



A European Starling on Oahu and its Possible Origin

by Peter V. Donaldson

A European Starling (*Sturnus vulgaris*) was present at Sand Island State Recreation Area, Honolulu (Oahu), Hawaii from 21 December 1980 until 14 January 1981, when the bird was collected. This is the second report of a European Starling for the state. The only other report of a European Starling in Hawaii is a sight record from South Point on the Big Island of Hawaii where "at least one and probably two" individuals were observed on 1 July 1979 (Elliott 1980). However, this bird is a first record for Oahu, and the first record for the state documented by photographs and a specimen. The specimen is preserved as a study skin, plus cleaned body skeleton, at the Bernice P. Bishop Museum, Honolulu, HI (catalog #BBM-X 157486). The photographs are held in the Rare Bird Documentary Photograph File of the Hawaii Audubon Society (RBDPF No. 199 et. al.).

Sand Island is located in Honolulu Harbor, separated from the south shore of Oahu by a 200 m wide channel. The northeast shore of Sand Island faces Honolulu Harbor, the south shore faces the ocean, and the northwest shore faces Keehi Lagoon. Keehi Boat Harbor is 1 km north of Sand Island, and Honolulu International Airport is 2½ km to the northwest, across Keehi Lagoon (Bryan 1982). A U.S. Coast Guard base, a sewage treatment plant, and an industrial area occupy the northern part of Sand Island. The west end of the island is undeveloped, with bare dirt, piles of rubble, and clumps of bushes. Sand Island State Recreation Area is a 200 m wide strip along the south shore with a sandy beach, large lawns, and scattered trees—mostly kiawe (*Prosopis pallida*) and ironwood (*Casuarina* spp.). Land birds usually found on Sand Island are: Spotted Dove (*Streptopelia chinensis*), Zebra Dove (*Geopelia striata*), Red-vented Bulbul (*Pycnonotus jocus*), Northern Mockingbird (*Mimus polyglottos*), Common Myna (*Acridotheres tristis*), Japanese White-eye (*Zosterops japonicus*), Northern Cardinal (*Cardinalis cardinalis*), Red-crested Cardinal (*Paroaria coronata*), House Finch (*Carpodacus mexicanus*), House Sparrow (*Passer domesticus*), and Nutmeg Mannikin (*Lonchura punctulata*).

On 21 December 1980, Susan Frosch, William Pimm, and I were counting birds for the Honolulu Christmas Bird Count. At 0830, we were driving through Sand Island State Recreation Area when I saw a strange bird walking on a lawn near the west end of the recreation area between the road and the fence along the north side. I am an active birder and I am familiar with all the birds normally found on Sand Island. I lived on the mainland until August 1979, so I am also familiar with the European Starling. This bird appeared to be a European Starling, which I knew to be extremely rare in Hawaii, so I immediately stopped the car and grabbed my camera. We observed the bird for 1 hr and I took several photographs

before we left to cover the rest of our sector. I returned to Sand Island at 1700 that evening and looked for the strange bird, but could not find it.

On 1 January 1981, I visited Sand Island again, and found the bird I had tentatively identified as a European Starling (hereafter: the starling) in the same area where I had first found it. I returned to Sand Island four more times between 2 and 10 January 1981, and each time I was able to find the starling in the same area; from 5 to 14 January, the starling was observed by several other people as well. I observed the starling for a total of 5 hr under a variety of conditions using 8 X 40 binoculars and a Questar scope (40X). On one occasion I observed the bird continuously for 90 min in bright sunlight from as close as 10 m. I took many pictures using either the Questar (1600 mm) or a 200 mm lens (Figure 1.)

Before 0930 or after 1600 HST, I was able to find the starling within a few hundred meters of where I first found it. The starling associated with a flock of 5-12 Common Mynas; it flew, perched, and foraged with them, although it often remained at the edge of the flock. During the morning and late afternoon, the starling and the mynas spent most of their time foraging on the lawn, and were easy to observe; but, in the middle of the day, the starling was hard to find. I saw the starling and the mynas fly north out of the recreation area late in the morning and fly in from the north late in the afternoon. The flock may have spent the middle of the day roosting in a stand of ironwoods in the industrial area on Sand Island where I often heard mynas calling (I never heard the starling vocalize). I tried scattering white bread on the lawn to attract the starling. The

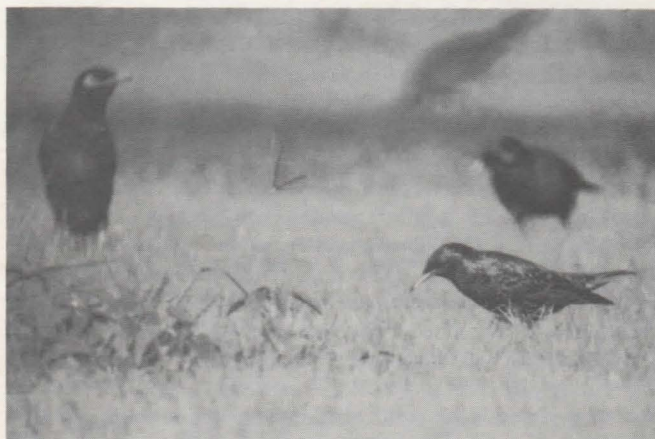


Figure 1. European Starling, Sand Island, Oahu, Hawaii. January, 1981.

Photo by Peter V. Donaldson

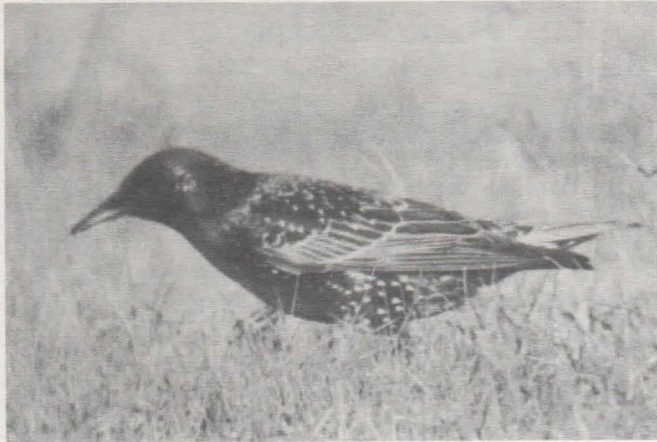


Figure 2. Female European Starling at Sand Island, Oahu, January, 1981.

Photo by Peter V. Donaldson

starling did fly in with the mynas and land near the bread, but the starling ignored the bread, and caught small arthropods in the grass while the mynas ate the bread. The starling and the mynas were equally wary, and would quickly fly into the trees if anyone approached closer than 10 m.

It might have been interesting to continue observing the starling to see if it would depart in the spring, undergo a normal sequence of molts, or survive for an extended period in Hawaii. However, the biologists with the Hawaii Division of Forestry and Wildlife were concerned about the possibility of European Starlings becoming established in Hawaii, and developing into a serious pest. So, although only one starling was ever seen on Oahu, the Forestry and Wildlife biologists took no chances: the bird was shot on 14 January 1981 and taken to the Bishop Museum. Dr. Storrs L. Olson, Curator, Division of Birds, U.S. National Museum, Smithsonian Institution, examined the specimen at the Bishop Museum and confirmed the identification as a European Starling (*Sturnus vulgaris*) (Alan C. Ziegler, pers. comm., 1982, unpublished letter, Hawaii State Division of Forestry and Wildlife files).

The following description is based on my field observations, and examination of the specimen and my photographs: total length—211 mm, wing—128 mm, tail—61 mm, tarsus—34 mm, culmen—15.6 mm, nares—18.8 mm. When the specimen was prepared, it was found to be a female, with its cranium fully ossified. The largest ovum measured 1 mm. The bird was plump, dark, and sleek with a short tail and a long, slender, pointed bill. The head, neck, back, rump, upper tail coverts, tectrices and breast were glossy black, with a purplish sheen, the belly and under tail coverts were black without the purplish sheen, and the remiges and rectrices were dull blackish-brown. There were buff spots on the upper tail coverts, rump, back, neck and occiput, and white spots on the undertail coverts and belly. The lower mandible and the base of the upper mandible were light brown; the rest of the upper mandible was brownish-black. The legs were brownish-orange. The starling walked with a waddling gait; its flight was swift and direct. In flight, the bird had pointed triangular, backswept wings, and a short square tail.

The original range of the European Starling is in Eurasia from the British Isles, France and Scandinavia, east to Lake Baikal,

wintering south to northern Africa, the Middle East, Arabia, Iraq, southern Iran, northwest India and northern China. The species has been widely introduced elsewhere. In the Pacific area, the European Starling is now established in North America from Alaska to Mexico, in Australia and New Zealand, the Chatham Islands, Fiji, the New Hebrides, Tonga (Long 1981) and since 1969 small numbers have been found regularly in Japan on Kyushu and the Ryuku Islands (Wild Bird Society of Japan 1982). The starling on Sand Island probably came from one of the introduced populations in the Pacific area.

It may not be possible to determine how the starling on Sand Island reached Oahu, but since the mechanisms for introduction of exotic birds to Hawaii are of considerable interest (i.e., Long 1981, Berger 1981, Williams 1983), I will discuss some of the possibilities:

1. The starling may have been deliberately brought to Hawaii (perhaps as a pet) and then released either deliberately or accidentally. Although no less an authority than Konrad Lorenz has recommended the starling as a pet (Lorenz 1952), I don't believe this is the most likely possibility. Since the starling has a reputation as a pest species, it is not a very popular bird (Howard 1959). Moreover, any introduction of the European Starling into Hawaii would be illegal. The European Starling is "prohibited entry" by Hawaii Dept. of Agriculture policy (Hawaii Revised Statutes 1976).

2. The starling might have flown to Oahu under its own power. The closest established population of the European Starling is on the west coast of North America (Long 1981)—about 3850 km from Honolulu, (U. of H., Dept. of Geography, 1983). Starlings in North America are quite variable in their migratory habits: some individuals are permanent residents, while others are highly migratory (Kessel 1953). Dr. Brina Kessel, Professor of Zoology and Curator, Terrestrial Vertebrate Collections, University of Alaska, sent me the following opinion: "While starlings cross the North Sea between Europe and the British Isles, and cross the Mediterranean, I am sure that they would not cross the huge expanses of the Pacific Ocean between Hawaii and the North American continent. It is far more likely that your birds arrived as stowaways aboard a ship! With lots of starlings around the shipping docks along the west coast of the continent, it seems entirely possible that an occasional bird might be caught on board when a ship put to sea."

3. I agree with Dr. Kessel that the most likely way the starling reached Sand Island was as a stowaway. Since Sand Island is located in Honolulu Harbor, and is only 2½ km from Honolulu International Airport, it is a location where a stowaway by either ship or plane would be likely to turn up. Although Dr. Kessel mentioned only the possibility of a stowaway from North America, a European Starling from some other location (e.g. Australia, New Zealand, Fiji, Tonga, etc.) could also have reached Honolulu as a stowaway.

There are many records of landbirds making long transoceanic voyages as stowaways: Durand (1972) summarized many examples of such stowaways in the North Atlantic from 1961-65. There is even one account of several starlings surviving a transoceanic voyage (Scott 1950). Seven starlings were aboard the M/V *Pellicula* when she sailed from Falmouth, England, on 29 October 1949. Two of the birds were caught and eaten by crewmembers, but the other five escaped capture. Those five starlings remained on-board until 12 November when the ship entered the lagoon at Maracaibo, Venezuela.

4. A different sort of possibility is that the starling at Sand

Island was one of the same birds seen at South Point in 1979 (Elliott 1980). If there were actually two or more starlings present, they might have nested, and the Sand Island bird could have fledged in Hawaii. The starling at Sand Island is the only one which has been reported in Hawaii since the sighting at South Point; there have been no more sightings at South Point. Dr. C. J. Ralph, formerly with the U.S.D.A. Forest Service in Hawaii, visited South Point after the 1979 sighting and searched for, but did not find, any starlings (D. Snider pers. comm.). A Hawaii Audubon Society field trip to South Point on 26 September 1981 also did not turn up any starlings (Paton 1981). If the starling at Sand Island did come from South Point, of course, that still leaves the question of how the bird got to South Point in the first place.

On the basis of the two records discussed here, the European Starling is now listed as an accidental straggler to Hawaii in "The Checklist of the Birds of Hawaii" (Pyle 1983) and as casual in the Hawaiian Islands in the "Checklist of North American Birds" (A.O.U. 1983).

Acknowledgements

I would like to thank the following people: Susan Frosch and William Pimm, for accompanying me on the 1980 Christmas Bird Count; Marie Morin, for obtaining reference material; Marie Morin, Dr. Alan C. Ziegler and Dr. Storrs L. Olson, for obtaining a definitive identification of the European Starling; Dr. Brina Kessel, for her comments on the possible origins of the starling; Pastor Daniel Snider, for his information on a visit to South Point to look for starlings; and Dr. C.J. Ralph, Peter W. C. Paton, and David Woodside, for their helpful comments on my original manuscript.

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ERRATUM

The Editors apologize for the errors which appeared in Doris J. Alcorn and John R. Henderson's paper entitled "Resumption of Nursing in 'Weaned' Hawaiian Monk Seal Pups". The paper appeared in the August 1984 issue of *'Elepaio* (Vol. 45, No. 2). Additional errata appeared in the September 1984 issue of *'Elepaio*.

On page 11 of the August 1984 issue, after the 5th paragraph under the Laysan Island section, a paragraph was inadvertently omitted. The missing paragraph follows:

"The second weaning occurred during the night of 18 May; at 0649 hr, 19 May, the pup was seen alone in the water. The weaning appeared to be normal, and was not due to mortality of the foster mother, as she was resighted on 25 May."

WILDLIFE REFUGE PLAN FOR PUBLIC REVIEW

The Draft Master Plan/Environmental Impact Statement (EIS) for the Hawaiian Islands National Wildlife Refuge was released by the U.S. Fish and Wildlife Service for public review on August 31, 1984.

Public participation in the planning process is encouraged. Copies of the Master Plan are available for public review in Honolulu at the following locations: Hamilton Library (U.H. Manoa, 2550 The Mall); Legislative Reference Bureau Library (415 S. Beretania); Hawaii State Library (478 S. King St.); Nat. Marine Fisheries Service (2570 Dole St.); State of Hawaii (1151 Punchbowl St.); and U.S. Fish and Wildlife Service (300 Ala Moana Blvd., Rm. 5302). The comment period ends on October 31, 1984. Please send comments to: Refuge Manager, Hawaiian Islands National Wildlife Refuge, P.O. Box 50167, Honolulu, Hawaii 96850.

WAIPIO PENINSULA FIELD TRIP REPORT -SEPTEMBER 1984-

Nine members and guests joined the Hawaii Audubon Society field trip to Waipio on Sunday, September 9th. The fields and roadways throughout the Peninsula appeared more dry and parched than at any time in recent memory. This was due in large part to the drought conditions of the past year and a half, compounded by record high temperatures during the "heat wave" of the past week. The East Ponds and West Ponds have been dry for many months. The large Central Pond has water, because it is artificially maintained as a settling basin for effluent from Oahu Sugar Mill in Waipahu.

Oahu Sugar no longer maintains a full-time security guard in the area on weekends to open the gate for our entry and departure; cars had to be parked by the Makalena Golf Course and the group walked from there to the Central Pond at about 8 a.m.

In the field just south of the golf course, the group had excellent views of Red Avadavats (formerly called Red Munias). The birds were in several flocks totaling at least 50 birds, including some males in fairly good red plumage. Farther along Waipio Peninsula Road, shortly before the turnoff heading westward to Central Pond, many House Finches were feeding on seeds of shrubs and grasses, and were easily viewed on electric wires and in tops of shrubs. Males showed varying amounts of red or yellow, affording a good comparison with the Red Avadavats in color pattern, size, and call notes.

The water level at the Central Pond was much reduced. The entire south half of the pond was wet mud, with scattered small puddles and shallow channels. This created excellent habitat for shorebirds, which were there in abundance.

The endangered Hawaiian Coots and Hawaiian Stilts were there in good numbers. Most numerous were the Lesser Golden-Plovers, numbering 200 or more when we arrived, but dwindling somewhat by the time we left. More than 100 Ruddy Turnstones and more than 50 Sanderlings were there, as expected. Scattered among these were the following birds, which are seen in Hawaii much less commonly, or irregularly: one Black-bellied Plover, two Semipalmated Plovers, two Lesser Yellowlegs, one Least Sandpiper, four Pectoral Sandpipers, one small sandpiper (sp?), one Ruff, one Short-billed Dowitcher, and one Least Tern. The

Semipalmated Plovers, two Least Sandpipers, and the Short-billed Dowitcher had been studied the previous day by three observers with spotting scopes at close range, in excellent light for extended periods, and were identified as these species by subtle plumage characters and by call. The Least Sandpipers were identified with a little less certainty than the others. Descriptive details will be submitted to the *'Elepaio* separately.

The Short-billed Dowitcher is difficult to distinguish from the Long-billed Dowitcher, the latter being much more frequently reported in Hawaii, but normally not arriving until later in the fall. The Short-billed is an earlier migrant; both are common in North America. The Semipalmated Plover of North America is frequently recorded in Hawaii, but seldom is carefully distinguished from the very similar Common Ringed Plover of Eurasia. The Least Sandpiper from North America has been reported frequently in Hawaii, but it is extremely similar to two species of small sandpipers from Eurasia, and almost as similar to four other Eurasian and North American small sandpipers, all but one of which have been recorded at least once in Hawaii.

Other species logged during the trip were a few Cattle Egrets, two Black-crowned Night-Herons flying by, and the usual common land-birds: Spotted and Zebra Doves, Japanese White-eyes, Common Mynas, and Red-crested Cardinals. Species not recorded on this trip, which often are found at Waipio, include Wandering Tattlers, Ring-necked Pheasants, Eurasian Skylarks, and Northern Cardinals.

The group was at the Central Pond from about 8:45 to 10:30 a.m. The small number of trip participants was attributed at least in part to the unusually early date of the second Sunday (9th), combined with the unusually late date when the *'Elepaio* announcing the field trip was put into the mail (Tuesday, September 4th) because of the Labor Day holiday weekend.

Robert L. Pyle



"HAWAII'S BIRDS" REVISED EDITION

The third edition, revised, of our best-selling field guide to the birds in Hawaii is now available. Members and others may obtain copies from the Society for \$4.95 each, plus postage (85¢ surface, or \$1.03 first class by air). Hawaii residents add 20¢ sales tax. Order from Hawaii Audubon Society, P.O. Box 22832, Honolulu, Hawaii 96822.

The new front cover (shown below) features a Laysan Albatross, photographed by Robert Shallenberger. The back cover has a striking portrait of an 'Io (Hawaiian Hawk) also taken by Rob.

Some of the paintings and photographs have been changed, and some species accounts have been updated with new information. All the common and scientific names were changed to conform to the 1983 A.O.U. checklist.

Dr. Robert Shallenberger generously volunteered his expertise and many hours of his time to overseeing the editing and printing of this guide. The Society is very grateful for his help.



OCTOBER FIELD TRIP: WAIALAE IKI

The Sunday, 14 October, field trip will visit Waialae Iki in the eastern Koolaus. The trip will feature forest birds; the birds will mainly be introduced species, but it is expected that 'Amakihi and possibly 'Apapane will be seen. This forest trail is not too difficult, although there are some steep sections.

Participants are advised to wear appropriate footwear for hiking. Also, you should bring along binoculars, water, a hat, a snack, and perhaps raingear.

Participants should gather by 7:30 a.m. at the Hawaii State Library (corner of Punch-bowl and King Streets) where directions and carpooling will be available. The trip leader is Bruce Eilerts; if you need more information, call him at 941-5974.

FUN AND EDUCATIONAL PUPPET SHOW

The Big Island's Anthurium Sisters will be bringing their "Puppets on the Path" back to Bishop Museum on October 27, Saturday, at 2:00 and 4:00 p.m. and on October 28, Sunday, at 4:00 and 6:00 p.m. The musical puppet show, "Nature Notes in Song and Rhyme", will feature songs and skits on native and exotic plants and animals, insular evolution, and Hawaiian ecosystems in a lively and entertaining way to delight adults and children alike. Join in the the fun. Bring your family and friends; picnic and visit the Museum, too. Admission will be \$2.50 for children under twelve (infants free) and \$4.50 for adults. Tickets may be purchased at the entrance to Atherton Halau; no reservations will be accepted and seating will be limited.

'ELEPAIO BY AIRMAIL

Members and subscribers wishing to have the 'Elepaio sent by airmail to addresses outside Hawaii may now obtain this service by remitting the additional amount needed to cover airmail postage costs. These amounts for 12 monthly issues are:

U.S. and territories and Canada.....	\$4.50
Central America, Caribbean.....	\$12.50
S. America, Europe, Africa, Pacific and Asia.....	\$14.50

OCTOBER PROGRAM: NATURAL HISTORY OF THE TUBUAI ISLS., FRENCH POLYNESIA

This program will report the findings of a recent, two-month natural history expedition conducted by P. Bruner (Director, Museum of Nat. History, BYU-Hawaii, and Assist. Prof. of Zoology at BYU-Hawaii).

The Tubuai Islands are located 500-1000 miles south of Tahiti. This archipelago is composed of five major islands: Rimitara, Raivavae, Tubuai, Rurutu, and Rapa. Collectively these islands have received very little natural history study, due in part to their relative isolation. Bruner's work marks the first overall investigation of the status of the avifauna of this part of the Pacific since the 1920's work of the Whitney South Seas Expedition sponsored by the American Museum of Natural History.

The meeting will be held at the McCully-Moiliili Library on 2211 S. King St., Honolulu, beginning at 7:30 p.m. on Monday, 15 October. Be sure to come, and bring along interested friends! PLEASE NOTICE THAT WE ARE BACK TO OUR REGULAR MEETING PLACE THIS MONTH!

NEW AUDUBON TELEVISION SERIES

The beauty and majesty of nature, as well as today's dangers threatening the earth's wildlife and environment, will be explored in "World of Audubon", the new series debuting this fall on cable SuperStation WTBS. The series, which will air quarterly through 1985, will premiere on the SuperStation on Monday, 22 October. Encore presentations will also be telecast on 28 October, 4 November, and 5 November (check local listings).

Hosted by veteran actor Cliff Robertson, each hour-long "World of Audubon" edition will use remarkable, on location wildlife photography, and interviews with noted conservationists and leading spokespersons to cover a variety of Audubon issues in a fast-paced, magazine-style program.

The inaugural program will include magnificently-photographed segments on Sea Otters in Big Sur, CA; rare pink flamingoes in Great Inagua, West Indies; Bald Eagles in Alaska; and Grizzly Bears in Yellowstone National Park.

Other segments will include revealing interviews with actor Richard Chamberlain on his

efforts to preserve California's scenic Tuolumne River, actress Pam Dawber ("Mork and Mindy") on her work as a solar energy proponent, and Friends of the Sea Otter founder Margaret Owings.

The program will also include a tribute to President Theodore Roosevelt, who championed wildlife conservation by establishing more than 50 natural sanctuaries and by creating the National Park System.

Please watch the premiere program on October 22, and encourage your friends and neighbors to watch it too.

WAIKIKI AQUARIUM: LOIHI SEAMOUNT THE NEXT HAWAIIAN ISLAND?

The October lecture in the Natural History lecture series at the Waikiki Aquarium will be given by John Wiltshire of the Dept. of Geology and Geophysics, U.H. Manoa.

Located off Hawaii's southeastern coast, only 30 miles from Kilauea, Loihi Seamount has already risen 10,000 feet off the seafloor. John Wiltshire will describe this active volcano, now only 3000 feet below the ocean surface, and some of the unique mineral deposits it may contain.

The lecture is Wednesday, 24 October, at 7:30 p.m. in the Waikiki Aquarium foyer. Phone 923-4725 for more information. A \$1.50 donation will be appreciated.

VOLUNTEERS NEEDED

Volunteers are always needed, for a variety of Audubon jobs both large and small!

One of our most pressing needs is to find two to four volunteers who are willing to be trained for mailing the 'Elepaio newsletter. Volunteers must be dependable; ideally, volunteers will alternate months, so that it will not be time-consuming. The main mailing activities include attaching stick-on address labels, and sorting the newsletter by zip codes. This is an ideal job for retirees, but any eager hands are welcome! We presently have two to three volunteer mailers, but they need more help. Call George Campbell at 941-1356 for more information.

Also, 'Elepaio newsletter especially needs typists. If you have as little as one hour a month to spare, consider volunteering to be a typist. Call Marie at 533-7530 after 5 p.m.

NOMINATING COMMITTEE FORMED

The Hawaii Audubon Society's Nominating Committee has been named. They are: Suzan Harada (839-5334), Rick Warshauer (967-7476), Norris Henthorne (395-0422), and Sheila Conant (948-8241).

Anyone who wants to recommend himself or someone else as an officer or director for the 1985 Board should write the Committee c/o HAS, P.O. Box 22832, Honolulu, Hawaii 96822, or call one of the members of the Committee listed above. The Committee appreciates any input from members of the Society.

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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.

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'ELEPAIO

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CALENDAR OF EVENTS

- Oct. 8 (Mon.) Board meeting at the home of Carl Christensen 1612 Kamole St., Honolulu. Begins at 7 p.m. Call 373-3457 for information.
- Oct. 14 (Sun.) Field trip to Waialae Iki with Leader Bruce Eilerts. See page 29 for details.
- Oct. 15 (Mon.) General meeting at the McCully-Moiliili Library at 2211 S. King St. at 7:30 p.m. Phil Bruner on *Natural History of the Tubuai Isls., French Polynesia*.

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