Hawaii, July 17-20, 1967, by Paul M. Scheffer representing the National Audubon Society as a non-staff member.

+++++

Any comments or suggestions? Ecosystems is an important subject, so please share your ideas with other members by writing to Kojima, 725-A 8th Ave., Honolulu, Haw. 96816.

LETTERS from Dick Gauthey, 21A Jefferson Road, Newport, R.I. 02840:

...We had a wonderful time coming across country, visiting Crater Lake, Mt. Rainier, Olympic and Glacier National Parks in the U.S. and Mt. Revelstoke, Glacier, Yoho and Banff in Canada. We saw a good number of animals which the children enjoyed--deer, elk, pronghorn, mountain sheep and mountain goat as well as the chipmunks and squirrels which are so friendly in the parks. I got five new birds including Northern Three-toed Woodpecker. Visited two National Wildlife Refuges--Klamath Lake in Oregon where there were 2 Golden Eagles and 2 Sandhill Cranes, and Bowdoin near Malta, Montana, where great numbers and variety of chicks and shorebirds and a colony of White Pelicans could be seen at close range from the car. The wildflowers in the sub-alpine zones at Mt. Rainier and Olympic parks were particularly beautiful....

From Gerald E. Swedberg to Robert L. Pyle, 13 June 1968: Newell's Shearwater
 ...On 6 June 1968 we picked up a Newell's Shearwater on a call from the Edgewater Hotel in Waikiki. Bird had flown in during the night. It was an adult in apparently good condition. I banded it USFandWS Band #536-31801 and released it on 7 June 1968 on Nuuanu Pali.

Field Notes from Charles G. Kaigler, 19 September 1968: Bristle-thighed curlew

My wife and I had a very productive outing to the Kahuku area on Saturday, September 14, 1968. The high point being the observation of six bristle-thighed curlews in the area between the old airstrip and the beach. The birds were observed through the 30 power scope. Identification was quite positive. I also saw a semi-plumated plover, but my wife did not, so I cannot confirm this sighting.

The entire area was much wetter than at any time I was there last year, and shorebirds were abundant. Ruddy turnstones and golden plovers were present in the hundreds. We counted over 50 stilt, and saw four sanderling and about seven black-crowned night herons. There were no ducks on the large pond closest the airstrip, but we did see a flight of 16 shovelers. There were seven female shovelers on the pond closest to the sugar refinery as well as over 25 coot and well over 150 cattle egrets.

My wife and I recently spent two mornings (September 25 and 26) in the Puu Laau mamane area (Island of Hawaii) searching for the palila (Psittirostra bailleui). There seemed to be plenty of seeds available, but we could only come up with one doubtful sighting during the approximately 8 hours we spent there.

Field Trip to Waipio and Kahuku, 13 October 1968:

The first shorebird trip of the season proved rewarding beyond expectation to the 18 members and visitors who made the excursion on October 13. Those who had already heard of the reported sightings of the bristle-thighed curlew in Kahuku held high hopes of finding the birds still there. They were. At least some of them were, but these sightings were climactic to what was already a good day. Sand Island and Hickam were skipped due to the morning high tide, and the first stop was the Waipio settlement basin. The group was hardly out of the cars before Bob Pyle spotted an osprey in flight to start the day off. There were some 60 ducks in and over the basin, about evenly divided between pintail and shoveler; well over a hundred cattle egret and more than 105 stilt; plover, of course (about 40), and 12 sanderling in view. For some reason there were no turnstones in the area at the time, although we saw one wandering tattler and found one pectoral sandpiper among the plover. Three strawberry finches were seen and too many black-headed mannikin to count. Mynahs, white-eyes, house sparrows, both barred and spotted doves and one cardinal rounded out the sightings at Waipio.

The next stop was the airstrip at Kahuku where the bristle-thighed curlew (at least six of them) obliged the group by making an appearance. There were 1 stilt, 2 turnstone and 1 sanderling present; but 4 coot, 5 black-crowned night heron, and about 75 plover were in evidence on the airstrip or in the adjacent ponds as well as mynahs and doves. Two cardinals were seen here. The nearby large pond held some 65 pintails and shovelers as well as a number of plovers. However, the pond and irrigation area nearer the mill was another story. This plantation pond held over 52 ducks, same even proportions between pintail and shoveler, 35 stilt, over 77 coot and well over 200 cattle egrets. Two wandering tattlers and one heron completed the sightings here.

An adjacent area across the road and closer to the mill, apparently newly burned, bulldozed and flooded held the greatest number of golden plovers, ruddy turnstones and stilt that we had seen all day. More than 25 sanderling were counted, but a good count was not possible for the others as we were blocking traffic. There were easily more than a hundred of each of the three birds listed

above. The fields on both sides of the road were alive with ricebirds working over the grass patches.

Charles G. Kaigler

Excerpts from the minutes of the general meeting, Hawaii Audubon Society, September 16, 1968:

...Charles Kaigler gave a report of the field trip to Manana. It was originally scheduled for August 25, but was postponed and held on September 8 instead. The following species were seen by most of the group: Common Noddies, Sooties, Wedge-tailed Shearwaters, Bulwer's Petrel, Fairy Tern, Red-tailed Tropicbird, Frigatebirds and Red-footed Bobby. When David Burckhalter spoke to the Society on August 19, he reported 50 Bulwer's Petrels to be on Manana at that time, and also he reported a nest of a Red-tailed Tropicbird with one adult and one chick in it. He said he would mark the nest in such a way that members from our field trip would find it. During the trip, several people found the nest site by following large well-marked green arrows, but there was no bird in it and the following note, dated August 20 was found, "Audubon people: When I checked today tropicbird and egg gone. Nest failure. Sorry, DLB." The field trip for October 13 will be for shorebirds. The Kaiglers were at Kahuku on Saturday, September 14, and saw 6 Bristle-thighed Curlews and 150 Cattle Egrets.

Gerald Swedberg, our speaker for the evening, ... gave us a very thought-provoking talk on conservation. Mr. Swedberg is the non-game bird biologist with the Department of Land and Natural Resources. Following Mr. Swedberg's talk, a lively discussion period followed and just about everyone present had some ideas on conservation projects to save Hawaii's birds.

ALOHA to our new members:

Jane G. Eliason, 601 Gateway House, 2563 Dole St., Honolulu, Hawaii 96822.
Mrs. Ralph A. Goni, Box 599, Chico, California 95926.
John W. Swanstrom, Jr., 432 Ill. Ave., Morton, Illinois 61550.
Mrs. Owen H. Wangenstein, 2832 West River Road, Minneapolis, Minn. 55406.
Richard Young, 1177 Hooli Circle, Pearl City, Oahu 96782.
Point Reyes Bird Observatory, Mesa Road, Bolinas, California 94924.

HAWAII'S BIRDS, a field guide for \$2.00 is an excellent gift for mailing to friends. An order blank is enclosed for your information and convenience.

NOVEMBER ACTIVITIES:

November 10 - Field trip to study shorebirds. Bring lunch, water, and if possible your car. Transportation cost (\$1.00) to be paid to the drivers. Meet at the Library of Hawaii at 8:00 a.m.
Leader: Charles G. Kaigler, telephone 988-3195.
November 11 - Board meeting at the Zoo entrance bldg. at 7:30 p.m. Members welcome.
November 18 - General meeting at the Waikiki Aquarium Auditorium at 7:30 p.m.
Program for the night: Mrs. Anne Powlison, fondly called "The Bird Lady" by the children of the elementary schools, will talk on her work with the youngsters.

HAWAII AUDUBON SOCIETY EXECUTIVE BOARD:

President-Miss Margaret Titcomb, Vice Presidents-Dr. Andrew J. Berger & Jack Throp
Secretary-Mrs. Robert L. Pyle, Treasurer-Bill Prange
Board Members: Dr. Robert L. Pyle & Ronald L. Walker
THE ELEPAIO: Editors-Miss Charlotta Hoskins & Miss Unoyo Kojima

MAILING ADDRESS: P.O. Box 5032, Honolulu, Hawaii 96814

DUES: Regular-\$3.00 per annum, Regular out of State-\$2.00 per annum, Junior (18 years and under)-\$1.00 per annum, Organization-\$2.00 per annum, Life-\$50.00.