



## Interisland Movement of Hawaiian Monk Seals

by Ancel M. Johnson<sup>1</sup> and Eugene Kridler<sup>2</sup>

Hawaiian monk seals (*Monachus schauinslandi*) regularly haul out on beaches of the northwestern islands of the Hawaiian Archipelago to rest, molt, give birth, and nurse their young. Islands used by monk seals include Nihoa and those islands and atolls northwesterly to Kure. The chain of islands used by monk seals is about 1000 nm long and the islands are separated by distances varying from 50 to 330 nm.

The genus *Monachus* includes 3 species, all considered endangered and one of these, the Caribbean monk seal (*M. tropicalis*) is believed to be extinct (Kenyon, 1977). Concern for the Hawaiian monk seal increased following reports by Kenyon and Rice (1959) and Rice (1960) of low numbers and the low counts of the 1960's and early 1970's. Even though there has been a decline in the total population of Hawaiian monk seals, in one area there has been a substantial increase (Johnson et al., 1982). Counts of monk seals at French Frigate Shoals, Necker and Nihoa, the easternmost atolls and islands used consistently by monk seals, have increased by about 40 seals during 1957-58 (Rice, 1960) to about 250 during 1975-1978 (Johnson et al., 1982). Counts on all islands west of French Frigate Shoals declined during the same period. Among the western islands the magnitude of the declines varied from about 25% to about 90% (Johnson et al., 1982). These observations suggest that the Hawaiian monk seal population is composed of several discrete subpopulations. Nevertheless, sightings of tagged monk seals indicate that there is some movement of seals among the islands. In this paper we review the data reported by Kenyon and Rice (1959) and Wirtz (1968) and present data collected by the U.S. Fish and Wildlife Service from seals tagged from 1966 through 1972.

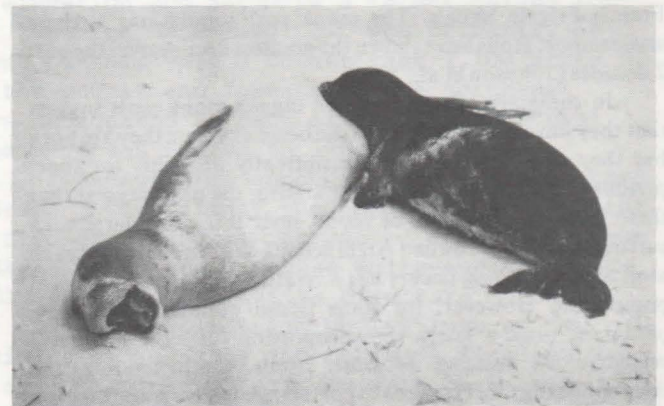
Generally, pinnipeds show a relatively high fidelity in their use of beach areas and this was found to be also true for monk seals. Kenyon and Rice (1959) and Rice (1960) reported that movements of 59 tagged monk seals were limited to short distances between islets within atolls. In an unpublished report Wirtz (1968) reported 8 instances of movement among 375 seals tagged in the early 1960's. Most of these tags (205) were applied at Kure Atoll.

During the period 1966 through 1972, 863 monk seals were tagged; 351 of these seals have been resighted a total of 674 times (Table 1). Most of this tagging was done by the staff of the Hawaiian Islands National Wildlife Refuge, U.S. Fish and Wildlife Service. The seals were tagged with a monel cattle ear tag attached to a hind flipper. Initially all ages and both sexes were tagged but after 1968, tagging pups of the year was emphasized. The sex was recorded for most seals tagged and

seals were assigned to the major age groups—pups, juveniles, subadults, and adults. Tagging and resighting was done on an opportunistic basis primarily during survey and inspection trips to the Refuge. Visits to an island lasted from a few hours to several days, consequently tagging and resighting effort varied from trip to trip and among islands. Usually tagged seals were not captured or disturbed when resighted, consequently, tagged seals were frequently resighted but their tag number could not be determined.

No age or sex associated differences were detected in the proportion of seals that had moved ( $P > 0.75$ ), therefore all data for each island were pooled for additional analysis. There were too few resightings of seals tagged as pups to determine if the rate of movement changed with age. Twenty-seven tagged seals, 8% of all 351 seals tagged and resighted, were sighted at islands other than where tagged, and 5% (31) of the total resightings (674) indicated seals had moved. A chi square test showed the percentages of the tagged seals resighted that had moved varied significantly ( $P < 0.01$ ) among islands, from about 3% to 15%, excluding Kure and Midway where only 8 and 5 seals were tagged. The rate of movement was less than expected for seals tagged at French Frigate Shoals, and greater than expected at Laysan and Lisianski.

The longest distance moved was from Pearl and Hermes Reef to French Frigate Shoals, about 575 nm. This is only slightly farther than the report by Schreiber and Kridler (1969) of a monk seal that moved from Laysan to Johnston Atoll, a distance of 547 nm.



Hawaiian monk seals.

Photo by Eugene Kridler



Table 1. Number of Hawaiian monk seals tagged (in parentheses) and islands where resighted.

Islands where marked	Islands where resighted							Total
	French Frigate Shoals	Laysan	Lisianski	Pearl and Hermes Reef	Midway	Kure	Other	
French Frigate Shoals (290)	137	2					2 *	141
Laysan (219)	2	73	1	5			2 †	83
Lisianski (133)	1	2	40	4			0	47
Pearl and Hermes Reef (208)	1	2	0	74			0	77
Midway (5)					1			1
Kure (8)				2				2

\* One seal resighted at Nihoa and one at Johnston Atoll.

† Both seals resighted at Johnston Atoll.

None of the monk seals were sighted at more than 2 atolls but 7 were resighted at the atoll where tagged after they were sighted elsewhere. A yearling of unknown sex, tagged at Laysan in 1967, was sighted at Lisianski on 18 March 1968 and at Laysan on 20 March 1968; these atolls are about 120 nm apart. Wirtz (1968) reported that an adult male tagged on Kure in 1963 was seen at Lisianski on 12 March 1965 and was back at Kure on 27 March 1965. The seal had traveled at least 275 nm. Movement from Laysan to Maro Reef to Laysan was reported by Johnson, P.A., et al. (1980). These observations suggest that the return to the "home" atoll was direct, not the result of wandering. However, other sightings, such as the pup sighting at Johnston Atoll, suggest that monk seals wander through a relatively large area surrounding the Hawaiian Archipelago.

There was no obvious directional movement to the east or west. However, among the westernmost atolls, that is from Laysan westward, 11 of 23 seals that had moved were seen at Pearl and Hermes Reef suggesting that that atoll or a nearby area is particularly attractive to seals. The shoal area (less than 10 fathoms) at Pearl and Hermes Reef is the most extensive west of French Frigate Shoals. The monk seal populations at these westernmost atolls have shown the greatest decline over the past 2 decades (Johnson et al., 1982).

In summary, observations of tagged monk seals suggest that they have a high fidelity to the beaches where they are born but they use other islands intermittently probably for short periods as temporary resting sites. Also, the data suggest that there is some wandering of monk seals through a large area surrounding the Hawaiian Archipelago. We conclude that each atoll where pupping occurs has a relatively discrete monk seal population. However, for some island populations, over a period of time, a fairly high proportion (at least 15%) will regularly use beaches or other atolls. Unfortunately, the resighting effort was limited to short sporadically spaced visits so that accurate estimates of the probability and duration of visits cannot be made. Other consequences of these attributes of monk seals should be noted. For instance, if an island population is

greatly reduced or eliminated, as apparently happened at Laysan at the turn of the century (Dill and Bryan, 1912) a population is likely to be reestablished by straying seals but will increase slowly because immigration from other island populations will be low due to the fidelity of seals to their natal beach. Straying provides a means of spreading contagious diseases and for genetic mixing among populations. Also, straying can bias population estimates; the magnitude of the bias depends on the method used and the amount of straying.

#### ACKNOWLEDGEMENTS

We wish to thank the U.S. Coast Guard for the logistical support provided; G. Balaz, R. Brownell, D. DeMaster, W. Gilmartin, K. Kenyon, and S. Conant for review and suggestions improving the manuscript; and the numerous people that assisted in tagging and reporting sightings of tagged monk seals.

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## MANANA ISLAND TRIP REPORT -AUGUST 1983-

Twenty-eight H.A.S. and Sierra Club members and guests participated in the fourth and final field trip to Manana for 1983 on Sunday, 21 August. The weather cooperated even better than earlier visits, with winds under 10 knots and sunny skies. Vegetation on the Island had been severely affected by the limited rainfall this year, leaving virtually all of the Wedge-tailed Shearwater burrows on the slopes and crater floor exposed for all of us to see. I noticed that shearwater nesting was slightly later than usual, with several eggs still unhatched. Bulwer's Petrel chicks, of which we saw four, were also somewhat less developed than is usually the case at this late date in the summer.

We hiked around the crater rim, an activity that is not recommended earlier in the season when Sooty Terns and Brown Noddies are far more numerous. An estimated 4-5,000 noddies remained on the Island, but sooties were very scarce. Several noddy chicks, from an apparent second nesting phase, were observed. At least a thousand noddy pairs were still on eggs around the crater rim.

Four immature Brown Boobies in flight near the crater rim and at least four different Red-tailed Tropicbirds provided a special treat. All came close enough to leave the binoculars at home. Frigatebirds, Wandering Tattlers, and Ruddy Turnstones were also added to the list during the visit. Of particular interest was our observation of an immature Black-crowned Night-Heron pulling a young shearwater chick from its burrow. While I had observed these predators taking young noddies and sooties with

some regularity, predation on shearwaters appears to be a far less common pastime. In normal rainfall years the vegetative cover in much of the shearwater nesting area would limit access to this prey.

The lack of vegetative cover also made it possible to observe at least four rabbits moving through a dying patch of tobacco on the central crater floor. Three other rabbits were seen in and around caves and rocks near the south tidal area.

Perhaps the only discouraging part of this visit was the number of other boats with divers and others who chose to land on Manana in spite of the two "landing prohibited" signs. This is a particularly vulnerable period in the shearwater colony because the lack of vegetative cover tempts the unknowing visitor to walk up-slope towards the crater rim, with the likelihood that several occupied burrows would be crushed. I believe an aggressive attempt at enforcement, particularly during weekend days with lovely weather, would be a useful exercise.

*Robert Shallenberger*

## MT. KAALA FIELD TRIP REPORT -JULY 1983-

The morning of Sunday 10 July dawned cloudy, with light showers frequenting the windward slopes of the Waianae Range. Such gloomy prospects failed to deter the approximately 25 cheerful and eager hopefuls who were patiently waiting at the customary Punch-bowl St. meeting spot for the scheduled trip to Mt. Kaala.

Mt. Kaala, the highest point on the Island of Oahu, rises to slightly more than 4,000 ft. in elevation and supports a rather unique forest type for Oahu--bog. It was primarily because of this unique forest that 1,100 acres of the summit and forests to the northeast were designated as part of the State Natural Area Reserves System in 1983.

We expected to encounter two of the native, endemic forest birds: the 'Apapane and 'Amakihi. We also expected the introduced exotic Japanese Bush-Warbler, and Japanese White-eye, and possibly an 'I'iwi (a native bird rare on Oahu).

After consolidating bodies into as few vehicles as possible and taking a final survey of all concerned ("Yes! We want to go up anyway!"), we started up about 7:45 a.m. The paved road provided excellent traction the entire 6+ miles up to the summit, much to every-



one's relief. However, upon reaching the summit we found that the prayer/curses hadn't changed the weather one bit, so all donned rain gear as we prepared for the hike across the bog.

Although the almost constant light rain and gusting wind continued throughout the hike, all seemed to thoroughly enjoy it. Frequent stops for short, informative talks on the surrounding plants by Dr. Derral Herbst, a botanist for the U.S. Fish and Wildlife Service, added much to the understanding of, and appreciation for, this unique area.

The only bird seen or heard during the entire one and one-half hour hike across the summit forest was the Japanese Bush-Warbler. These were heard only occasionally (a total of 4 or 5 heard) but were not seen. On the trip down, a stop was made approximately one-half mile above the upper gate in a mixed native-exotic forest to pursue a reported 'Elepaio sighting made on the way up. Unfortunately, no 'Elepaio were seen or heard, but all enjoyed the intermittent sunshine.

A few of the group remained after the trip ended around 11 a.m. to search for peafowl in the pasture area around the lower part of the road, and to investigate some of the native wiliwili trees in flower. At one point, a total of 12 peafowl were heard calling; however, spotting them was quite difficult as the echoes of their calls prevented us from pinpointing their locations. Three were eventually located. Erckel Francolin calls were also heard.

*Timothy A. Burr*

## NEW PUBLICATIONS

The *Liaison Conservation Directory for Endangered and Threatened Species* has been updated (May 1983) and published. This directory lists Federal, State-Territorial, private organizations, and independent contacts who are cooperating in the U.S. Endangered Species Program. All persons listed in the directory will receive a copy. Others may purchase the directory from the Government Printing Office, Washington, D.C. 20402 (stock number 024-010-00642-1, price is \$5.00).

The U.S. List of Endangered and Threatened Wildlife and Plants (50 CFR 17.11 and 17.12), reprinted in the July 27, 1983, *Federal Register* (Vol. 48, No. 145, pp. 34182-34196), is now available. Limited copies are available upon request from Office of Public Affairs-Publications, U.S. Fish and Wildlife Service, Washington, D.C. 20240.

*Reprinted from the Endangered Species Technical Bulletin*

## WATCH OUT FOR SHEARWATER "FALLOUT"!

The season of "fallen shearwaters" will become noticeable soon. Last year on Kauai, over 1,400 fallen Newell's Shearwaters were picked up by the public, collected by wildlife officials, and released back into the wild. (The Newell's Shearwater is one of two species of native Hawaiian seabirds that are threatened with extinction; it is known to nest only on Kauai.) On Oahu, at least 100 Wedge-tailed Shearwaters (a non-endangered seabird) were turned in by the public to Sea Life Park, the Honolulu Zoo, and the State Division of Forestry and Wildlife.

Shearwaters only come and go to their nesting burrow after dark, and in doing so often cross highways and populated areas that have bright lights. The young birds are apparently attracted to artificial light and become temporarily blinded or confused and injure themselves by flying into utility wires, tree limbs and buildings. Many fall on the highways and are hit by cars.

Shearwaters are seabirds that feed primarily on small fish and squid. They can go for a fairly long time without food and will not readily feed in captivity.

If you live on Kauai and find a fallen shearwater, turn it in to the nearest aid station. (Shearwater aid stations will be provided at all County Fire Stations, Hanalei Liquor Store, Kong Lung Store (Kilauea), and at the Y.M.C.A. building at Poipu.) Or, call the Kauai Division of Forestry and Wildlife (245-4433) or the U.S. Fish and Wildlife Service (828-1431) and report it as soon as possible. Wildlife officials will examine birds which are turned in, and will care for those that cannot make it back into the wild immediately.

If you live on Oahu and think you have found a shearwater, bring it in a box to the Honolulu Zoo, Sea Life Park, or call the Oahu District Biologist at 548-2861 or Tim Burr/Marie Morin at 548-5921.

*Adapted from a DLNR News Release*





## Checklist of the Birds of Hawaii

Robert L. Pyle

This Checklist includes all species of birds which have occurred naturally in Hawaii, and those species introduced by man which are currently established as viable populations reproducing in the wild. It revises and updates the *Preliminary List of the Birds of Hawaii* (Pyle, 1977) and *Amendment No. 1* to that list (Pyle, 1979).

Since these were published, *The American Ornithologists' Union Check-List of North American Birds*, in its forthcoming 6th edition, has been expanded in scope to include the birds of Hawaii. The *34th Supplement to the A.O.U. Checklist* (A.O.U., 1982) provides a preliminary listing from the 6th edition of the birds of Canada and the United States, including Hawaii. The 34th Supplement is followed in this Checklist for sequence of species, and generally for vernacular and scientific names. A few departures from the 34th Supplement are noted in appropriate sections of the Appendix.

Hawaiian language names were given to most of the native bird species by the native Hawaiian people long before western man arrived in the islands. These are the names generally used in the older literature, and they are used extensively today. The Hawaiian names given in this Checklist follow Pukui and Elbert (1973) and Titcomb and Gagne (1976).

The geographic scope of this Checklist includes all islands in the state of Hawaii west to Kure Atoll, plus Midway Atoll (not legally a part of the state of Hawaii), and coastal waters out to 325 kilometers (about 200 miles) from any of these islands. All endemic species and subspecies are listed, including those presumed to have become extinct in historic times. Ancient species known only from archaeological specimens are not included.

Scientific names are given to the species level for visitors and foreign introduced species, and to the subspecies level for native breeding birds. Tribe headings are shown within the unique Hawaiian sub-family *Drepanidinae*.

The A.O.U. English name from the 34th Supplement is provided for the vernacular name. Other vernacular names which are used frequently in Hawaii and in the literature are given in parentheses. Vernacular names are given to subspecies level for those endemic forms where subspecific names traditionally have been used to distinguish between different island races.

The Hawaii Audubon Society strongly encourages use of the traditional Hawaiian language names, including the diacritical marks hamsa and macron for correct spelling and pronunciation, as vernacular names for endemic birds. The author also encourages omission of the 's suffix from vernacular names formed from names of persons.

A symbol to the left of the vernacular name indicates the status of the species or subspecies in Hawaii. Symbols are defined in Table 1.

Visitor species accepted for the Checklist must be supported by a specimen, or by a published sight record giving adequate details of identification in a context indicating the observer was aware of its rarity in Hawaii. Reasonable likelihood that a straggler may have arrived with the help of man, rather than having reached Hawaii naturally without assistance, is sufficient to withhold the bird from the Checklist.

Foreign species are of two classes: those introduced and well established before World War II; and a large number of gamebird and songbird species brought to Hawaii during the past 30 years. Some of the latter introductions are well-documented, but many are not. It isn't always clear whether continued presence of an exotic species represents reproduction in the wild, or successive introductions over a period of years. Criteria for acceptance as an established population are based on persistent sightings (8-10 years or more for passerines) of the species in a specific area in numbers indicating some recruitment to the population after the last known escape or introduction, preferably with direct evidence of nesting activity or breeding. The more recently introduced species in the Checklist with "Fn" status reflect the author's best judgment at this time that they are established. Decisions were subjective, with a number of species marginal as to whether they should or should not be included.

The author is especially indebted to Warren King, Mae Mull, Ron Walker and Fred Zeillemaker for providing considerable information and consultation for the earlier *Preliminary List of the Birds of Hawaii*. Others who have provided helpful comments during preparation of this Checklist include Tim Burr, Roger Clapp, Peter Donaldson, Mike Ord, Doug Pratt, Peter Pyle, Mike Scott, Rob Shallenberger and Dave Woodside. Many thanks to them all for their interest and contributions.

Suggestions for modifications, additions or deletions to the Checklist are solicited. They should be forwarded to the author for consideration for future amendments.

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TABLE 1. Symbols for Status.

- R = Resident native species; normally does not leave the islands.  
 Re = Resident - endemic at species level; not extinct.  
 Rx = Resident - endemic at species level; presumed extinct  
 Ri = Resident - indigenous species; Hawaiian form is not endemic.  
 Ris = Resident - indigenous species; Hawaiian subspecies is endemic.
- F = Foreign introduced species; resident; normally does not leave the islands.  
 Fl = Foreign - long established and breeding since before 1940.  
 Fn = Foreign - new introduction since 1950; apparently established.  
 Fx = Foreign - formerly long-established and breeding for more than 25 years, but now no longer present in Hawaii.
- B = Breeding species in Hawaii; native; most individuals depart Hawaii when not breeding.  
 Bi = Breeder - indigenous species; Hawaiian form also breeds elsewhere.  
 Bis = Breeder - indigenous species; Hawaiian subspecies breeds only in Hawaii.
- V = Visitor species; breeds elsewhere; occurs in Hawaii when not breeding.  
 Vc = Visitor - common migrant to Hawaii.  
 Vr = Visitor - regular migrant to Hawaii in small numbers.  
 Vo = Visitor - occasional to frequent migrant to Hawaii.  
 Vs = Visitor - accidental straggler to Hawaii; at least one well-substantiated record since 1960.  
 Vx = Visitor - accidental straggler to Hawaii; no well-substantiated record since 1960.  
 Vd = Visitor - accidental straggler to Hawaii; recorded in Hawaii only as dead remains.
- P = Pelagic species; breeds elsewhere; occurs offshore normally beyond immediate coastal waters, or as accidental straggler to land.  
 Pr = Pelagic - current information indicates it occurs regularly within 325 kilometers (about 200 miles) of Hawaiian Is.  
 Po = Pelagic - current information indicate it occurs occasionally within 325 kilometers (about 200 miles) of Hawaiian Is.  
 Ps = Pelagic - known only from one or a very few sightings or specimens.
- E- (or T-) in the right hand column preceding the genus name designates a species or subspecies currently listed as Endangered (or Threatened) on the Federal List of Endangered Species.

## CHECKLIST OF THE BIRDS OF HAWAII

## LOONS

Vs Arctic Loon

## GREBES

Vs Pied-billed Grebe

Vs Horned Grebe

Vs Eared Grebe

## ALBATROSSES

Vo Short-tailed Albatross

Bi Black-footed Albatross

Bi Laysan Albatross

Mōlī

## PETRELS, SHEARWATERS

Po Northern Fulmar

Bis Dark-rumped Petrel (Hawaiian Petrel)

'Ua'u

Po White-necked Petrel (Juan Fernandez Petrel)

Po Mottled Petrel

Ps Murphy's Petrel

Ps Kermadec Petrel

Ps Herald Petrel

Bi Bonin Petrel

Ps Black-winged Petrel

Bi Bulwer's Petrel

'Ou

Ps Jouanin's Petrel

Ps Flesh-footed Shearwater

## GAVIIDAE

*Gavia arctica*

## PODICIPEDIDAE

*Podilymbus podiceps**Podiceps auritus**Podiceps nigricollis*

## DIOMEDEIDAE

*Diomedea albatrus**Diomedea nigripes**Diomedea immutabilis*

## PROCELLARIIDAE

*Fulmarus glacialis*E-*Pterodroma phaeopygia sandwichensis**Pterodroma externa**Pterodroma inexpectata**Pterodroma ultima**Pterodroma neglecta**Pterodroma arminjoniana**Pterodroma hypoleuca hypoleuca**Pterodroma nigripennis**Bulweria bulwerii**Bulweria fallax**Puffinus carneipes*



Bi Wedge-tailed Shearwater	'Ua'u-kani	<i>Puffinus pacificus chlororhynchus</i>
Ps Buller's Shearwater (New Zealand Shearwater)		<i>Puffinus bulleri</i>
Pr Sooty Shearwater		<i>Puffinus griseus</i>
Po Short-tailed Shearwater		<i>Puffinus tenuirostris</i>
Bi Christmas Shearwater		<i>Puffinus nativitatis</i>
Bis Townsend's Shearwater (Newell Shearwater, formerly considered a race of Manx Shearwater)	'A'o	T- <i>Puffinus auricularis newelli</i>
Ps Little Shearwater		<i>Puffinus assimilis</i>
<b>STORM-PETRELS</b>		
Ps Fork-tailed Storm-Petrel		<b>HYDROBATIDAE</b>
Pr Leach's Storm-Petrel		<i>Oceanodroma furcata</i>
Bi Band-rumped Storm-Petrel (Hawaiian Storm-Petrel, Harcourt Storm-Petrel)	'Akē'ake	<i>Oceanodroma leucorhoa</i>
Bi Sooty Storm-Petrel		<i>Oceanodroma castro (cryptoleucura-?)</i>
<b>TROPICBIRDS</b>		
Ri White-tailed Tropicbird	Koa'e-kea	<i>Oceanodroma tristrami</i>
Ps Red-billed Tropicbird		<b>PHAETHONTIDAE</b>
Bi Red-tailed Tropicbird	Koa'e-'ula	<i>Phaethon lepturus dorotheae</i>
<b>BOOBIES</b>		
Ri Masked Booby (Blue-faced Booby)	Ā	<i>Phaethon aethereus</i>
Ri Brown Booby	Ā	<i>Phaethon rubricauda rothschildi</i>
Ri Red-footed Booby	Ā	<b>SULIDAE</b>
<b>CORMORANTS</b>		
Vs Pelagic Cormorant		<i>Sula dactylatra personata</i>
<b>FRIGATEBIRDS</b>		
Ri Great Frigatebird	'Twa	<i>Sula leucogaster plotus</i>
Ps Lesser Frigatebird		<i>Sula sula rubripes</i>
<b>HERONS, EGRETS</b>		
Vs Great Blue Heron		<b>PHALACROCORACIDAE</b>
Vs Great Egret		<i>Phalacrocorax pelagicus</i>
Vs Snowy Egret		<b>FREGATIDAE</b>
Vs Little Blue Heron		<i>Fregata minor palmerstoni</i>
Fn Cattle Egret		<i>Fregata ariel</i>
Vs Green-backed Heron (Green Heron)		<b>ARDEIDAE</b>
Ri Black-crowned Night-Heron	'Auku'u	<i>Ardea herodias</i>
<b>IBIS</b>		
Vs White-faced Ibis		<i>Casmerodius albus</i>
<b>GEESE, DUCKS</b>		
Vs Fulvous Whistling-Duck		<i>Egretta thula</i>
Vs Tundra Swan (Whistling Swan)		<i>Egretta caerulea</i>
Vs Greater White-fronted Goose (White-fronted Goose)		<i>Bubulcus ibis</i>
Vs Snow Goose		<i>Butorides striatus</i>
Vs Emperor Goose		<i>Nycticorax nycticorax hoactli</i>
Vo Brant		<b>THRESKIORNITHIDAE</b>
Vo Canada Goose	Nēnē	<i>Plegadis chihi</i>
Re Hawaiian Goose		<b>ANATIDAE</b>
Vr Green-winged Teal		<i>Dendrocygna bicolor</i>
Vo Mallard		<i>Cygnus columbianus</i>
Re Hawaiian Duck	Koloa-maoli	<i>Anser albifrons</i>
Re Laysan Duck		<i>Chen caerulescens</i>
Vc Northern Pintail	Koloa-māpu	<i>Chen canagica</i>
Vs Garganey		<i>Branta bernicla</i>
Vo Blue-winged Teal		<i>Branta canadensis</i>
Vs Cinnamon Teal		<i>E-Nesochen sandvicensis</i>
		<i>Anas crecca</i>
		<i>Anas platyrhynchos</i>
		<i>E-Anas wyvilliana</i>
		<i>E-Anas laysanensis</i>
		<i>Anas acuta</i>
		<i>Anas querquedula</i>
		<i>Anas discors</i>
		<i>Anas cyanoptera</i>

Vc Northern Shoveler  
 Vs Gadwall  
 Vs Eurasian Wigeon (European Wigeon)  
 Vr American Wigeon  
 Vs Common Pochard  
 Vs Canvasback  
 Vs Redhead  
 Vo Ring-necked Duck  
 Vs Tufted Duck  
 Vs Greater Scaup  
 Vr Lesser Scaup  
 Vs Harlequin Duck  
 Vx Oldsquaw  
 Vs Surf Scoter  
 Vo Bufflehead  
 Vs Hooded Merganser  
 Vs Red-breasted Merganser  
 Vs Ruddy Duck

**HAWKS, EAGLES**

Vo Osprey  
 Vs Steller's Sea-Eagle  
 Vs Northern Harrier  
 Re Hawaiian Hawk  
 Vs Golden Eagle

**FALCONS**

Vo Peregrine Falcon

**FRANCOLINS, PHEASANTS, QUAILS**

Fn Black Francolin  
 Fn Erckel's Francolin  
 Fn Gray Francolin  
 F1 Chukar  
 F1 Japanese Quail  
 Fn Kalij Pheasant  
 F1 Red Junglefowl  
 F1 Ring-necked Pheasant  
 F1 Common Peafowl  
 F1 Wild Turkey  
 F1 Gambel's Quail  
 F1 California Quail

**RAILS, GALLINULES, COOTS**

Rx Hawaiian Rail  
 Rx Laysan Rail  
 Ris Common Moorhen (Hawaiian Gallinule,  
 Common Gallinule)  
 Ris American Coot (Hawaiian Coot)

**PLOVERS**

Vr Black-bellied Plover  
 Vc Lesser Golden-Plover (Pacific Golden Plover,  
 American Golden Plover)  
 Vs Mongolian Plover  
 Vs Snowy Plover  
 Vo Semipalmated Plover  
 Vs Killdeer  
 Vs Eurasian Dotterel

Koloa-mohā

*Anas clypeata*  
*Anas strepera*  
*Anas penelope*  
*Anas americana*  
*Aythya ferina*  
*Aythya valisineria*  
*Aythya americana*  
*Aythya collaris*  
*Aythya fuligula*  
*Aythya marila*  
*Aythya affinis*  
*Histrionicus histrionicus*  
*Clangula hyemalis*  
*Melanitta perspicillata*  
*Bucephala albeola*  
*Lophodytes cucullatus*  
*Mergus serrator*  
*Oxyura jamaicensis*

**ACCIPITRIDAE**

*Pandion haliaetus*  
*Haliaeetus pelagicus*  
*Circus cyaneus*  
*E-Buteo solitarius*  
*Aquila chrysaetos*

**FALCONIDAE**

*Falco peregrinus*

**PHASIANIDAE**

*Francolinus francolinus*  
*Francolinus erckelii*  
*Francolinus pondicerianus*  
*Alectoris chukar*  
*Coturnix japonica*  
*Lophura leucomelana*  
*Gallus gallus*  
*Phasianus colchicus*  
*Pavo cristatus*  
*Meleagris gallopavo*  
*Callipepla gambelii*  
*Callipepla californica*

**RALLIDAE**

*Porzana sandwichensis*  
*Porzana palmeri*  
*E-Gallinula chloropus sandvicensis*  
*E-Fulica americana alai*

**CHARADRIIDAE**

*Pluvialis squatarola*  
*Pluvialis dominica*  
  
*Charadrius mongolus*  
*Charadrius alexandrinus*  
*Charadrius semipalmatus*  
*Charadrius vociferus*  
*Charadrius morinellus*

'Io

Moa

Moho

'Alae-'ula

'Alae-ke'oke'o

Kōlea



**STILTS**

Ris Black-necked Stilt (Hawaiian Stilt)

**SANDPIPERS, WADERS**

Vs Greater Yellowlegs  
 Vr Lesser Yellowlegs  
 Vs Wood Sandpiper  
 Vs Willet  
 Vc Wandering Tattler  
 Vs Gray-tailed Tattler (Polynesian Tattler)  
 Vs Whimbrel  
 Vr Bristle-thighed Curlew  
 Vo Bar-tailed Godwit  
 Vs Marbled Godwit  
 Vc Ruddy Turnstone  
 Vs Red Knot  
 Vc Sanderling  
 Vo Western Sandpiper  
 Vs Long-toed Stint  
 Vo Least Sandpiper  
 Vs Baird's Sandpiper  
 Vr Pectoral Sandpiper  
 Vr Sharp-tailed Sandpiper  
 Vr Dunlin  
 Vs Curlew Sandpiper  
 Vs Buff-breasted Sandpiper  
 Vo Ruff  
 Vs Short-billed Dowitcher  
 Vr Long-billed Dowitcher  
 Vo Common Snipe  
 Vs Pin-tailed Snipe  
 Vo Wilson's Phalarope  
 Vs Red-necked Phalarope  
 Ps Red Phalarope

**JAEGERS, GULLS, TERNS, NODDIES**

Vr Pomarine Jaeger  
 Vo Laughing Gull  
 Vs Franklin's Gull  
 Vs Common Black-headed Gull  
 Vo Bonaparte's Gull  
 Vo Ring-billed Gull  
 Vs California Gull  
 Vo Herring Gull  
 Vs Slaty-backed Gull  
 Vs Western Gull  
 Vo Glaucous-winged Gull  
 Vs Glaucous Gull  
 Vs Black-legged Kittiwake  
 Vs Caspian Tern  
 Vs Common Tern  
 Ps Arctic Tern  
 Vo Least Tern  
 Bi Gray-backed Tern  
 Bi Sooty Tern  
 Vs Black Tern  
 Ri Brown Noddy (Common Noddy)  
 Ri Black Noddy (Hawaiian Noddy, White-capped Noddy)  
 Bi Blue-Gray Noddy  
 Ri White Tern (Fairy Tern)

Āe'o

Ūlili

Kioea

'Akekeke

Huna-kai

Pākalakala

'Ewa'ewa

Noio-kōhā

Noio

Manu-o-Ku

**RECURVIROSTRIDAE***E-Himantopus mexicanus knudseni***SCOLOPACIDAE**

*Tringa melanoleuca*  
*Tringa flavipes*  
*Tringa glareola*  
*Catoptrophorus semipalmatus*  
*Heteroscelus incanus*  
*Heteroscelus brevipes*  
*Numenius phaeopus*  
*Numenius tahitiensis*  
*Limosa lapponica*  
*Limosa fedoa*  
*Arenaria interpres*  
*Calidris canutus*  
*Calidris alba*  
*Calidris mauri*  
*Calidris subminuta*  
*Calidris minutilla*  
*Calidris bairdii*  
*Calidris melanotos*  
*Calidris acuminata*  
*Calidris alpina*  
*Calidris ferruginea*  
*Tryngites subruficollis*  
*Philomachus pugnax*  
*Limnodromus griseus*  
*Limnodromus scolopaceus*  
*Gallinago gallinago*  
*Gallinago stenura*  
*Phalaropus tricolor*  
*Phalaropus lobatus*  
*Phalaropus fulicarius*

**LARIDAE**

*Stercorarius pomarinus*  
*Larus atricilla*  
*Larus pipixcan*  
*Larus ridibundus*  
*Larus philadelphia*  
*Larus delawarensis*  
*Larus californicus*  
*Larus argentatus*  
*Larus schistisagus*  
*Larus occidentalis*  
*Larus glaucescens*  
*Larus hyperboreus*  
*Rissa tridactyla*  
*Sterna caspia*  
*Sterna hirundo*  
*Sterna paradisaea*  
*Sterna antillarum*  
*Sterna lunata*  
*Sterna fuscata oahuensis*  
*Chlidonias niger*  
*Anous stolidus pileatus*  
*Anous minutus melanogenys*  
*Procelsterna cerulea saxatilis*  
*Gygis alba rothschildi*



**AUKLETS, PUFFINS**

- Vd Parakeet Auklet  
 Vd Tufted Puffin  
 Vs Horned Puffin

**SANDGROUSE**

- Fn Chestnut-bellied Sandgrouse

**DOVES**

- Fl Rock Dove  
 Fl Spotted Dove (Chinese Dove, Lace-necked Dove)  
 Fl Zebra Dove (Barred Dove)  
 Fn Mourning Dove

**BARN-OWLS**

- Fn Common Barn-Owl

**TYPICAL OWLS**

- Ris Short-eared Owl (Hawaiian Owl) Pueo

**SWIFTLETS**

- Fn Gray Swiftlet (Edible-nest swiftlet)

**KINGFISHERS**

- Vs Belted Kingfisher

**LARKS**

- Vs, Fl Eurasian Skylark

**SWALLOWS**

- Vs Barn Swallow

**CROWS**

- Re Hawaiian Crow 'Alalā

**TITS**

- Fx Varied Tit (Yamagara, Japanese Tit)

**BULBULS**

- Fn Red-vented Bulbul  
 Fn Red-whiskered Bulbul

**BUSH-WARBLERS, 'ELEPAIO, THRUSHES, ETC.**

- Fl Japanese Bush-Warbler (Uguisu)  
 Re Millerbird  
 Rx Laysan Millerbird  
 Re Nihoa Millerbird  
 Re Elepaio 'Elepaio  
 Re Kauai 'Elepaio 'Elepaio  
 Re Oahu 'Elepaio 'Elepaio  
 Re Hawaii 'Elepaio 'Elepaio  
 Fl White-rumped Shama (Shama, Shama Thrush)  
 Re Hawaiian Thrush  
 Re Kauai Thrush Kāma'ō  
 Rx Oahu Thrush 'Āmaui  
 Re Molokai Thrush Oloma'ō  
 Rx Lanai Thrush Oloma'ō  
 Re Hawaii Thrush 'Ōma'ō  
 Re Small Kauai Thrush Puaiohi  
 F Greater Necklaced Laughing-thrush  
 F Gray-sided Laughing-thrush  
 Fl Melodious Laughing-thrush (Hwa-mei, Chinese Thrush)  
 Fl Red-billed Leiothrix (Pekin Nightingale, Japanese Hill Robin)

**ALCIDAE**

- Cyclorrhynchus psittacula*  
*Fratercula cirrhata*  
*Fratercula corniculata*

**PTEROCLIDIDAE**

- Pterocles exustus*

**COLUMBIDAE**

- Columba livia*  
*Streptopelia chinensis*  
*Geopelia striata*  
*Zenaida macroura*

**TYTONIDAE**

- Tyto alba*

**STRIGIDAE**

- Asio flammeus sandwichensis*

**APODIDAE**

- Aerodramus vanikorensis*

**ALCEDINIDAE**

- Ceryle alcyon*

**ALAUDIDAE**

- Alauda arvensis*

**HIRUNDINIDAE**

- Hirundo rustica*

**CORVIDAE**

- E-Corvus hawaiiensis*

**PARIDAE**

- Parus varius*

**PYCNONOTIDAE**

- Pycnonotus cafer*  
*Pycnonotus jocosus*

**MUSCICAPIDAE**

- Cettia diphone*  
*Acrocephalus familiaris*  
*Acrocephalus familiaris familiaris*  
 E- *Acrocephalus familiaris kingi*  
*Chasiempis sandwichensis*  
*Chasiempis sandwichensis sclateri*  
*Chasiempis sandwichensis gayi*  
*Chasiempis sandwichensis sandwichensis*  
*Copsychus malabaricus*  
*Phaeornis obscurus*  
 E- *Phaeornis obscurus myadestina*  
 E- *Phaeornis obscurus oahuensis*  
 E- *Phaeornis obscurus rutha*  
*Phaeornis obscurus lanaiensis*  
*Phaeornis obscurus obscurus*  
 E- *Phaeornis palmeri*  
*Garrulax pectoralis*  
*Garrulax caerulatus*  
*Garrulax canorus*  
*Leiothrix lutea*



**MOCKINGBIRDS**

Fl Northern Mockingbird

**PIPITS**

Vs Red-throated Pipit

Vs Water Pipit

**STARLINGS, MYNAS**

Vs European Starling

Fl Common Myna

**HONEYEATERS**

Re Kauai Oo

Rx Oahu Oo

Re Bishop's Oo (Molokai Ōō)

Rx Hawaii Oo

Rx Kioea

Ō'ō'a'a

Ō'ō

Ō'ō

Ō'ō

Kioea

**WHITE-EYES**

Fl Japanese White-eye (Mejiro)

**CARDINALS, MEADOWLARKS, ETC.**Fl Northern Cardinal (Cardinal, Kentucky Cardinal,  
North American Cardinal, Red Cardinal)

Fl Red-crested Cardinal (Brazilian Cardinal)

Fl Yellow-billed Cardinal

Fn Yellow-faced Grassquit

Fn Saffron Finch

Vs Savannah Sparrow

Vs Snow Bunting

Fl Western Meadowlark

Vs Great-tailed Grackle

**FINCHES, HAWAIIAN HONEYCREEPERS**

Fl House Finch (Linnet)

Vs Common Redpoll

Fn Yellow-fronted Canary (Green Singing Finch)

Fl Common Canary (Canary)

**HAWAIIAN HONEYCREEPERS****FINCH-BILLED HONEYCREEPERS**

Re Laysan Finch

Re Nihoa Finch

Re Ou

Re Palila

Rx Lesser Koa-Finch

Rx Greater Koa-Finch

Rx Grosbeak Finch

Re Maui Parrotbill

Ō'ū

Palila

Hopue

**SLENDERBILLED HONEYCREEPERS**

Re Common Amakihi

Re Kauai 'Amakihi

Re Oahu 'Amakihi

Re Maui 'Amakihi

Re Hawaii 'Amakihi

Re Anianiau (Lesser 'Amakihi)

Rx Greater Amakihi

'Amakihi

'Amakihi

'Amakihi

'Amakihi

'Amakihi

'Anianiau

**MIMIDAE***Mimus polyglottos***MOTACILLIDAE***Anthus cervinus**Anthus spinoletta***STURNIDAE***Sturnus vulgaris**Acridotheres tristis***MELIPHAGIDAE**E- *Moho braccatus**Moho apicalis**Moho bishopi**Moho nobilis**Chaetoptila angustipluma***ZOSTEROPIDAE***Zosterops japonicus***EMBERIZIDAE***Cardinalis cardinalis**Paroaria coronata**Paroaria capitata**Tiaris olivacea**Sicalis flaveola**Passerculus sandwichensis**Plectrophenax nivalis**Sturnella neglecta**Quiscalus mexicanus***FRINGILLIDAE***Carpodacus mexicanus**Carduelis flammea**Serinus mozambicus**Serinus canaria***DREPANIDINAE (subfamily)****PSITTIROSTRINI (tribe)**E- *Telespyza cantans*E- *Telespyza ultima*E- *Psittirostra psittacea*E- *Loxioides bailleui**Rhodacanthis flaviceps**Rhodacanthis palmeri**Chloridops kona*E- *Pseudonestor xanthophrys***HEMIGNATHINI (tribe)***Hemignathus virens**Hemignathus virens stejnegeri**Hemignathus virens chloris**Hemignathus virens wilsoni**Hemignathus virens virens**Hemignathus parvus**Hemignathus sagittirostris*



Rx Hawaiian Akialoa  
 Rx Oahu 'Akialoa  
 Rx Lanai 'Akialoa  
 Rx Hawaii 'Akialoa  
 Re Kauai Akialoa  
 Re Nukupuu  
 Re Kauai Nuku-pu'u  
 Rx Oahu Nuku-pu'u  
 Re Maui Nuku-pu'u  
 Re Akiapolaau  
 Re Kauai Creeper  
 Re Hawaii Creeper  
 Re Maui Creeper  
 Re Maui Creeper  
 Rx Lanai Creeper  
 Re Molokai Creeper  
 Re Oahu Creeper  
 Re Akepa  
 Re Kauai 'Ākepa  
 Rx Oahu 'Ākepa  
 Re Maui 'Ākepa  
 Re Hawaii 'Ākepa

## RED AND BLACK HONEYCREEPERS

Rx Ula-ai-hawane  
 Re Iiwi  
 Rx Hawaii Mamo  
 Rx Black Mamo (Perkins Mamo)  
 Re Crested Honeycreeper  
 Re Apapane  
 Rx Laysan Honeycreeper  
 Re 'Apapane  
 Re Poouli

## SPARROW WEAVERS

Fl House Sparrow

## WAXBILLS, MANNIKINS

Fn Red-cheeked Cordonbleu  
 Fn Lavender Waxbill  
 Fn Orange-cheeked Waxbill  
 Fn Black-rumped Waxbill (Red-eared Waxbill)  
 Fl Red Avadavat (Red Munia, Strawberry Finch)  
 Fn Warbling Silverbill  
 Fl Nutmeg Mannikin (Spotted Munia, Ricebird)  
 Fl Chestnut Mannikin (Black-headed Munia, Black-headed Mannikin)  
 Fn Java Sparrow

## SPECIES PAIRS

Well substantiated sightings, identifiable only to one of a species pair difficult to distinguish in the field, have been recorded in Hawaii since 1960 for the following species pairs:

Southern/Northern Giant-Petrel	<i>Macronectes giganteus</i> or <i>M. halli</i> (PROCELLARIIDAE)
Tahiti/Phoenix Petrel	<i>Pterodroma rostrata</i> or <i>P. alba</i> (PROCELLARIIDAE)
Spotted/Common Sandpiper	<i>Actitis macularia</i> or <i>A. hypoleucos</i> (SCOLOPACIDAE)
Hudsonian/Black-tailed Godwit	<i>Limosa haemastica</i> or <i>L. limosa</i> (SCOLOPACIDAE)
South Polar/Great Skua	<i>Catharacta maccormicki</i> or <i>C. skua</i> (LARIDAE)

## ADDITIONAL NOTE

**Common Waxbill** (*Estrilda astrild*, family ESTRILDIDAE). Small populations of waxbills seen regularly since 1976 at Kuilima and Waipio, Oahu, have been identified as this species (E. 42:89-90). M. Ord observed an adult feeding seeds to four fledglings at Waipio December 5, 1982. Although this species may well be breeding at several localities on Oahu, it has not been observed over a sufficient period of time to be assured that the population is established and viable.

## HEMIGNATHINI (tribe) (continued)

'Akialoa  
 'Akialoa  
 'Akialoa  
 'Akialoa  
 'Akialoa  
 Nuku-pu'u  
 Nuku-pu'u  
 Nuku-pu'u  
 Nuku-pu'u  
 'Akiapōlā'au  
 'Akikiki  
 'Alauwahio  
 'Alauwahio  
 'Alauwahio  
 Kakawahie  
 'Alauwahio  
 'Ākepa  
 'Akeke'e  
 'Akepeu'ie  
 'Akepeu'ie  
 'Akepeu'ie

*Hemignathus obscurus*  
*Hemignathus obscurus ellisianus*  
*Hemignathus obscurus lanaiensis*  
*Hemignathus obscurus obscurus*  
 E- *Hemignathus procerus*  
*Hemignathus lucidus*  
 E- *Hemignathus lucidus hanapepe*  
*Hemignathus lucidus lucidus*  
 E- *Hemignathus lucidus affinus*  
 E- *Hemignathus munroi*  
*Oreomystis bairdi*  
 E- *Oreomystis mana*  
*Paroreomyza montana*  
*Paroreomyza montana newtoni*  
*Paroreomyza montana montana*  
 E- *Paroreomyza flammea*  
 E- *Paroreomyza maculata*  
*Loxops coccineus*  
*Loxops coccineus caeruleirostris*  
*Loxops coccineus rufus*  
 E- *Loxops coccineus ochraceus*  
 E- *Loxops coccineus coccineus*

## DREPANIDINI (tribe)

'Ula-ai-hāwane  
 'Tiwi  
 Mamo  
 'Ō'ō-nuku-mu, Hoa  
 'Ākohekohe  
 'Apapane  
 'Apapane  
 Po'ouli

*Ciridops anna*  
*Vestiaria coccinea*  
*Drepanis pacifica*  
*Drepanis funerea*  
 E- *Palmeri dolei*  
*Himatione sanguinea*  
*Himatione sanguinea freethii*  
*Himatione sanguinea sanguinea*  
 E- *Melamprosops phaeosoma*

## PASSERIDAE

*Passer domesticus*

## ESTRILDIDAE

*Uraeginthus bengalus*  
*Estrilda caeruleascens*  
*Estrilda melpoda*  
*Estrilda troglodytes*  
*Amandava amandava*  
*Lonchura malabarica*  
*Lonchura punctulata*  
*Lonchura malacca*  
*Padda oryzivora*



## APPENDIX

Summary of Changes from *Preliminary List of the Birds of Hawaii* (1977) as amended (1979).

## 1. SPECIES ADDED

(See Part 5 for new species in the subfamily *Drepanidinae*).

Abbreviations: AB. = American Birds; E. = 'Elepaio;

RBDPF = Rare Bird Documentary Photograph File, Hawaii Audubon Society.

- Eared Grebe (*Podiceps nigricollis*). One bird at Lowe Aquafarm, Oahu, during February and March 1983, was seen by numerous observers. RBDPF no. 220 *et. al.*
- Black-winged Petrel (*Pterodroma nigripennis*). This was formerly *P. hypoleuca nigripennis*, a subspecies of Bonin Petrel, but is now treated by the A.O.U. as a full species. One bird landed on a fisheries research vessel 60 miles west of Hawaii I. Nov. 12, 1965, and was still alive when brought to an Audubon Society meeting in Honolulu three days later (E. 26:91).
- Flesh-footed Shearwater (*Puffinus carneipes*). Two records (W. King, pers. comm.): specimen, in POBSP collection, U.S. National Museum, collected September 15, 1964 about 120 miles south of Laysan I.; sighting, April 22, 1965 about 110 miles south of Kaula I.
- Fork-tailed Storm-Petrel (*Oceanodroma furcata*). Two sightings at sea: December 7, 1964, about 110 miles southeast of Hawaii I. (W. King, pers. comm.); and March 18, 1976, about 25 miles east-southeast of Nihoa I. (K. Kenyon, *vide* F. Zeillemaker in unpublished Trip Report, Hawaiian Islands National Wildlife Refuge, March 17 to April 26, 1976, U.S. Fish & Wildlife Service).
- Snowy Egret (*Egretta thula*), included in the Preliminary List in the Species Pair section. One bird with full nuptial plumes observed at Nuupia Pond, Oahu, March 6-31, 1980. Other small white egrets on Maui and Hawaii Islands in 1975 and 1980-81 probably were this species (E. 43:79-82). RBDPF no. 085 *et. al.*
- Green-backed Heron (*Butorides striatus*). One bird seen irregularly at Lokoaka Pond, Hawaii I., from December 18, 1980 until at least November 11, 1982 (AB 36:222,333). RBDPF no. 147.
- White-faced Ibis (*Plegadis chihi*), included in the Preliminary List in the Species Pair section. The *Plegadis* ibis resident at Waipio, Oahu from November 1976 until at least December 1982 has been identified as this species (E. 41:45-46).
- Fulvous Whistling-Duck (*Dendrocygna bicolor*). Six birds were seen well January 6 and 9, 1982 at Punamano Pond, Oahu. Two were seen regularly at nearby Kii Pond and Lowe Aquafarm from June 1982 until at least March 1983 (AB 36:333)
- Tundra Swan (*Cygnus columbianus*). An immature was seen alive at Sand I., Midway Atoll November 7, 1979. A skeleton, presumably of the same bird, was found later and identified at the U.S. National Museum as this species (E. 41:82).
- Common Pochard (*Aythya ferina*). Female or eclipse-plumaged male was observed at Sand I., Midway Atoll, November 22 to December 10, 1979 (E. 41:83). RBDPF no. 112 *et. al.*
- Curlew Sandpiper (*Calidris ferruginea*). One bird observed well at Waipio, Oahu, October 1979. RBDPF no. 067 *et. al.*
- Parakeet Auklet (*Cyclorhynchus pssitacula*). Dead remains of at least eight individuals have been found on beaches of Kure and Midway Atolls in 1963 and 1980 (E. 40:120, 41:84), and in February 1983 (U.S. Fish & Wildlife Service). Specimens in Bishop Museum and U.S. National Museum.
- Tufted Puffin (*Fratercula cirrhata*). Dead remains of one bird (USNM #576074) were found on Laysan I. April 13, 1977 (E. 40:120).
- Chestnut-bellied Sandgrouse (*Pterocles exustus*). First introduced on Hawaii I. in 1961; rarely reported during the ensuing 15 years. Occasional sightings reported near Waimea in late 1970's, increasing to 200 to 300 birds recorded in early October 1981 (AB 36:223).
- European Starling (*Sturnus vulgaris*). One bird found at Sand Island Park, Oahu December 21, 1980. It was seen by numerous observers until collected in mid-January 1981 (Bishop Museum #X-157486). RBDPF no. 199 *et. al.* Sand Island Park is adjacent to Honolulu Harbor, suggesting circumstantially that this starling might have reached Hawaii aboard a trans-Pacific ship. Two birds were reported sighted near South Point, Hawaii I. July 1, 1979 (E. 40:100).
- Yellow-faced Grassquit (*Tiaris olivacea*). Birds of this species were first sighted in August 1974 on Manana Trail near Pacific Palisades, Oahu (E. 35:65). They have been observed regularly since 1977 along the same trail and in nearby areas (E. 38:106). Two specimens were collected in 1977 by Hawaii State Division of Fish and Game, now the Division of Forestry and Wildlife (Shallenberger, Avifaunal Survey in the Central Koolau Range, Oahu. Ahuimanu Productions, p. 62-63, April 1978.)
- Great-tailed Grackle (*Quiscalus mexicanus*) A female grackle was seen well at Waipio, Oahu in November 1980, February 1982 and July 1982 (AB 36:334) and was finally identified as this species based on plumage and eye color. RBDPF no. 201. Since it is not normally a long distance migrant, it seems less likely that this individual reached Hawaii unassisted than would be the case for most other passerine stragglers included in the Checklist.



Common Redpoll (*Carduelis flammea*), included in Amendment No. 1 to the Preliminary List in the Species Pair section. The single birds observed at Kure Atoll in 1977 and 1978 were identified by the observer as Common Redpolls, and not Hoary Redpolls (E 39:14). One bird observed at Sand I., Midway Atoll October 12, 1982, was identified as Common rather than Hoary based on rump color (P. Pyle, unpubl. ms.)

## 2. SPECIES DELETED

Green Pheasant (formerly *Phasianus versicolor*). The A.O.U. now treats this as a subspecies of Ring-necked Pheasant (*P. colchicus*.)

Barbary Partridge (*Alectoris barbara*). Absence of reported observations in recent years justify deleting this species from the Checklist until clear evidence is developed that an established breeding population exists.

Pin-tailed Whydah (*Vidua macroura*). Small numbers in the Diamond Head area of Oahu in the late 1960's and 1970's may have bred, but apparently have not become established. Waxbills, which would have been the most likely host species for this parasitic breeder, have declined drastically in the Diamond Head area, making it unlikely that this whydah could persist.

NOTE: Gray Swiftlet (*Aerodramus vanikorensis*) and Gray-sided Laughing-thrush (*Garrulax caerulatus*) were included in the Preliminary List, as amended, and are retained in the Checklist. The A.O.U. 34th Supplement does not list them, on grounds that their populations in Hawaii are very small, and because of possible uncertainty in their taxonomic identification.

## 3. CHANGES IN VERNACULAR NAMES

The A.O.U. English name differs from the vernacular name given in the Preliminary List as amended, for the species listed below. Species whose A.O.U. English name differs only in omission of the diacritical marks hamsa and macron, or in addition of the 's suffix, are not listed individually.

A.O.U. ENGLISH NAME	PRELIMINARY LIST AS AMENDED
Dark-rumped Petrel .....	Hawaiian Petrel
White-necked Petrel .....	Juan Fernandez Petrel
Buller's Shearwater .....	New Zealand Shearwater
Townsend's Shearwater .....	Newell Shearwater
Band-rumped Storm-Petrel .....	Hawaiian Storm-Petrel
Masked Booby .....	Blue-faced Booby
Greater White-fronted Goose .....	White-fronted Goose
Northern Pintail .....	Pintail
Eurasian Wigeon .....	European Wigeon
Steller's Sea-Eagle .....	Steller Sea Eagle (no hyphen)
Common Peafowl .....	Indian Peafowl
Wild Turkey .....	Turkey
Common Moorhen .....	Hawaiian Gallinule
American Coot .....	Hawaiian Coot
Lesser Golden-Plover .....	American Golden Plover
Eurasian Dotterel .....	Dotterel
Black-necked Stilt .....	Hawaiian Stilt
Gray-tailed Tattler .....	Polynesian Tattler
Pin-tailed Snipe .....	Pintail Snipe
Red-necked Phalarope .....	Northern Phalarope
Common Black-headed Gull .....	Black-headed Gull
Black Noddy .....	Hawaiian Noddy
Zebra Dove .....	Barred Dove
Common Barn-Owl .....	Barn Owl
Short-eared Owl .....	Hawaiian Owl
Eurasian Skylark .....	Skylark
White-rumped Shama .....	Shama
Small Kauai Thrush .....	Puaiohi
Melodious Laughing-Thrush .....	Hwa-mei
Northern Mockingbird .....	Mockingbird
Bishop's Oo .....	Molokai O'o
Common Amakihi .....	'Amakihi
Hawaiian Akialoa .....	'Akialoa
Hawaii Mamo .....	Mamo
Red-cheeked Cordonbleu .....	Red-cheeked Cordon-bleu
Lavender Waxbill .....	Lavender Fire-Finch
(given as Lavender Fire-Finch in the 34th Supplement, but changed to Lavender Waxbill in the 6th edition)	



Black-rumped Waxbill .....	Red-eared Waxbill
Red Avadavat .....	Red Munia
Nutmeg Mannikin .....	Spotted Munia
Chestnut Mannikin .....	Black-headed Munia

## 4. CHANGES IN SCIENTIFIC NAMES, EXCEPT SEE SECTION 5 FOR HAWAIIAN HONEYCREEPERS

A.O.U. ENGLISH NAME	A.O.U. CHECKLIST	PRELIMINARY LIST AS AMENDED
Little Blue Heron .....	<i>Egretta caerulea</i> .....	<i>Florida caerulea</i>
Emperor Goose .....	<i>Chen canagica</i> .....	<i>Philacte canagica</i>
Hawaiian Goose .....	<i>Nesochen sandvicensis</i> .....	<i>Branta sandvicensis</i>
Japanese Quail .....	<i>Coturnix japonica</i> .....	<i>Coturnix coturnix</i>
Gambel's Quail .....	<i>Callipepla gambelii</i> .....	<i>Lophortyx gambelii</i>
California Quail .....	<i>Callipepla californica</i> .....	<i>Lophortyx californicus</i>
Common Snipe .....	<i>Gallinago gallinago</i> .....	<i>Capella gallinago</i>
Pin-tailed Snipe .....	<i>Gallinago stenura</i> .....	<i>Capella stenura</i>
Wilson's Phalarope .....	<i>Phalaropus tricolor</i> .....	<i>Steganopus tricolor</i>
Red-necked Phalarope .....	<i>Phalaropus lobatus</i> .....	<i>Lobipes lobatus</i>
Red Phalarope .....	<i>Phalaropus fulicaria</i> .....	<i>Phalaropus fulicarius</i>
Least Tern .....	<i>Sterna antillarum</i> .....	<i>Sterna albifrons</i>
Black Noddy .....	<i>Anous minutus</i> .....	<i>Anous tenuirostris</i>
Belted Kingfisher .....	<i>Ceryle alcyon</i> .....	<i>Megaceryle alcyon</i>
Hawaiian Crow .....	<i>Corvus hawaiiensis</i> .....	<i>Corvus tropicus</i>

(Given as *C. tropicus* in the 34th Supplement, but changed to *C. hawaiiensis* in the 6th edition)

## 5. CURRENT AND FORMER TAXONOMY OF HAWAIIAN HONEYCREEPERS

A.O.U. ENGLISH NAME	A.O.U. CHECKLIST	PRELIMINARY LIST AS AMENDED
<b>(FAMILY FRINGILLIDAE)</b>		
<b>HAWAIIAN HONEYCREEPERS</b> .....	<b>DREPANIDINAE (subfamily)</b> .....	<b>DREPANIDIDAE Family</b>
<b>FINCH-BILLED HONEYCREEPERS</b> ..	<b>PSITTIROSTRINI Tribe</b> .....	<b>PSITTIROSTRINAE Subfamily</b>
Laysan Finch .....	<i>Telespyza cantans</i> .....	<i>Psittirostra cantans cantans</i>
Nihoa Finch .....	<i>Telespyza ultima</i> .....	<i>Psittirostra cantans ultima</i>
O'u .....	<i>Psittirostra psittacea</i> .....	<i>Psittirostra psittacea</i>
Palila .....	<i>Loxioides bailleui</i> .....	<i>Psittirostra bailleui</i>
Lesser Koa-Finch .....	<i>Rhodocanthis flaviceps</i> .....	<i>Psittirostra flaviceps</i>
Greater Koa-Finch .....	<i>Rhodocanthis palmeri</i> .....	<i>Psittirostra palmeri</i>
Grosbeak Finch .....	<i>Chloridops kona</i> .....	<i>Psittirostra kona</i>
Maui Parrotbill .....	<i>Pseudonestor xanthophrys</i> .....	<i>Pseudonestor xanthophrys</i>
<b>SLENDERBILLED HONEYCREEPERS HEMIGNATHINI Tribe</b>		
Common Amakihi .....	<i>Hemignathus virens</i> .....	<i>Loxops virens</i>
Kauai 'Amakihi .....	<i>Hemignathus virens stejnegeri</i> .....	<i>Loxops virens stejnegeri</i>
Oahu 'Amakihi .....	<i>Hemignathus virens chloris</i> .....	<i>Loxops virens chloris</i>
Maui 'Amakihi .....	<i>Hemignathus virens wilsoni</i> .....	<i>Loxops virens wilsoni</i>
Hawaii 'Amakihi .....	<i>Hemignathus virens virens</i> .....	<i>Loxops virens virens</i>
Anianiau .....	<i>Hemignathus parvus</i> .....	<i>Loxops parvus</i>
Greater Amakihi .....	<i>Hemignathus sagittirostris</i> .....	<i>Loxops sagittirostris</i>
Hawaiian Akialoa .....	<i>Hemignathus obscurus</i> .....	<i>Hemignathus obscurus</i>
Oahu 'Akialoa .....	<i>Hemignathus obscurus ellisianus</i> .....	<i>Hemignathus obscurus ellisianus</i>
Lanai 'Akialoa .....	<i>Hemignathus obscurus lanaiensis</i> .....	<i>Hemignathus obscurus lanaiensis</i>
Hawaii 'Akialoa .....	<i>Hemignathus obscurus obscurus</i> .....	<i>Hemignathus obscurus obscurus</i>
Kauai Akialoa .....	<i>Hemignathus procerus</i> .....	<i>Hemignathus procerus</i>
Nukupuu .....	<i>Hemignathus lucidus</i> .....	<i>Hemignathus lucidus</i>
Kauai Nuku-pu'u .....	<i>Hemignathus lucidus hanapepe</i> .....	<i>Hemignathus lucidus hanapepe</i>
Oahu Nuku-pu'u .....	<i>Hemignathus lucidus lucidus</i> .....	<i>Hemignathus lucidus lucidus</i>
Maui Nuku-pu'u .....	<i>Hemignathus lucidus affinus</i> .....	<i>Hemignathus lucidus affinus</i>
Akiapolaau .....	<i>Hemignathus munroi</i> .....	<i>Hemignathus wilsoni</i>
Kauai Creeper .....	<i>Oreomystis bairdi</i> .....	<i>Loxops maculatus bairdi</i>
Hawaii Creeper .....	<i>Oreomystis mana</i> .....	<i>Loxops maculatus mana</i>



## SLENDERBILLED HONEYCREEPERS (continued)

Maui Creeper .....	<i>Paroreomyza montana</i> .....	
Maui Creeper .....	<i>Paroreomyza montana newtoni</i> .....	<i>Loxops maculatus newtoni</i>
Lanai Creeper .....	<i>Paroreomyza montana montana</i> .....	<i>Loxops maculatus montanus</i>
Molokai Creeper .....	<i>Paroreomyza flammea</i> .....	<i>Loxops maculatus flammeus</i>
Oahu Creeper .....	<i>Paroreomyza maculata</i> .....	<i>Loxops maculatus maculatus</i>
Akepa .....	<i>Loxops coccineus</i> .....	<i>Loxops coccineus</i>
Kauai 'Akepa .....	<i>Loxops coccineus caeruleirostris</i> .....	<i>Loxops coccineus caeruleirostris</i>
Oahu 'Akepa .....	<i>Loxops coccineus rufus</i> .....	<i>Loxops coccineus rufus</i>
Maui 'Akepa .....	<i>Loxops coccineus ochraceus</i> .....	<i>Loxops coccineus ochraceus</i>
Hawaii 'Akepa .....	<i>Loxops coccineus coccineus</i> .....	<i>Loxops coccineus coccineus</i>

RED AND BLACK HONEYCREEPERS	DREPANIDINI Tribe .....	DREPANIDINAE Sub-family
Ulai-ai-hawane .....	<i>Ciridops anna</i> .....	<i>Ciridops anna</i>
Iiwi .....	<i>Vestiaria coccinea</i> .....	<i>Vestiaria coccinea</i>
Hawaii Mamo .....	<i>Drepanis pacifica</i> .....	<i>Drepanis pacifica</i>
Black Mamo .....	<i>Drepanis funerea</i> .....	<i>Drepanis funerea</i>
Crested Honeycreeper .....	<i>Palmeri dolei</i> .....	<i>Palmeri dolei</i>
Apapane .....	<i>Himatione sanguinea</i> .....	<i>Himatione sanguinea</i>
Laysan Honeycreeper .....	<i>Himatione sanguinea freethii</i> .....	<i>Himatione sanguinea freethii</i>
'Apapane .....	<i>Himatione sanguinea sanguinea</i> .....	<i>Himatione sanguinea sanguinea</i>
Poouli .....	<i>Melamprosops phaeosoma</i> .....	* <i>Melamprosops phaeosoma</i>

\**Melamprosops phaeosoma* is now tentatively placed in the DREPANIDINI Tribe. In the Preliminary List, it was placed in the PSITTIROSTRINAE Subfamily.



## 1984 BOARD NOMINEES: HAWAII AUDUBON SOCIETY

The Nominations Committee, composed of S. Conant, A. Newman, J. Obata, and B. Gagné, have nominated the following persons for the 1984 Hawaii Audubon Society Board:

President:	Dr. Sheila Conant
1st Vice-President:	Suzan Harada
2nd Vice-President:	Phil Bruner
Treasurer:	Norris Henthorne
Record. Secretary:	Thea Johanos
Correspond. Secy.:	Karen Henthorne
Directors:	George Campbell
	Carl Christensen
	Marie Morin
	Marion Saunders
	Ray Tabata
	Alan Ziegler

Additional nominations can be made by any Hawaii Audubon Society member. Nominations must be either received by mail or hand-carried to the Elections Committee on or before 21 November 1983. (Please notice that this 21 Nov. date is not a postmark deadline, but the actual deadline for receiving the mailed nominations.)

All nominations must be submitted with the written consent of the nominee. The nominee must be a Hawaii Audubon Society member or have an application pending.

If you are mailing a nomination, send it to: The Election Committee, P.O. Box 22832, Honolulu, Hawaii 96822. Be sure that the written consent of the nominee is enclosed!

## BACK ISSUES OF 'ELEPAIO

Current prices for back issues of 'Elepaio are listed below. Actual postage charges for shipping will also be added on to these prices.

Vol. 41, No. 1 (July 1980) to present:

50¢ per issue, \$5.00 per volume

Vol. 1 through 40 (1939 to 1979):

\$1.00 per issue, \$10.00 per volume  
(5 or more volumes: \$8.00 per volume)

Vol. 1 through 43 (complete set: 1939 to June '83)

\$350.00 for the complete set

## ELECTIONS COMMITTEE APPOINTED

President Bob Pyle has appointed three Hawaii Audubon members to the Elections Committee. The members of the new committee are: Susan Schenck (Chairperson), Jack Mitchell and Alice Mitchell. As stated in the By-law amendments, the Election Committee "shall prepare and distribute ballots, receive ballots and written nominations, and tally votes".

## VOTE BY MAIL

Due to the new By-law amendments which were passed last year, it is possible for all local and joint-with-National members to vote in the election of officers without being present at the annual meeting. Off-Oahu, Pacific Basin members will now have a more equitable voice in HAS affairs. We hope everyone will participate in the new mail-in vote, especially if a member is not able to attend the annual meeting (votes may also be handed in at the beginning of the annual meeting).

Members will find their ballot and HAS envelope in the December issue of the 'Elepaio. The ballot should be returned promptly in order to be counted at the December annual meeting, which is generally on the 3rd Monday of December.

Mainland members (not subscriber; subscribers may not vote) who wish to vote should immediately request a ballot by first class mail. The 'Elepaio is mailed 3rd class and many Mainland members might not get their ballots on time if they wait for the December issue. If a Mainland member requests a ballot, a ballot will be sent to them via 1st class mail, and should be received in time for voting.

Since all Hawaii Audubon annual memberships expire on December 31, 1983, local members may wish to return their 1984 dues along with their ballot. Joint members will receive an invoice from National Audubon.

## REPRINTS OF ARTICLES

Reprints of articles in the 'Elepaio are available to authors and others at the following rate if ordered before publication date: for 100 copies, \$10. per page of the article. For each additional 100 copies, add \$3 per page. These prices are subject to change.



## HELP US GET AN OFFICE

At the October Board meeting, members of the Hawaii Audubon Society Board discussed the urgent need for a local Chapter office. The office could maintain an information phone; files, typewriters, and educational materials; a table for meetings and newsletter paste-ups; etc. Ideally the office should be on or near a bus line in a central location (e.g. near the Univ. of Hawaii, Manoa) and have at least 300 sq. ft. If anyone knows of any such space which could be donated, or rented at a minimal cost, please call Bob Pyle at 262-4046. Or, better yet, come to the 3 pm meeting on this subject 20 November (Sun.) at 3419 E. Manoa Rd., Honolulu.

## COME TO THE BYOPAD !

Hawaii Audubon Society Board members, ex-Board members, Committee Chairs, future Board members, and other members who have an interest in brainstorming over the future direction of Hawaii Audubon (e.g. Should we get an office?) are requested to attend a BYOPAD (bring your own pupus and drinks) at 3419 E. Manoa Rd., Honolulu, at 3 p.m. Sunday, 20 Nov. Call S. Conant at 948-8241 for more information.

## ATTENTION FEDERAL EMPLOYEES!

The National Audubon Society has been admitted this year as a beneficiary agency in the Combined Federal Campaign. The CFC is a solicitation of all federal government employees conducted each fall as part of the Aloha United Way campaign.

Federal government employees may designate their CFC contributions to the National Audubon Society. The word at this time is that contributions intended for Audubon should be designated to agency #503, and that Audubon will not share in the undesignated contributions, however, check on these points in the CFC literature.

A substantial portion of the proceeds received by National Audubon Society will be returned to Hawaii Audubon Society for use in local educational and environmental programs. Those who are not federal employees and who contribute to Aloha United Way have no opportunity this year to designate contributions to the Audubon Society

## NOVEMBER FIELD TRIP: QUEEN'S BEACH

The Sunday, 13 November field trip will be to explore birds and plants along Queen's Beach, near the Hawaii Kai Golf Course on Oahu. Access permission is still pending; the alternative will be a field trip to view forest birds on the Aiea Loop.

There are two meeting sites for this field trip. Interested persons should meet at 7:00 a.m. on Punchbowl St., Honolulu, next to the Hawaii State Library. For more information, call Peter Donaldson at 456-5662. Be prepared for the trip with appropriate footwear (tennis shoes or hiking boots), a hat, sun lotion, and a jug of water. Don't forget your binoculars! If the group ends up looking for forest birds at Aiea Loop, a light rain jacket might also be appropriate for some hikers to bring.

## ALOHA TO NEW MEMBERS

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

Joint (National and Hawaii): Mr. E.F. Bennett, Honolulu; Margaret P. Blackmer, Hilo; Jim Chiddix, Honolulu; Esther M. Frenz, Hilo; W.N. Gubser, Kailua-Kona; Louise Thomas, Honolulu.

Local: Lori Campbell, Hilo; Andrew Char, Honolulu; Mr. and Mrs. Dudley W. Foster, Kailua; Mary Foster, Tucson, AZ; Curtice Griffin, Columbia, MO; Floyd Hayes, Beltsville, MD; Kathy Houtchens, Honolulu; Joseph C. Jeffers, Honolulu; Muriel W. Jeffers, Honolulu; Sharry A. Jones, Downey, CA; Dorothy J. Kapahua, Honolulu; Arthur Kimura, Honolulu; Helen Lange, Kaneohe; Alison Layman, Menlo Park, CA; Norine Marousek, Orland Park, IL; Mike Moulton, Knoxville, TN; Jay Munns, Honolulu; Shelley Murasaki, Kealahou, HI; Ethel C. Pearson, N. Pembroke, MA; Stephen Potter, Darien, CT; Jeanne U. Rabel, Makakilo; Margaret M. Ramberg, Honolulu; Rae Shiraki, Honolulu; Michael Steffes, St. Paul, MN; Vernon K. Stroschein, Honolulu; Lance Tanino, Kaneohe; Floyd Tilton, Honolulu; Robin Wahl, Bellingham, WA; Lou Young, San Jose, CA.

*Susan Schenck and Kammy Wong*



NOVEMBER PROGRAM:

HAWAII'S FOREST BIRDS

The guest speaker for the Monday 21 Nov. general meeting will be J. Michael Scott.

Mike is a U.S. Fish and Wildlife Service biologist from the Big Island. He plans to present an overview on his native forest bird research, which was conducted on the major Hawaiian Islands. Bird distributions and factors limiting those distributions will be included in this slide talk.

The meeting will be held at McCully-Moiliili Library on S. King St., Honolulu, at 7:30 p.m. The public is welcome.

This is a chance to get an update on Hawaii's unique and fascinating native birds!

IF NOT A MEMBER, PLEASE JOIN US

JOINT MEMBERSHIP

(National and Hawaii Audubon Societies)

Table with 2 columns: Membership Type and Amount. Rows include Individual (\$25.00), Family (32.00), Sustaining (50.00), Supporting (100.00), Contributing (250.00), Donor (500.00), Life (single payment) (1500.00), and Dual Life (single payment) (2000.00).

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)

Table with 2 columns: Membership Type and Amount. Rows include Regular (\$6.00), Junior (18 and under) (3.00), Subscriber (non-Hawaii residents) (6.00), and Life (150.00, payable in three equal annual installments).

All Local Memberships and Subscriptions are for a calendar year January through December. New Local Members and late renewing members who send in dues through September may obtain all previous issues of 'Elepaio in that calendar year, upon request and reimbursement to the Society for mailing costs. Dues received after September are applied to membership extended through the following calendar year, but do not include previous issues of 'Elepaio in the current year.

HAWAII AUDUBON SOCIETY

BOARD OF DIRECTORS

Table listing Board of Directors: President (Dr. Robert L. Pyle, 262-4046), 1st V.P. (Dr. Wayne Gagné, 941-5659), 2nd V.P. (Dr. Charles Lamoureux, 948-8028), Treasurer (Norris Henthorne, 734-7562), Rec. Secy. (Suzan Harada, 845-6704), Cor. Secy. (Thea Johanos, 946-2181), and Directors (Patricia Avery, 988-7622; Phillip Bruner, 293-3806; George Campbell, 941-1356; Erma Ikawa-Nicola, 967-7367; Marie Morin, 533-7530; Marion Saunders, 988-2635).

COMMITTEES

Table listing Committees: Conservation (Dr. Charles Lamoureux, 988-2255), Education (Patricia Avery, 537-9564), 'Elepaio (Peter Galloway, 847-3511; Marie Morin, 533-7530), Field Trips (Peter Donaldson, 456-5662), Finance (Norris Henthorne, 734-7562), Mail Distrb. (Leilani Pyle, 262-4046), Membership (Dr. Robert Pyle, 262-4046; Susan Schenck, 488-4974; Kammy Wong), Programs (Phillip Bruner, 293-3806), Publicity (Vacant), Sales (George Campbell, 941-1356; Richard Smith, 262-4784), Scholarships (Dr. Sheila Conant, 948-8241), and Special Pub. (Dr. Rob. Shallenberger, 261-3741).

'ELEPAIO

Table listing Editors (Marie Morin, Peter Galloway) and Production Committee (Anne Conibear, Kathy Harrington, Audrey Newman, and Joel Simasko).

CHANGE OF ADDRESS

Are you planning to move? If so, please let us know ahead of time, or as soon as you know your new address.

HELP WITH 'ELEPAIO

The December issue of the 'Elepaio will be pasted-up 12 November (Sat.) beginning at 1 p.m. at 1415 Victoria St. #1515. If you want to help, call Peter at 847-3511 ex. 156 or Marie at 533-7530 for the entry phone number. No experience necessary! We train!



CALENDAR OF EVENTS

- Nov. 9 (Wed.) Board meeting at the home of M. Saunders, 3596 Woodlawn, Honolulu, at 7:00 p.m. Call 988-2635 for more information.
- Nov. 13 (Sun.) Field trip. Meet 7 a.m. at State Library on Punchbowl St., or call Peter Donaldson at 456-5662 for more details. (See p. 60)
- Nov. 21 (Mon.) General meeting on *Hawaii's Forest Birds* with Dr. J.M. Scott. McCully-Moiliili Library at 2211 S. King St., Honolulu, at 7:30 p.m.

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