



## Pelagic Seabird Observations from Northwest Hawaiian Island Waters

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The status and distribution of seabirds in pelagic waters surrounding the Hawaiian Islands remain poorly understood. King (1970) details observations made over a 15-month period from a study area located mostly south and east of the main Hawaiian Islands, and Gould (1983) graphs by latitude species recorded between Alaska and Hawaii from 24 October to 6 November 1976. Otherwise, no detailed observations have been made in Hawaiian waters, and practically nothing is known of seabird distribution in the deeper pelagic waters around the Northwest Hawaiian Islands.

In November 1984, we went to Laysan Is. as part of a field crew for the U.S. Fish and Wildlife Service (USFWS). Passages were made from Midway Is. to Laysan aboard the U.S.S. Townsend Cromwell and from Laysan to Tern Island, French Frigate Shoals (FFS) aboard the fishing vessel *Feresa*. While on these passages, we made seabird observations during all daylight hours. These included 30-minute counts every hour as specified by a standard censusing method suggested by Tasker *et al.* (1984) and by using a format devised by D.G. Ainley of the Point Reyes Bird Observatory (PRBO). Count data have been incorporated into data banks with USFWS, Honolulu, and PRBO for future analysis of overall Pacific seabird distribution. We present herein a summary of our observations and documentation of the non-breeding species, with the hope that it will initiate a better understanding of the pelagic status and distribution of these species in this area.

Between Midway and Laysan, observations were made from 27° 29'N 175° 39'W to 26° 53'N 174° 16'W on 3 November (11 hours of observation), and from 26° 05'N 172° 15'W to Laysan (25° 43'N 171° 44'W) on 4 November (4 hours). Observations then were made from Laysan to 25° 31'N 171° 09'W (5 hours) on 14 November, 24° 48'N 169° 29'W to 24° 22'N 168° 14'W on 15 November (11 hours), and for about 25 km along a line extending south southeast to Tern Is., FFS (23° 46'N 166° 16'W) during the morning of 16 November (2 hours). The totals from the two full days, 3 and 15 November, are of particular interest as they are more representative of the true pelagic status of the species observed.

Locally breeding species were most frequently encountered. Numbers of these increased dramatically near the islands and were significantly higher in the open water expanse between Midway and Laysan than in pelagic waters between Laysan and FFS. Non-breeding species were recorded in small numbers, with densities less dependent on proximity to the islands. These were primarily transient, southern hemisphere species but also included a North Pacific breeding species wintering in the area. Two species observed, Cook's Petrel (*Pterodroma cookii*) and Wilson's Storm-Petrel (*Oceanites oceanicus*), had not previously been recorded in Hawaiian waters. This most certainly reflects the lack of previous observations in the area rather than the displacement of the

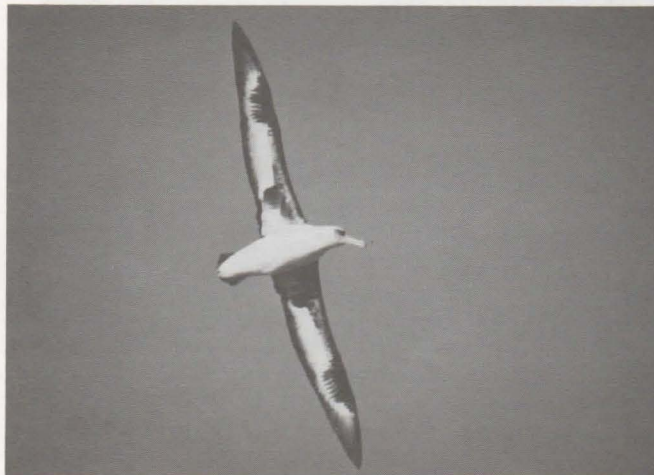
individuals observed. Both authors observed and identified all non-breeding species, except for the Short-tailed Shearwater (*Puffinus tenuirostris*). Stewart Fefer of USFWS also assisted in counts and identifications.

The following accounts include all species observed in pelagic waters.

### I. Breeding Species.

**Albatrosses** (*Diomedea* spp.). Black-footed (*D. nigripes*) and Laysan (*D. immutabilis*) Albatrosses were observed on both portions of the voyage and were found in considerably higher numbers close (within 5 km) to islands, especially Laysan Is. On 3 November, 10 Black-footed and 3 Laysan Albatross were recorded, and on 15 November only 3 Black-footed and no Laysan Albatross were seen. The higher number of Black-footed Albatross recorded is probably indicative of their diurnal feeding habits, as compared with the potential nocturnal feeding behavior of Laysan Albatross.

**Bonin Petrel** (*Pterodroma hypoleuca*). This was the most commonly recorded species between Midway and Laysan. About 250 were recorded on 3 November, most often as single birds but occasionally in clusters of up to 25 individuals. All were flying; no feeding was observed. Hundreds were observed within 10 km of Laysan. Only two were recorded on 15 November, however, in the open water expanse between Laysan and FFS. Contrary to many of the other breeding species, none were found in association with schools of fish. Five were recorded on the morning of 16 November, in the vicinity of FFS.



Adult Laysan Albatross in flight.

Photo by Bruce D. Eilerts



**Wedge-tailed Shearwater** (*Puffinus pacificus*). This species was commonly observed on both portions of the trip. We recorded about 150 on 3 November and about 250 on 15 November. The birds were mostly encountered as single birds between Midway and Laysan, whereas they occurred primarily in flocks of up to 100 individuals between Laysan and FFS. These flocks were actively feeding in association with several large schools of Skipjack Tuna (*Katsuwonus pelamis*). As with the other breeding species, higher numbers were noted within 10 km of the islands.

**Sooty Storm-Petrel** (*Oceanodroma tristrami*). These storm-petrels were uncommonly observed on both portions. A total of 13 were recorded in the 33 hours of pelagic observations, with 6 on 3 November and only 1 on 15 November. Three were observed on 16 November in the vicinity of FFS. All observations were of single individuals. On Laysan, as many as 14 were counted each evening (4–13 November) flying in over the refuge sign on the island's western shore.

**White-tailed Tropicbird** (*Phaethon lepturus*). A single bird on 15 November at 24° 40'N 169° 12'W was the only individual encountered. This species is normally associated with volcanic islands rather than atolls and, thus, was unexpected at this locale.

**Boobies** (*Sula* spp.). All three breeding species, Masked Booby (*S. dactylatra*), Brown Booby (*S. leucogaster*), and Red-footed Booby (*S. sula*), were recorded in small numbers and almost exclusively within 5 km of the islands. In pelagic waters, only single individuals of each species were recorded on 15 November, between Laysan and FFS.

**Great Frigatebird** (*Fregata minor*). This species was found abundantly over the three islands visited, but only two individuals were recorded in pelagic waters, on 14 and 15 November. The latter individual, an adult female, was following a school of Skipjack Tuna.

**Sooty Tern** (*Sterna fuscata*). Twenty Sooty Terns were recorded in the 33 hours of pelagic observations. Most were recorded within 50 km of the islands. Only two were recorded on 3 November, and six were observed on 15 November, all following Skipjack Tuna schools.

**Other Terns.** We frequently encountered Brown Noddies (*Anous stolidus*), Black Noddies (*A. minutus*), and White Terns (*Gygis alba*) within 10 km of the islands. A single White Tern was observed on 3 November, and two Brown Noddies, a Black Noddy, and a White Tern were observed together over a school of Skipjack Tuna on 15 November. These were the only pelagic observations of these species.



Figure 1. Documentary photos of the White-necked Petrel. Left — dorsal aspect; bird between Midway and Laysan, 3 Nov. 1984. Right — ventral aspect; bird near Tern Is., FFS, 16 Nov. 1984.

Photos by Peter Pyle

## II. Non-breeding Species.

**White-necked Petrel** (*Pterodroma externa*). Four birds of this species were observed on 3 November between Midway and Laysan, and one was recorded about 16 km west-northwest of Tern Is., FFS, on 16 November. They were identified by the presence of a short, heavy bill; a flight pattern typical of *Pterodroma*; relatively large size; distinct dark "W" pattern across the back and upper surface of the wings; white underside with very thin, diagonal covert-bars on the undersides of the wings; and black cap separated from the back by a distinct and broad, white collar. This latter characteristic is diagnostic of the race which breeds in the Kermadec Islands, *Pt. e. cervicalis* (Harrison 1983). Like many other southern hemisphere seabirds, the White-necked Petrel ranges into the North Pacific when not breeding. Gould (1983) did not report this species north of Hawaii, but King (1970) recorded them (mostly the nominate race) commonly in his study areas, with peak numbers of *cervicalis* encountered in October-January and May-June. A photograph of the 16 November bird has been deposited in the Hawaii Rare Bird Documentary Photo File (HRBP # 436) maintained by the Hawaii Audubon Society (Figure 1).

**Kermadec Petrel** (*Pterodroma neglecta*). We identified a single, dark-phased individual of this species on 3 November at 27° 03'N 174° 42'W. It was a slender winged *Pterodroma*, entirely "warm" brown in coloration (as closely seen in excellent lighting conditions), except for obvious whitish patches confined to the base of the primaries on the undersurface of the wings. The only other *Pterodroma* with this pattern, the Solander's Petrel (*Pt. solandri*), should appear more grayish than brown. Gould (1983) recorded this southern hemisphere breeder as far north as 38°N 158°W; King (1970) recorded it uncommonly in his study area with peak numbers observed between September and January; and a specimen of this species was taken on Kure Atoll in May, 1923 (Clapp and Woodward 1968). It is evidently a regular transient through the area.

**Cook's Petrel** (*Pterodroma cookii*). We recorded 5 Cook's Petrels on 3(2 birds), 4(2), and 15(1) November. Extremes in location were 27° 18'N 175° 16'W and 24° 41'N 169° 09'W. The birds were distinctly smaller and more slender than Bonin Petrels and had very pale heads; pale gray backs with narrow and fairly distinct "W" patterns on the upperparts; pale rumps; white bellies; and narrow, diagonal, underwing covert bars. The area of the wing trailing the "W" pattern was clearly as pale as the portion of the back and wing coverts forward of the "W" pattern. This combination of features eliminates all other species (Harrison 1983). One bird followed the boat for 15 minutes (allowing detailed study), and all birds were heading in a southward direction. This is the first record of Cook's Petrel in Hawaiian waters. However, Gould (1983) recorded them in the central North Pacific, and records from Alaska and California (Harrison 1983) clearly establish this New Zealand species as regularly ranging through the area.

**Buller's Shearwater** (*Puffinus bulleri*). Two individuals of this species were observed on 3 November, both in the vicinity of 27° 21'N 175° 20'W. The birds had long, slender bills and a straight-winged flight pattern, identifying them as shearwaters. They were mostly gray above, with a fairly distinct "W" pattern across their wings. Underneath, they were entirely white except for narrow black borders to both edges of the wings. Pyle is familiar with Buller's Shearwaters and immediately recognized them. Gould (1973) did not report this species, and King (1970) recorded only three spring observations in his study area. These and a May



specimen from about 200 km south of Necker Island (R. Pyle, pers. comm.) are the only previous reports of this southern hemisphere breeder in Hawaiian waters. The common occurrence of the species off California in fall (Harrison 1983), however, indicates the potential for its autumn occurrence in Hawaii, as well.

**Short-tailed Shearwater** (*Puffinus tenuirostris*). Pyle watched an individual of this species following the boat for several minutes on 3 November at 27° 27'N 175° 34'W. It was small with slender wings, arched high in flight, and was entirely dark in coloration except for a sullied light sheen to the undersides of the wings. It was separated from the very similar Sooty Shearwater (*P. griseus*) by the slight build and sullied as opposed to bright underwing sheen. The observer has seen both species and is familiar with this identification problem. Confusion with Christmas Shearwater (*P. nativitatis*) was eliminated by the bird's shape, flight habits, and presence of some sheen to the underwings. The Short-tailed Shearwater breeds abundantly in Australia and spends its non-breeding season (May–October) off the Aleutian Islands (Harrison 1983). The only previous records in Hawaiian waters are by King (1970), who recorded 880 observations in his study area, 95% of which were seen during the period 9–13 November 1964, and Gould (1983), who reported these or Sooty Shearwaters in the same time period south to 24°N 158°W.

**Wilson's Storm-Petrel** (*Oceanites oceanicus*). We carefully identified three individuals of this species on 3 November in the vicinity of 27° 10'N 174° 58'W. Two were seen together, 30 minutes after which a single bird was closely observed following the boat for several minutes. Field marks noted were the birds' small size (smaller than Leach's Storm-Petrel, which was also observed that day) and very distinct, continuous, fluttery flight-pattern, with feet dropping and pattering on the water surface for as long as 10 seconds. The upperparts were brown with a distinct pale bar across the wing coverts, and a broad, undivided, white rump patch was present, extending at least around to the undertail coverts. The tail was short and unforked, and the feet were clearly visible, projecting beyond the tail in flight. These characteristics combine to eliminate all other species of storm-petrels, including the similar Leach's and Band-rumped (*Oceanodroma castro*) Storm-Petrels (see Lee 1984). Pyle is also very familiar with Wilson's Storm-Petrel and recognized the diagnostic manner of flight and foot pattering as representative of this species. These are the first records of Wilson's Storm-Petrel in Hawaiian waters. It is a southern hemisphere breeder with a major northward range extension into the North Atlantic Ocean and a small and little understood extension into the North Pacific (Huber 1971). Records for the Eniwetak area, Japan, and California (Huber 1971, Harrison 1983) indicate the potential for its regular occurrence in Hawaiian waters.

**Leach's Storm-Petrel** (*Oceanodroma leucorhoa*). Four Leach's Storm-Petrels were observed, on 3(2 birds), 4, and 14 November. They differed considerably from the Wilson's Storm-Petrels in shape and flight, having a much longer and clearly forked tail, and an erratic flight pattern, with frequent gliding interspersed with veering flaps. The plumage was otherwise similar to the Wilson's Storm-Petrels except that the rump patch was more confined to the upper surface of the rump and showed a distinct division down the center. Confusion with Band-rumped Storm-Petrels was eliminated on the basis of flight pattern and the division of the white rump patch. Gould (1983) found this North Pacific breeder along his transect, King (1970) recorded it commonly throughout the winter in his study area, and there are also numerous

beach-washed records for the Hawaiian Islands (R. Pyle, pers. comm.), including two from Kure Atoll (Clapp and Woodward 1968).

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We thank Stewart Fefer (USFWS) for organizing the Laysan trip and Commander Keister of the Townsend Cromwell and Ed Shallenberger of the *Feresa* for ensuring our safe and comfortable passages. Robert Pyle of the B.P. Bishop Museum, Honolulu, kindly provided us with unpublished information on distribution, and Cameron Kepler and an anonymous reviewer made many helpful suggestions for improving the manuscript. This is contribution # 335 of the Point Reyes Bird Observatory.

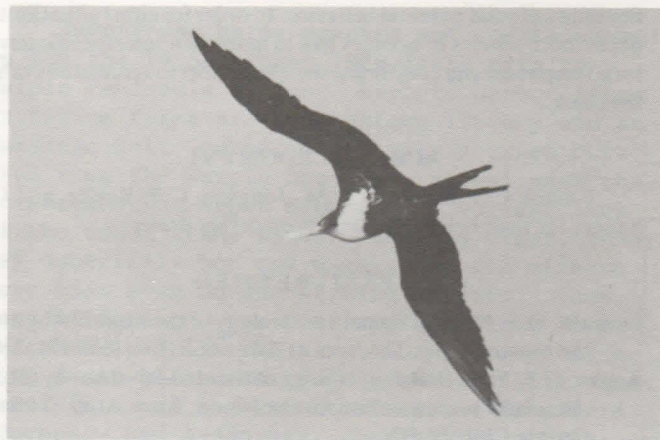
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Great Frigatebird.

Photo by Greg Vaughn



## Masked Booby Nest Helper?

Mark J. Rauzon<sup>1</sup>

Three species of Sulids breed in the Northwestern Hawaiian Islands and have dissimilar nesting requirements (Nelson 1978). The Masked Booby (*Sula dactylatra*) nests on barren ground. In Hawaii, it nests on sandy upper beaches and also in open inland areas. The Red-footed Booby (*S. sula*) constructs a nest of sticks in shrubs or trees. The Brown Booby (*S. leucogaster*) builds a nest of sticks directly on the ground (Nelson 1978).

Although Masked Boobies will nest on or beneath vegetation, only rarely are they observed to nest on vegetation (Kepler 1969). Doward (1962b) observed a first year breeder nesting on *Tribulus cistoides*. Kepler (1969), studying their breeding biology at Kure Atoll, never observed Masked Boobies perched in shrubs.

On 17 April 1977 at Whale-Skate Island, French Frigate Shoals, Hawaii (23° 51'N 166° 13'W), I saw an adult Masked Booby perched in an overturned *Tournefortia argentea* bush approximately 1 m above the ground. This individual, judged to be female from its pale yellow bill (Kepler 1969), was sitting on the rim of a stick nest occupied by a Red-footed Booby which was brooding a chick. On 24 April and 11 May, the Masked Booby was brooding the chick alone (Figure 1). The chick appeared to be about nine weeks old on 11 May because of the eruption of black remiges and rectrices (Nelson 1967a). At this stage, chicks of both Masked and Red-footed Boobies superficially appear similar (Nelson 1978), and I could not be sure of the chick's identity.

My visits to the nests were brief, and the relationship of the nesting birds can be interpreted in several ways. The Masked Booby female may have laid its egg(s) in a nest built by a male Red-footed Booby. The pair may have then raised the chick together. However, the chick may or may not have been a hybrid between the two birds. The only sulid hybridizations reported have been between Masked and Brown Boobies, both terrestrial nesters (Nelson 1978, Worcester 1911).

Another explanation is that the Masked Booby may have been a helper. A helper as defined by Skutch (1961) is a bird which assists the nesting efforts of another bird that is not its mate. Kepler (1969) found that Masked Boobies need not hatch eggs in order to develop "proper parental behavior." This behavior has been seen in other sulids. A Red-footed Booby helped feed and brood Great Frigatebird (*Fregata minor*) chicks (Woodward 1976).

This observation is an example, albeit aberrant, of the flexibility of sulid parental behavior. In order for either situation to occur, both species of boobies had to mute their interspecific territorial responses and coordinate their behaviors to successfully raise the chick.

### ACKNOWLEDGMENT

I thank C.S. Harrison, A.M. Johnson, C.B. Kepler, and G. Sanger for their helpful comments on earlier drafts.

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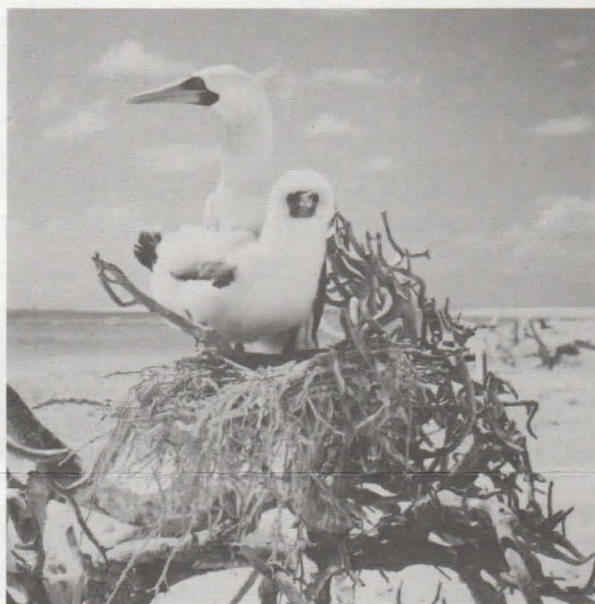


Figure 1. Masked Booby attending chick at Red-footed Booby nest.

Photograph by M.J. Rauzon

## NO NA LEO 'OLE

### Marijuana Eradication

The Hawaii Division of Forestry and Wildlife recently solicited comments on an EIS preparation notice for a project to eradicate marijuana on State-owned and managed Conservation District lands of the islands of Hawaii, Maui, and Molokai. A final EIS was approved in 1985 for an identical project on the island of Kauai. In reply, the Society gave its full support to eradication of marijuana growing on State Conservation lands. In addition, the Society encouraged the elimination of any other illegal farming or unauthorized land use on Conservation lands.



The Society's major concern is the protection of native plants and animals from damage when the project is under way. The chemicals to be used in the spraying program are Chevron Weed Oil - similar to diesel oil - and glyphosate, sold commercially as Round-up. Paraquat will not be used. We requested a carefully detailed plan for the protection of native habitats when the trained work crews do the spraying and mechanical removal of marijuana plants.

#### Wai-luku River Hydropower Plant

The Garratt-Callahan Company of California has filed a Conservation District Use Application with the Hawaii Department of Land and Natural Resources for a 5 megawatt hydroelectric power project at the confluence of the Wai-luku River and Hookelekele Stream five miles west of Hilo. In comments on the EIS preparation notice, the Society calls for in-depth surveys of the terrestrial and stream habitats that will be affected by the project. In particular, a botanical specialist needs to assess the ohia forest in the area and evaluate the impact on the rare variety of *Metrosideros collina*, presently identified as "newellii," that apparently occurs only on and adjacent to the development sites.

Also of key importance will be the assessment by an aquatic biologist of whether viable populations of native stream animals and plants can survive a long-term reduced stream flow.

The endangered Hawaiian Hawk ('Io) has been observed at the project site. According to the developer's preliminary ornithological report, there is a possibility that two other rare bird species inhabit the area in very low numbers: the endangered Hawaiian Duck (Koloa) and the threatened Newell Shearwater ('A'o). The State of Hawaii is the landowner of the project site.

#### Opae-ula Pond Development

The Kamehameha Schools/Bishop Estate is seeking to change the land use designation of a 353-acre parcel of land at Makala-wena, North Kona from Conservation to Urban-Resort zoning. The Society is keenly interested in this proposal because Opae-ula Pond and the adjacent coastal wetlands at Makala-wena are the most important remaining Big Island habitat for the endangered Hawaiian Stilt (Ae'o) and the en-

dangered Hawaiian Coot (Alae-ke'oke'o). If resort zoning is granted, the Bishop Estate says it will make the pond an 18-acre "wildlife refuge."

In comments on 20 September on the EIS preparation notice, the Society recommended that the Protective subzone-Conservation district land use designation be retained for Opae-ula, the adjacent brackish water ponds and the coastal dunes because of the key importance of Opae-ula as habitat for endangered waterbirds, as well as for other native birds, migratory ducks and shorebirds.

In 1970, the U. S. Fish & Wildlife Service (FWS) gave top priority on the Big Island to the acquisition of Opae-ula for a permanently protected national wildlife refuge. Subsequently, the FWS almost succeeded in purchasing 35 acres, to include the pond and a buffer zone, but the deal fell through at the last minute.

Plans are underway now for ten more tourist resorts along the West Hawaii coast, both north and south of Makala-wena. Competition and capital investment risks for new resorts are said to be substantial. The Society has proposed an alternative land use to the Bishop Estate: "to restore and maintain the integrity of Opae-ula Pond, the adjacent wetlands and the coastal dunes as a wildlife refuge in perpetuity for the conservation education and natural history heritage of its beneficiaries-the Hawaiian students of the Kamehameha Schools."

Mae E. Mull  
Is. of Hawaii Rep

### SEPTEMBER FIELD TRIP TO WAIPIO PENINSULA

Twenty-one hardy members and guests showed up for the 14 September 1986 field trip to Waipio Peninsula in Pearl Harbor, Oahu. After gathering first at the downtown library and at Makalena Golf Course, we finally started our trek from the Waipio Depot Rd. access near the incinerator at about 8:00 AM. A virtual lack of the usual trade winds made this clear, sunny day especially hot and muggy, and its effects were soon seen on the wilting birders. (How many birders can you fit into the shade of a telephone pole?) The first interesting birds were found before we reached the settling ponds. Waipio's usual assortment of exotic Estrildid finches - Red Avadavats, Chestnut Mannikins, and Common Waxbills - were all seen feeding in grassy weeds. Though not the most cooperative of birds,



by the end of the morning everyone managed to get a decent look at them, and a few also saw some Nutmeg Mannikins, which are much less common there. Three Eurasian Skylarks were seen foraging on the dried mud very close to us, and a fine view was had by all. A few skylark calls were heard, but unfortunately no full flight-songs. A Shama was also heard calling from some distant trees.

The real object of the trip, however, was shorebirds, and the participants were well-rewarded with good numbers of the regular migrants, as well as a nice assortment of less common visitors. Most common were at least 150 Lesser Golden-Plover (Kolea), at least 100 Ruddy Turnstones ('Akekeke), 80 or so Sanderlings (Hunakai), and a hundred or more noisy Ae'o, the endangered endemic Hawaiian subspecies of the Black-necked Stilt. A pair of Wandering Tattler ('Ulili) completed the list.

The first of the rarer shorebirds was a Least Sandpiper, spotted by leader Bob Pyle. Everyone was given a decent look at this small yellow-legged peep through the various scopes that were set up. There were also two semi-palmated-type plover, one juvenile and one non-breeding adult. Peter Donaldson also identified a Short-billed Dowitcher by subtle field-marks: the Short-bill's tertiaries have an orangish "tiger-stripe" pattern on them, whereas the Long-bill's are all dark. This character was adequately seen through Peter's Questar (crystal clear at 40x). Short-billed Dowitchers are by far the rarer of the two dowitcher species to visit Hawaii. There were also two Lesser Yellow-legs, which occasionally came fairly close and provided excellent views. Interestingly, one was obviously larger than the other, but it, too, was determined to be a Lesser. There were good views as well of the rarest bird of the day: a limping Buff-breasted Sandpiper. This very rare straggler was first confirmed in Hawaii in 1978 and has been seen here only a few times since. Its slender build; evenly buffy breast, throat, and face, and faint eyering were seen well by everyone.

Moving to the next pond, we found only the usual stilts and common migrants, as well as four distant 'Alae-ke'oke'o, the Hawaiian Coot. As we were about to move around this pond to search for the Ruffs (♂) and Reeves (♀ of the same species) seen here last week, Peter spied one as it glided into the pond, but it flew off before anyone could get a good look at it. Following the ditch around this and the next pond (which held only a few stilts and plover), we saw at least three (1 Ruff and 2 Reeves) flying above and between the ponds. Eventually we were able to find them on the ground in a dry, bulldozed, new pond in the company of

plover. We obtained some nice views of them through the telescopes and were able to see the notable size differences between the sexes and compare them to plovers.

By this time, our numbers were reduced by attrition, and our vision blurred by the heat waves, so the survivors began to head back. On the way out, Peter saw a distant, flying Black-bellied Plover, and he also pointed out a Koloa (Hawaiian Duck) that flew by. We reached the cars at about 11:30am, hot, thirsty, and tired, but happy with a morning well-spent.

Jaan Lepson

## OCTOBER FIELD TRIP TO JAMES CAMPBELL REFUGE

Due to a mailing mix-up, last month's issue of the 'Elepaio was late in notifying HAS members of the 5 October 1986 field trip to James Campbell National Wildlife Refuge in Kahuku, Oahu.

Four people did manage to make the outing, and they were treated to good weather and great birding. Large numbers of the native and endangered Hawaiian Stilt (Ae'o), Hawaiian Coot ('Alae-ke'oke'o), Hawaiian Gallinule ('Alae-ula), and Hawaiian Duck (Koloa) were observed along with the Black-crowned Night-Heron (Aukuu). A good number of Northern Shovelers, several American Wigeons, and a flock of unidentified teal were sighted along with several members of the resident Fulvous Whistling-Duck population. Wandering Tattlers, Lesser Golden-Plovers, Sanderlings, and Ruddy Turnstones were also observed in and around the refuge ponds, and two Ring-necked Pheasants, a hen and cock, were flushed along the fenceline.

Permission to visit the sand dunes and beach fronting the refuge was granted by Campbell Estate, and, to everyone's delight, three Bristle-thighed Curlews were sighted flocking with several Lesser Golden-Plovers amongst the naupaka and morning glory.

The determined group was then allowed into the Amorient Prawn Farm in search of more feathered critters. Two rafts of Fulvous Whistling-Ducks were observed, most of which were young birds near fledging. As many as six youngsters were counted with one adult. Many more stilts, gallinules, coots, and Hawaiian Ducks were seen, but there was a noticeable decline in the Black-crowned Night-Heron population, probably due to the predator control efforts of the prawn farm.



Cattle Egrets, Common Mynahs, Zebra and Spotted Doves, House Finches, Nutmeg Mannikins, and a Northern Cardinal were observed on both the prawn farm and the refuge, along with a lone-soaring Frigatebird.

The group broke up at noon, but two of us persevered and went back to a dry pond on the refuge. There we were treated to a large congregation of shorebirds (plovers, Ruddy Turnstones, Sanderlings, and Wandering Tattlers). Six were vagrant species. We were able to identify one Pectoral and two Sharp-tailed Sandpipers and two dowitchers. We also observed a small sandpiper we believed could have been a Curlew Sandpiper, but due to poor light conditions we could not make a positive identification.

All in all it was a rewarding day of birding. Since this field trip was announced too late, HAS has decided to reschedule a visit to these same places Sunday, November 16th.

Bruce Eilerts

## ALOHA TO NEW MEMBERS

We welcome the following new members and encourage them to join in our activities.

### Local Members and Subscribers:

Marjorie H. Carrick, Albuquerque, NM; Patrick Ching, Honolulu, HI; Daniel Kahane, Los Angeles, CA; Issac Kanoa, Haiku, HI; Kaycie Lane, Honolulu, HI; John B. Langley, Pendleton, SC; Gabriele C. LeMond, Honolulu, HI; Clytie P. Mead, Newport Beach, CA; Judy Pudoff, Loloa, HI; Paul R. Sievert, Madison, WI; Kiley Sullivan, Kailua, HI; Teri Ann Tokushige, Kailua, HI.

## HAS PHOTO/ART EXHIBIT

Patrick Ching and Bruce Eilerts are organizing a HAS photo/art exhibit that is tentatively scheduled to run through the month of March in the exhibit room at Ho'omaluhia Botanic Garden.

If you are interested in displaying your wildlife photos in this exhibit, please call Patrick Ching at 839-2866 or Bruce Eilerts at 941-5974.

Your speedy response will be much appreciated so that final plans can be made.

## NOVEMBER 17 PROGRAM THE MATING SYSTEM OF TROPICAL HOUSE WRENS

At the November General Meeting, Dr. Leonard (Lenny) Freed, who teaches vertebrate zoology at the University of Hawaii, will speak on the intriguing social life of a well-known bird in an exotic locale. House Wrens are familiar birds to all who have lived on the mainland. Less appreciated is the fact that these birds are found from southern Canada to Tierra del Fuego, and thus breed in an extremely wide variety of habitats. During a 4-year study of a House Wren population in lowland central Panama, Freed found that males and females are, with rare exception, monogamous and paired for life on territories defended throughout the year. However, breeding opportunities or empty positions on territories are severely limited for both males and females throughout the year, generating intense competition within each sex. The monthly General Meeting will be held November 17th, at the McCully-Moiliili Library. The meeting begins at 7:30 PM; members, guests, and the general public are welcome to attend.

## NOVEMBER FIELD TRIP

Sunday, November 16

James Campbell National Wildlife Refuge

Leaders: Bruce and Robin Eilerts (941-5974)

The November field trip will be a repeat visit to James Campbell National Wildlife Refuge and Amorient Aquafarm, near Kahuku. This was the destination of last month's trip; however, owing to the early date of the trip and the late publication of the 'Elepaio, most members did not hear about the trip until after it was held. The Eilerts have generously agreed to lead the trip again, and we hope this will provide a second chance for those who wish to join this very popular excursion. This is an excellent opportunity to observe migratory shorebirds and waterfowl along with native waterbirds and, possibly, seabirds. Refer to last month's trip report (page 186) for rare sightings recorded on that trip. Participants should pack a lunch and bring binoculars (if available), a hat and sunscreen. Meet at 7:30 AM in front of the State Library on Punchbowl Street.



## 1986 CHRISTMAS COUNTS

There will be six Audubon Christmas Counts this year. These counts are always exciting, with records to be broken and new birds to be seen. We especially need people to attend the counts on the outer islands. The counts have been scheduled to facilitate a weekend visit to Kauai or Hawaii. For information on Kauai counts, contact Winona Sears at 822-3045. For Hawaii Is. counts see notice below. Bob Pyle (262-4046) can be contacted about Oahu counts. The counts are scheduled as follows:

### Oahu:

Waipio - Saturday, 20 December  
Honolulu - Sunday, 21 December

### Kauai:

Lihue - Saturday, 20 December  
Kapaa - Saturday, 27 December  
Waimea - Sunday, 28 December

### Big Island:

Volcano - Saturday, 3 January

## CHRISTMAS COUNT WORKSHOP

A Hawaii natural history workshop is planned in conjunction with the 1986 Audubon Christmas bird count on the Big Island for 2-3 January 1987. This workshop will provide a unique opportunity to observe rare Hawaiian birds and plants in their native habitat. The tentative schedule is as follows:

### Friday, 2 January

Early morning trip to Kulani Correctional Facility to view rare forest birds ('Akiapola'au, *et al.*), or Bird and plant identification training and field trip within the National Park, and Evening speakers.

### Saturday, 3 January

Christmas bird count, data compilation, and evening speaker and dinner.

The Magma House at Hawaii Volcanoes National Park will be available for lodging. The facility has two dorms, a large meeting room with fireplace, and a community kitchen. Limited airport pick-up in Hilo is planned, renting of cars is encouraged. There will be a nominal registration fee and a small charge for those wishing to stay at the Magma House. If you plan to attend the Kulani CF trip and live off-island, plan to arrive in Hilo Thursday evening. Also, security clearance at

Kulani CF is necessary. Therefore, you must send your Social Security number and date of birth along with your registration request. For further information and registration forms, call Larry Katahira at 967-7416 (home), -8133 (work), or Julie Williams at 968-8166 (home) or 967-7396 (work) or write to them at Box 774 Volcano, HI 96785. Register by 1 December.

## NOMINATING COMMITTEE REPORT

The Society's 1986 Nominating Committee (Darwin Bohnet, Sheila Conant and Michael Hall) has settled on the slate of officers it will nominate for this December's election for the 1987 Board of Directors. The slate that will be offered by the Nominating Committee is:

President:	Phillip Bruner
First Vice-President:	Peter Luscomb
Second Vice-President:	Allen Allison
Treasurer:	Joel Simasko
Recording Secretary:	Tim Ohashi
Corresponding Secretary:	Michael Hall
Directors:	Darwin Bohnet
	Bruce Eilerts
	Robert Fleischer
	Wayne Gagne
	Mae Mull
	Tim Sutterfield

Should any member wish to nominate additional "write-in" candidates, the Bylaws do allow for this possibility. The nominator must send, in writing, his or her nomination to the Nominating Committee (c/o Hawaii Audubon Society, P. O. Box 22832, Honolulu, HI 96822) so that it is received no later than 14 November 1986. The nominator should also include a two or three line biography of the candidate that will be published on the ballot that goes out with the December 'Elepaio. The written nomination must be accompanied by, or the Committee must receive, also by 14 November, written consent from the person being nominated that he or she is willing to run for election and to serve in the appropriate post on the Board of Directors. The deadlines are set to allow time for preparation and publication of the ballots with the December 'Elepaio.

## MANAGEMENT TAKES THE BLAME

for the late publication of last month's 'Elepaio. We apologize for inconveniences caused, particularly to Alan Ziegler and Bruce Eilerts, upon whose voluntary services the Society depends.



## HAWAII AUDUBON SOCIETY

## BOARD OF DIRECTORS

President	Phillip Bruner	293-3820
1st. V. P.	Andrew Engilis	848-4155
2nd. V. P.	Peter Luscomb	261-3645
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Rec. Secy.	Tim Ohashi	396-8061
Cor. Secy.	Michael Hall	293-3800
Directors	Allen Allison	848-4145
	David Boynton	335-5008
	Wayne Gagne	848-4166
	Mae Mull	967-7352
	Tim Sutterfield	737-5874

## COMMITTEES

Adopt-a-Refuge	Phillip Bruner	293-3820
	Sheila Conant, Jim Krakowski, Robert Pyle	
Conservation	Wayne Gagne	848-4166
	David Boynton, Mae Mull	
Education	David Boynton	335-5008
	Suzan Harada, Steve Montgomery	
Field Activities	Andrew Engilis	848-4155
	Peter Donaldson, Suzan Harada, Carl McIntosh, Robert Pyle	
Finance	Audrey Newman	732-7572
	Marie Morin, Michael Ord, Thane Pratt, Robert Pyle	
Grants and Scholarship	John Engbring	546-7530
	Allen Allison, Phillip Bruner, Robert Kinzie, Thane Pratt	
Mail Distr.	Leilani Pyle	262-4046
Membership	Robert Pyle	262-4046
	Susan Schenck, George Campbell	
Programs	Allen Allison	848-4145
	Lee Bauer, Peter Luscomb	
Publicity	Darwin Bohnet	293-5647
	M. Engilis, S. Harada, C. McIntosh	
Publications	Andrew Engilis	848-4155
	P. Bruner, S. Conant, R. Pyle	
Sales	Martha McDaniel	235-6636

## ISLAND REPRESENTATIVES

Kaua'i	Dr. David and Winona Sears	822-3045
Maui	(vacant)	572-1499
Hawai'i	Mae Mull	967-7352

## FREE ICE CREAM

Will again be served to those volunteers who help with the typing, proof-reading, or paste-up of next month's 'Elepaio at Thane Pratt's house, 954 Spencer St. on Saturday, 22 November, at 1:00 PM. Phone 524-8464 for more information. Authors of articles, notices, etc. are reminded that these must be received by 15 November to be included in the December issue.

Many thanks to Sheila Conant, Rob Fleischer, and David McCauley for helping with the production of the November issue.

## 'ELEPAIO

Editors	Thane Pratt	524-8464
	Sheila Conant	948-8241
Production	Robert Fleischer, Marie Morin, Robert Pyle	
Mailing	George Campbell, Susan Schenck, Alan Ziegler	
(MANUSCRIPTS of articles and newsletter items may be sent to the Managing Editor at 954 Spencer St., Honolulu, HI 96822. Articles not subject to peer review MUST be received by the 15th of each month to be considered for publication in the next month's issue.)		

## IF NOT A MEMBER, PLEASE JOIN US

## JOINT MEMBERSHIP

(National and Hawaii Audubon Societies)

Individual.....	\$ 30.00
Family.....	38.00
Sustaining.....	50.00
Supporting.....	100.00
Contributing.....	250.00
Donor.....	500.00
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*Special rates for full-time students and Senior Citizens (65 years of age or older) are available. Please write for application form.*

## LOCAL MEMBERSHIP

(Hawaii Audubon Society only)

Regular.....	\$ 6.00
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Subscriber (non-Hawaii residents)....	6.00
Life (payable in three equal annual installments).....	150.00

*All Local Memberships and Subscriptions are for a calendar year January through December.*



# CALENDAR OF EVENTS

- Nov. 10 (Mon.) Board Meeting at Bishop Museum at 7:00 PM. Call Phil Bruner at work, 293-3820.
- Nov. 16 (Sun.) Field trip to J. Campbell NWR. Meet 7:30 AM at the State Library on Punchbowl St. Trip notice on page 187.
- Nov. 17 (Mon.) General Meeting at McCully-Moiliili Library at 7:30. Program notice on page 187.
- Nov. 22 (Sat.) 'Elepaio paste-up at Thane Pratt's house (524-8464) at 1:00 PM.

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HAWAII AUDUBON SOCIETY  
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