



SEABIRDS OF KILAUEA POINT, KAUAI ISLAND, HAWAII

by G. Vernon Byrd and C. Fred Zeillemaker

Kilauea Point (22°14'N, 159°24'W), the northernmost location in the main Hawaiian Islands, is well-known for its historic lighthouse (Figs. 1 and 2). This peninsula is surrounded by 45 m high cliffs, steep hillsides, and offshore islets which provide habitat for nesting and roosting seabirds.

The lighthouse and supporting facilities were maintained by the U.S. Coast Guard until 1974 when the U.S. Fish and Wildlife Service assumed management of the area as a seabird refuge. The authors were the first two refuge managers: Zeillemaker 1974 to 1977; and Byrd 1977 to 1980.

Observations of seabirds were recorded throughout the period July 1974 to April 1980. The following annotated list summarizes our information.

ANNOTATED LIST OF SEABIRDS

Black-footed Albatross (*Diomedea nigripes*).

Birds were seen in flight near Kilauea Point 15 May and 15 June 1975, 16 January and 21 February 1976, 31 January 1977, and 4 January 1978. The observation on 16 January 1976 involved four birds, but all the others were singles. Twice Black-footed Albatrosses were seen following ships past Kilauea Point; nine birds each on 19 and 20 February 1971, and eight birds on 2 April 1977. The only observation of this species on the ground was made 4 January 1978 when one bird alighted on Crater Hill near nesting Laysan Albatrosses (*Diomedea immutabilis*).

Laysan Albatross. Since 1975 the species has attempted nesting in the area between Kilauea Point and Mokolea Point (Zeillemaker and Ralph 1977, Byrd and Telfer 1979, 1980). Birds were seen first in late November each season and albatrosses remained through at least early May in years when no nestlings survived. In 1979, when chicks were successfully reared, adults continued to feed chicks until early July when the last chick fledged. Peak counts of adults averaged approximately six from 1975 to 1977 and 20 from 1978 to 1980.

Wedge-tailed Shearwater (*Puffinus pacificus*). The species breeds in small colonies scattered along the coastline of Kauai, but the Kilauea Point area has the largest and most successful colonies (Byrd and Boynton 1978).

Birds arrived from late February to mid-March each year. Courtship and burrow construction occurred in April and May. Egg laying occurred primarily during the last three weeks of June, and most eggs hatched

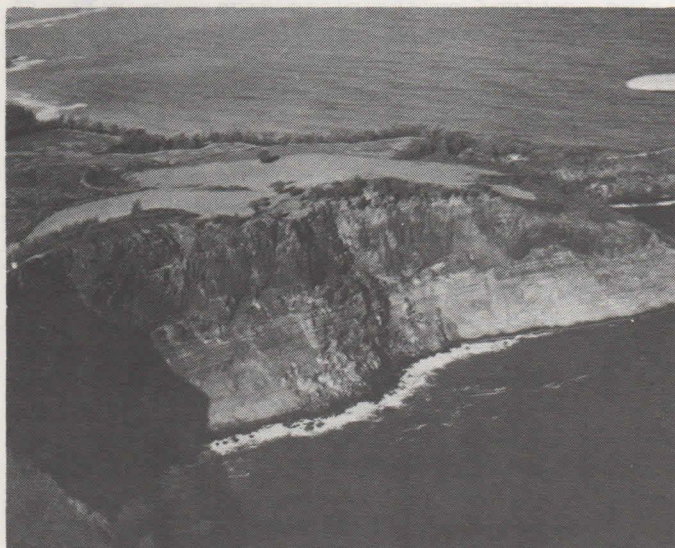


Figure 1. Photograph of Kilauea Pt. and vicinity with Crater Hill in foreground.



Figure 2. Photograph of Lighthouse at Kilauea Point.

during the first two weeks of August. Most chicks fledged the last half of November. All birds departed by early December.

Sooty Shearwater (*Puffinus griseus*).

A closely grouped flock of 30 birds flew past Kilauea Point 14 November 1975.

Newell's (Manx) Shearwater (*Puffinus puffinus newelli*). Birds were occasionally heard at night from April to October as they flew over the area to or from their nesting colonies in the interior mountains. Prior to 1976, when the historic lighthouse was in operation, Newell's Manx Shearwaters occasionally collided with the lighthouse or the taller radio antenna structure probably being blinded by the large, bright light. The radio tower was removed in 1975 and the old light was replaced by a small, directional, rotating light in 1976. Since then no "grounded" shearwaters have been found at the site.

Bonin Petrel (*Pterodroma hypoleuca*).

The only record is a single bird that collided with a structure at Kilauea Point 20 September 1974 (Fig. 3).

Bulwer's Petrel (*Bulweria bulwerii*).

A single bird was found dead near a guy wire at Kilauea Point 6 June 1978. John Sincock, Tom Telfer, and Byrd found the remains of three petrels on Mokuiaee Island in early July 1979, and the remains of 11 were discovered there in late September 1979.

White-tailed Tropicbird (*Phaethon lepturus*). These tropicbirds were year around residents at Kilauea Point. Pairs nested in cavities under tree roots, beneath junk (Fig. 4), or in large holes in the cliff face. The highest monthly peak counts, 12 to 16

birds, occurred May to August, and the lowest counts, 1 to 5 birds, occurred October to December.

Courtship flights were observed frequently from January to March and occasionally from April to August. Nesting is apparently asynchronous; recently-fledged birds were found August through January.

In 1979 at least five pairs nested along the coastline between the headlands west of Kilauea Point and Crater Hill.



Figure 3. Photograph of Bonin Petrel found at Kilauea Point.

Red-tailed Tropicbird (*Phaethon rubricauda*). Birds were first seen at Kilauea Point each year mid-February to mid-March. The highest annual count of adult birds was 12 to 20. The species nested in large crevices on the cliff face. In 1979 8 nests were scattered along the cliff face from Kilauea Point to Crater Hill. Chicks fledged from August to October. All birds departed in October.

Blue-faced Booby (*Sula dactylatra*).

Seven sightings of lone birds were made 1975 to 1977 on Mokuiaee Island; one each in January, February, May, June, July, and two in November.

Brown Booby (*Sula leucogaster*).

Brown Boobies roosted on Mokuiaee Island and on ledges on the cliff face of the crater. Monthly high counts ranged from 5 to 60 birds. Low counts usually occurred December through March and highest numbers were recorded August to November, but there were exceptions.

No proof of nesting was obtained, but the observations of two fledglings in November 1976 suggests the possibility.

Red-footed Booby (*Sula sula*). Red-footed Boobies nested in the bushes surrounding Kilauea Point until the late 1960's when the



Figure 4. Phototgraph of White-tailed Tropicbird nest near Kilauea Point.

birds moved to present nesting areas (Fig. 5). It probably took several years for the move to be completed, but the last birds moved in 1968 due to disturbance from unrestrained dogs kept by Coast Guard personnel (J. Sincock pers. comm.).

The colony size increased from 1974 to 1979, on the hill accross the cove from Kilauea Point: 350 nests on 10 June 1975, 435 nests on both 16 July 1976 and 21 February 1977, 491 nests on 17 June 1979, and 628 on 12 April 1980. The colony on the seaward face of Crater Hill may have decreased in size during the study due to a rapidly expanding colony of Cattle Egrets (*Bubulcus ibis*) (Byrd et al. 1980). Zeillemaker considered this booby colony to be larger than the one just east of Kilauea Point, but it contained only 60 percent as many nests (376) as the Kilauea Point colony on 15 April 1980.

At the beginning of the nesting season breeding phenology in the colony was fairly synchronous, but as the season progressed late laying occurred (involving 10 to 15 percent of the total breeding pairs). In 1976, 1979, and apparently 1978 and 1980, egg laying commenced in mid-March, hatching started in late April or early May, and chicks began fledging in mid-to late July (Fig. 6). In 1977 the first eggs were laid in early January. That year hatching began about mid-February, and chicks were fledging by early May. In 1975 the nesting phenology was about three weeks later than in 1977, but earlier than other years. The species is a year around resident at the site.

Great Frigatebird (*Fregata minor*). Frigatebirds do not nest in the area, but roost throughout the year on Mokuaeae Island and on *Casurina* trees near the base of the steep face of Crater Hill. Frigatebird populations were usually highest May through

November when monthly high counts ranged from 40 to 200. Counts from December to April ranged between 8 and 50 birds. During the study, adult male frigatebirds were seen on only 6 occasions; all single birds except one group of three. The single males were

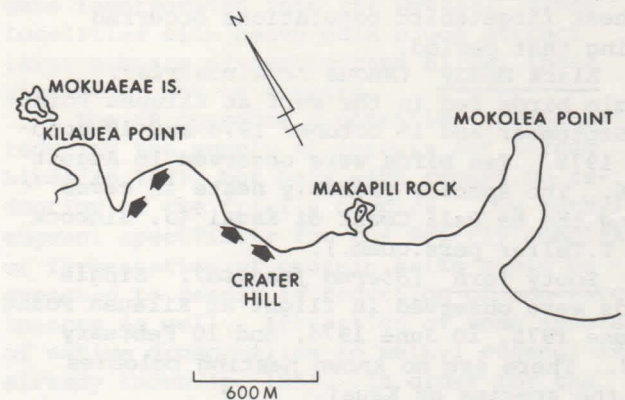


Figure 5. Map showing locations (double arrows) of the two main Red-footed Booby colonies near Kilauea Point.

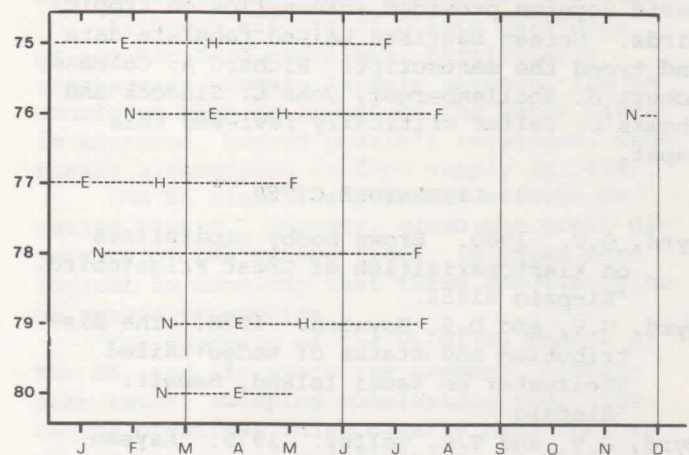


Figure 6. Diagram of Red-footed Booby nesting events at Kilauea Point 1975 to 1980. Symbols indicate the beginning of the peak of activities: N - nest material gathering; E - egg laying; H - hatching; and F - fledging.

seen 21 January to 19 February and 4 July. The group of three was observed 25 May. All others were either adult females or birds in immature plumage.

Frigatebird presence at Kilauea Point is presumably based on the species klepto-parasitic relationship with the Red-footed Booby. This behavior has been documented elsewhere (e.g. Nelson 1978), and it was frequently observed at Kilauea Point (Byrd 1980). Boobies arrived at the colony with extra food during the incubation and chick rearing periods (April to October) and the highest frigatebird populations occurred during that period.

Black Noddy (*Anous tenuirostris*). Single birds fed in the surf at Kilauea Point 29 September and 15 October 1974 and 10 October 1978. Ten birds were observed 16 August 1976. The species probably nests in caves along the Na Pali Coast of Kauai (J. Sincock and T. Telfer pers. comm.).

Sooty Tern (*Sterna fuscata*). Single birds were observed in flight at Kilauea Point 6 June 1975, 10 June 1976, and 10 February 1977. There are no known nesting colonies for the species on Kauai.

ACKNOWLEDGMENTS

Valerie Byrd and Melly Zeillemaker provided frequent field assistance. John L. Sincock and Thomas C. Telfer provided unpublished field notes. Daniel Moriarty assisted with shearwater and booby observations. Roger Clapp identified the Bulwer's Petrel remains. David Boynton provided information on tropicbirds. Noreen Bautista helped tabulate data and typed the manuscript. Richard A. Coleman, Robert J. Shallenberger, John L. Sincock and Thomas C. Telfer critically reviewed this paper.

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FRUITFLY ERADICATION: REVIEW OF TRI-FLY ENVIRONMENTAL ASSESSMENT

by Peter Galloway

A copy of the *Draft Environmental Assessment of the Tri-fly Eradication Program in Hawaii* was recently sent to Hawaii Audubon Society by the Hawaii State Department of Agriculture for our information and review. We submitted comments on 1 December. A copy was sent to the U.S. Fish and Wildlife Service to supplement HAS comments on the proposed listing of *Achatinella* as an endangered genus ('Elepaio, August 1980).

The environmental assessment (EA) was prepared by Ketron, Inc., Arlington, Virginia under contract to the U.S. Animal and Plant Health Inspection Service (APHIS), and submitted to the U.S. Department of Agriculture (USDA).

The primary purpose of an EA is to investigate the level of potential impacts of a proposed program to help the decision maker (in this case, USDA) decide if these impacts are significant enough to require preparation of an environmental impact statement (EIS) under federal law. In addition, Hawaii state EIS regulations will have to be satisfied. The present document is not a Draft EIS.

The stated objective of the Tri-fly program is to eradicate three introduced pestiferous fruit fly species, referred to collectively for convenience as the Tri-fly complex, which are widely distributed throughout the Hawaiian Islands: the oriental fruit fly (*Dacus dorsalis* Hendel), the melon fly (*Dacus cucurbitae* Coquillett), and the Mediterranean fruit fly (*Ceratitis capitata* Wiedemann). Although assessment of the possibility of achieving eradication is "not within the scope...and...not addressed within the report" (p. xi), this controver-

sial aspect of the proposed program will have to be addressed if an EIS is prepared.

In addition to sterile male releases, the proposed plan calls for three chemical control methods which, it is hoped, will provide specific delivery of a non-specific insecticide (malathion). One method calls for malathion to be combined with a hydrolyzed-protein bait spray. The two other chemical methods, to be used for male annihilation, will combine malathion with a male attractant (methyl eugenol) in either impregnated cigarette filter tips or in a thixotropic liquid spray. Type of treatment chosen for a particular locality will depend upon human population density, Tri-fly complex population densities, and other factors. The existence of National Parks, Natural Area Reserves, wildlife refuges, aquaculture farms and other potentially sensitive entities will impose further limitations on treatment plans.

Hawaii Audubon Society comments focused upon potential impacts of the proposed program on Hawaii's native wildlife. In general, the existing information upon which some important conclusions of the EA are based is extremely limited, and it is clear that further study is necessary to answer critical questions, particularly those relating to malathion toxicity and target specificity in Hawaii's diverse native communities. Some specific problems found in the EA are as follows.

Information on degradation of malathion in Hawaii's tropical environment, including possible microbial degradation to toxic intermediates, is needed to supplant the Temperate Zone data presented. In particular, sorbtion of malathion by leaf and branch surfaces of native plants, and by the biological film they support (algae, fungi, etc.), needs evaluation. These surfaces are the habitat of many native arthropods, and native molluscs graze the biological films. The EA points out that no toxicity data for the tree snails are apparently available, and further, with regard to the proposed Endangered genus *Achatinella*, "nor are there likely to be any toxicity studies done, so that the actual effect of malathion on this genus cannot be ascertained" (p. 158). The EA then concludes, based on data from larger terrestrial snails, that there will be no effect on the native land (tree) snails, which seems highly conjectural. The EA also states that "bait spraying...will be localized and limited to exotic trees where these snails are rarely found" (p. 158), which is incorrect. *Achatinella* are commonly found on the exotic straw-

berry guava (*Psidium cattleianum*) in mixed native and exotic forest. Also, it seems very unlikely that spraying can be effectively limited to individual exotic trees in such forests.

The EA cites toxicity of malathion as a possible effect on native forest birds and mentions eating of filter tips or using filter tips for nest material as two ways in which forest birds may be exposed, but fails to recognize another obvious one: birds may also ingest malathion from spray which lands on upward-facing *Metrosideros* blossoms and gets incorporated into the nectar. Since localities with heavy ohia bloom attract large numbers of nectivorous birds, these sites must not be treated.

The EA concedes a potential effect of reducing the supply of insects for forest birds (p.142), but only with regard to reduction of the Tri-fly complex. Low methyl eugenol specificity for the Tri-fly complex or fermentation of protein baits could be expected to result in reduction of non-target insects as well. Attraction of some species of native drosophilids to methyl eugenol is already known (p. 165). In order for the bait spray to maintain whatever specificity it has for the Tri-fly complex, it must not be allowed to ferment, and the EA asserts (p. 165) that the protein bait will dry fairly quickly and fermentation would not be a factor. However, it appears more likely that some fermentation could take place in wet forest areas, attracting saprophytic Drosophilidae and other non-target insects.

Although effects of dilute malathion on aquatic food organisms, particularly crustaceans, remain largely unknown, the EA concludes that no impact on the water birds is expected, beyond possible localized, temporary alterations in food supply (p. 174).

The EA minimizes possible effects on native plants. However, given the great diversity of the native flora, it seems more logical to conclude that there are likely to be sensitive species.

The synopsis of the wildlife module of the EA, and its executive summary, contain some rather sweeping conclusions regarding native organisms which clearly need further qualification and modification, or deletion. In view of its possible impacts on native *Drosophila* and *Scaptomyza* populations and on *Drosophila* Project research, and because of its largely unknown potential impacts on other native organisms, the proposed program should receive a very thorough review. If plans proceed, an EIS certainly should be required.

HAWAII BIRD OBSERVATIONS AUGUST 1979 THROUGH JULY 1980

by Robert L. Pyle

Warm dry weather continued through the summer and fall. A damaging rainstorm hit windward Hawaii Island in mid-November, and a severe rain and windstorm pounded Oahu and Maui January 7-10. Thereafter, precipitation generally was near normal through the spring and summer.

Short-tailed Albatross--A single Short-tailed Albatross appeared again at Sand I., Midway for the eighth winter in a row. It was seen from Nov. 7 until at least Jan. 20 (GG, TP). More exciting was another at Tern I., FFS Jan 13-14 (RSch, SSchl).

Laysan Albatross--The first bird returned to Kilauea Nov. 17. All nesting at Kilauea and Barking Sands on Kauai failed this year due primarily to dogs and vandals (VB, 'Elepaio 41:1). At Sand I., Midway, 2 Laysan X Black-footed Albatross hybrid adults were seen regularly through November and December (GG). One Laysan found dead at Hauola Beach, L.) Mar 12 (PEC) may be the first known record ashore on any of the islands south of Oahu. The skeleton went to the Bishop Museum.

Hawaiian Petrel ('Ua'u) (En)--Again this year (as last year), at least 100 petrels were heard and seen near the Fog Drip station on Munro Trail, L. Observations were made between 7 and 8 p.m. July 17 (PeC). A few were heard there earlier on July 1, but none on April 14. Six petrels were heard at Wai-kane Spring, M. on May 24 (PeC).

Newell (Manx) Shearwater--The salvage program on Kauai this year rescued more than 1100 birds from Oct 1 to Nov 20 (VB, JS). These were almost all fledglings, banded and released by wildlife personnel after being grounded on highways at night and being turned in by the public to designated receiving stations.

Bulwer Petrel--At Lisianski I. in the Northwest Hawaiian Islands EK found 27 Bulwer Petrel nests and estimated about 40 nests probably present. Egg laying started in late May. Although Bulwers were known to have nested on Lisianski over a half century ago, no breeding activity had been observed there in recent decades. Bulwers also were found nesting during August off Puu Pele Pt. on the south shore of Lanai (LH). Two birds unable to fly were found by fishermen Aug 31

in the ocean off Lanai. They were placed in a rock crevice at Puu Pele Pt. and were gone the next day (PeC). The HAS trip to Manana Island off Oahu Aug 11 found 4 active nests (LH, 'Elepaio 40:91).

Harcourt Storm-Petrel--Two of these birds turned in along with the shearwaters provided an exciting bonus for the salvage program on Kauai. One, a fledgling with remnants of down, was found Oct 24 near the town of Waimea. The other, an adult with refeathered brood patch (JS), was picked up Nov 10 in lower Hanapepe Valley. A population of this species was originally described as a race endemic to Hawaii, based on a few young birds collected in the late 1800's near Kauai. But its nest and eggs have never been found in Hawaii.

White-tailed Tropicbird--Two were roosting together in a crevice in a building on Sand I., Midway from Dec 19 to 26, but no egg was found (GG). Near Honolulu, 4 were flying together in Manoa Valley near Waiole Tea Room Apr 19, and another was seen in flight over the Honolulu Art Academy May 16 (SC). In July a pair was watched in spectacular courtship flight low over the trees around the Governor's mansion (CJR). And at Lanai City, L., two were watched in flight July 10 and one on the next day (PeC).

Little Blue Heron--For the fourth consecutive year, an adult Little Blue Heron has appeared for a brief period in early fall at the same pond area on Waipio Peninsula, O. This year it was reported Aug 19 (RP, PPy), was seen two or three times in September, and was last seen Oct 10 (PD). From 1966 to 1972 an adult Little Blue also was seen almost annually in fall at the same general locality. These are the only known records of this species in Hawaii. One wonders how many of these occurrences may represent the same individual bird. If it is the same bird, does it migrate annually to Hawaii, or has it found a hideaway on Oahu where it spends most of the year undetected? If different birds have been involved, the coincidence in timing and locality is remarkable. A young White-faced Ibis also appeared first in the fall of 1976 in this same locality, but it has been observed regularly in all seasons since then.

Cattle Egret--The Cattle Egret resident at Midway since March 1979 was seen regularly through the fall, winter and spring until at least May 1, 1980 (VB, GG, EK). Another was regularly seen at Tern I., FFS from Sep 7 to Oct 18 (VB) and from Mar 24 to at least Apr 8 (fide JA). Four were seen at sea between Hawaii and the Line Islands in early November, flying southwestward. One came aboard the vessel and died 2 days later (PK). Other sightings in unusual locations included one at Hulopo'e Beach, L., Apr 12 (PeC), one on Laysan I. in May (fide EK) and one on Nihoa I. during June (SC, MC). At Waipio on Aug 19, 880 were counted at the Central Pond alone with many more in other parts of the area (RP).

Snowy Egret--A Snowy Egret at Nuupia Pond, O., Mar 6 to 31 (RC) was seen by many observers and well photographed. The bird was in fine adult plumage with well-developed head plumes and good color on bill and feet. As such, it was the first confirmed record of the species for the state.

Black-crowned Night-Heron--Following a behavior pattern that probably was commonplace on the high Hawaiian Islands before man arrived, a night-heron (Auku'u) was seen July 4 flying downstream in remote, heavily forested, almost inaccessible Waihou Valley on Molokai I., at least 2 miles up from the coast (LG).

White-faced Ibis--The immature dark ibis resident in the Waipio area since September 1976 has finally been confirmed as a White-faced Ibis, based on the reddish eye (DP, 'Elepaio, 41:45--SC, 'Elepaio 38:56). The bird has been seen regularly by many observers in all seasons to date.

Blue-faced Booby--At least 10 full grown birds and 3 chicks were seen on Moku Manu through a high-powered Questar scope from Ulupau Head, O., June 28 (RP, PD).

Red-footed Booby--Following Oahu's major rain and windstorm of Jan 9, most of the resident colony of 1500± in Ulupau Crater departed the area and were gone for several days before gradually returning (TC).

Whistling Swan--An immature was seen alive at Sand I., Midway Nov 7. It was not observed again until Dec 22 when the carcass of a dead swan was found in the same area (GG). The specimen was sent to the U.S. National Museum for identification by Roger Clapp, and it is the first swan of any species to be recorded in Hawaii.

Canada Goose--In recent years this species has turned up in the islands virtually every winter. This year, one appeared at Kii Pond, O., Nov 4 (RP, MO et al.) and 2 were found at the adjoining Lowe Aquafarm Dec 14 and Jan 19 (DS). At least 3 were at the same place Feb 29 (DP) and into March. One was present at Kanaha Pond, M., Mar 21 (RC) and 28 (RP). On Kauai, a group of at least a dozen at Hanalei from August until October may have been escapes from a captive flock (VB). But one small individual with a large white neck ring seen there repeatedly from December through February was probably a bona fide straggler. It may have been the Cackling subspecies which is frequently recorded in Hawaii but which rarely has the neck ring, or it might have been the very rare Aleutian subspecies (VB).

Brant--Brant reports this winter included one at Lihue, K. on the Christmas Count Dec 15 (WS), one at Kii Pond from Dec 8 (RP, MO) to Jan 19 (DS), and 2 there from Feb 10 through at least May 14 (GC, RC et al.).

Ducks--Although 43 Pintails had arrived at Waipio by Sep 23 (RP), migrant waterfowl numbers on Oahu were generally low through October. Lack of rain, and less than optimum habitat conditions at Waipio and Kii Ponds were factors. But with improving water conditions, numbers built up in November to 200 to 300 at each locality, most of them Pintails and Shovelers. Most Mallards in Hawaii are derived from feral stock, but one drake at Kii Oct 17 (PD) and 2 there Dec 8 (MO, RP) mixed with Pintails and Shovelers may have been wild migrants from N. America. An emaciated female Mallard, weak and unable to fly, found at Sand I., Midway Dec 7 (GG) was very likely a bona fide straggler. Up to 7 Koloa (EW) were seen regularly at Waipio through the fall, 4 were at Hamakua Drive, O. Nov 11 (RP) and two were at Kii Dec 8 (MO, RP).

Other species recorded in the state this year were: Gadwall (3 at Sand I. Midway); Green-winged Teal (Waipio (10), Kii, Tern I. FFS and a well-observed European Green-winged Teal at Sand I. Midway-GG); Garganey (2 fine drakes at Waipio); European Wigeon (Laysan, Waipio, up to 5 at Kii); Am. Wigeon (5 at Waipio, 15 at Kii); Ring-necked Duck (Waipio, Kii and Waiakea Pond, H.); Canvasback (Waipio, Kii, Kealia, M., Lihue, K., 5 at Lumahai River, K); Canvasback or Pochard (Sand I., Midway, Photos-GG); Greater Scaup (Kealia, M.); Lesser Scaup (Waipio, Kii, Sand I. Midway); Tufted Duck (Waipio, Kii); Buffle-head (Waipio, Kii, Waimea Reservoir, H., Sand I. Midway); Hooded Merganser (Kii).

Two or three Shovelers seen repeatedly through June and July at Lowe Aquafarm, O. (fide RC) were apparently overwintering.

Marsh Hawk--One bird was seen briefly at Kawainui Marsh on the Honolulu Christmas Count Dec 16 (RSha, EK, 'Elepaio 40:122).

Osprey--The bird headquartering at Waiawa Unit, Pearl Harbor NWR, O. since early 1979 was sighted repeatedly there and at nearby locations through the summer and fall and also in March and early April 1980. One was observed across the island at Malae Kakana St. Park, near Laie, O. Apr 27 (TB). Elsewhere in the state, an Osprey was watched perched and in flight at Halape on the south-east coast of Hawaii I. Aug 3 and 4 (PPa, LM). On Lanai I., where there are few if any prior records of Osprey, one was seen along Shipwreck Beach between Kahua Bay and Laehi Pt. Oct 26-28 and Nov 10 (PeC et al., SSchK). And Maui had its Osprey at Kealia Pond on the Christmas Count Dec 31 (RSha, KK) and at Kanaha Pond Mar 2 (DP).

Peregrine Falcon--At Sand I., Midway a Peregrine was being mobbed by many White Terns and Black Noddies Jan 16. Another large hawk, probably the same bird, was seen there Feb 5 and 14 (GG). A large drab falcon with a streaked breast, probably an immature Peregrine, was watched in flight at Ulupau Head, O. Jan 15 as it made a half-hearted pass at a Great Frigatebird (OJ).

Golden Plover--An intensive study involving netting and color banding Golden Plovers in a wintering population at Bellows Field, O., yielded much new information about their behavior patterns (OJ, PB - 'Elepaio, in press). The population of several hundred birds remained relatively stable through the winter until Apr 24, then dwindled dramatically in 2 days to no more than a dozen individuals (OJ).

Overwintering Golden Plovers were noted during June and July at widely scattered localities including Nihoa I. (12); Hanalei NWR, K. (4); Honokohau and Chain-of-Craters Rd., H.; and Bellows Field (14), Kii Pond, Walker Bay and Kaneohe Air Station on Oahu (SC, PPa, PB, PD, RC, RP). These were in non-breeding plumage. But a group of 37 at Kaneohe Air Station June 28, most of them having mottled black underparts (RP), is hard to explain.

Common Snipe--Single birds were found at Waipio Nov 8 and 15 (PD) and again on the Christmas Count Dec 23 (MO, RP). Two were at the Lowe Aquafarm Dec 14 (DS).

Whimbrel--One of these very rare stragglers to Hawaii was discovered at Bellows Field, O. Feb 7 (PB). The bird was observed for 3 minutes standing in an open grassy field fronting a housing area. The plumage was worn, particularly the rectrices and first two primaries. It was resting, not foraging, and flew off toward the ocean when flushed by a passing car.

Bristle-thighed Curlew--One curlew at Kii Pond July 13 and two on July 29 (RC) were extremely early. Thereafter, the curlew flight this year was disappointing, with only two other sightings at Kii (PB) through the rest of the fall. (The report of one at Waipio in *American Birds* 34:205 is an error.) One found on a rocky shore at Hapuna Beach, H., Oct 7 (PB) is one of the few reports of this species on any of the main Hawaiian Islands other than Oahu. Up to 10 were at Sand I., Midway through November and December (GG). One was found on isolated Nihoa I. June 1 (SC, MC).

Spotted Sandpiper--A bird observed carefully at Tern I., FFS from Aug 31 through October was identified as a Spotted, rather than a Common Sandpiper, on the basis of the grayish back not strongly barred and the short tail extending just past the wing tip (VB, RSch). The bird remained through the winter and spring until as least Apr 11 (SSch1, JA).

Bar-tailed Godwit--A scattering of sightings throughout the state this year included single birds at Waipio (PD, PK) and Kanaha Pond, M. (JW) in October, Sand I., Midway in November (GG) and Green I., Kure Atoll in March (GG). Two were noted on Lisianski I. in late May (EK).

Ruff--Ruffs came to Hawaii again this fall and winter as they have each year since 1977. One male was at Tern I., FFS Aug 22 to Sep 17 (VB), and 3 remained at Kanaha Pond, M. for three weeks in October (CK, JW). At Waipio, the first one was found Sep 16 (MO, RP) and up to 3 were reported regularly through the season until at least Apr 4 (DS, PD, CJR, et al.). One bird was at Kii Pond Dec 8 (MO, RP) and another was seen Dec 17 on Kauai in a wet grassy field along the highway just past Waimea (DS).

Hawaiian Stilt (En)--Two stilts landed on the runway at Lanai Airport June 1 and remained for 10 minutes before flying off. The day was rainy and the runway had many puddles of standing water (fide PeC). Stilts

were apparently unknown from Lanai before the early 1970's at least (Berger, *Hawaiian Bird-life*; Munro, *Birds of Hawaii*), so this could well be the first report of the species on that island. The two birds probably were enroute between Maui and another island, which in itself is significant.

On Molokai I., 24 stilts were found at Kaunakakai sewage treatment pond and 4 at Kakahaia NWR on Sep 15 (BB). One at Kaunakakai was a color-banded bird from Oahu.

Red Phalarope--A fine bird in winter plumage with a few breeding feathers coming in was picked up barely alive Mar 24 on the BYU-Hawaii campus, Laie, O. (PB). It became a specimen in the BYU collection. Another one in winter plumage was seen a few miles away at Kii Pond Apr 17 to 22 (RC, RP). These, plus the one on the Maui Christmas Count December 31 constitute an unprecedented "invasion" of this species to the islands themselves, although they do winter on the high seas in this part of the Pacific.

Wilson Phalarope--A weakened bird was found at Tern I., FFS Aug 5 and died the next day (VB). Another was at Kii Pond Sep 16 (MO, RP).

Other shorebirds--The usual assortment of less common migrants (Black-bellied Plover, Lesser Yellowlegs, Sharp-tailed, Pectoral, Least, and Western Sandpipers, Dunlin and Dowitcher) were reported this fall, winter and spring at regular wetland areas in the main islands and also in the Northwestern Hawaiian Islands. Notable sightings included a Semipalmated Plover and Pectoral Sandpiper at Tern I., FFS; a Lesser Yellowlegs on Laysan; and a Sharp-tailed Sandpiper on Lisianski. JW had a high count of 18 Sharp-tailed Sandpipers at Kanaha Pond, M. Oct 28, and up to 7 were at Sand I., Midway Dec 6 (GG).

Summer sightings of Ruddy Turnstones included 10 (7 in breeding plumage) at Honolulu Airport June 26 (MS), 18 mostly in mottled plumage at Kaneohe Air Station June 28 (RP) and 16 at Waipio July 16 (PD). Other reports of up to half a dozen Ruddy Turnstones, Wandering Tattlers or Sanderlings during June and July came from Nihoa I. (SC, MC), Oahu (RC) and Hawaii I. (PPa).

Gulls--Although gulls traditionally have been considered to be only accidental stragglers to Hawaii, increasing field work in recent years on islands other than Oahu and particularly on the uninhabited Northwestern Hawaiian Islands has brought a corresponding increase in gull reports. Beginning with an

immature Laughing/Franklin type at Waipio Sep 25, gulls were found through the fall, winter and spring on Hawaii, Maui, Lanai, Oahu and Kauai, and also at French Frigate Shoals, Laysan, Midway and Kure. Species involved were Glaucous, Glaucous-winged, Western, Herring, California, Ring-billed, Laughing, Franklin and Bonaparte. Most were single birds, but two and three immature Laughing Gulls together were seen for a period of weeks at two different Oahu locations. The fine adult Western Gull resident at Paiko Lagoon, O. since Dec 1978 apparently disappeared sometime after late March 1980.

The most exciting and significant gull find was a weakened immature banded Laughing Gull picked up alive at Ahukini Landing, K., Dec 14. It died later that day and is now a specimen in the Bishop Museum. It had been banded as a juvenile near Barnegat Light, New Jersey 5 months earlier in July 1979 (TT). Besides documenting the remarkable journey of this bird, the specimen has the tail band extending completely to the outer rectrices, and a proportionately long bill, which helps confirm these features as indicators of Laughing Gull rather than Franklin Gull in immatures of this type reaching Hawaii.

Two adult Franklin Gulls with black heads and typical wingtip patterns were well-observed at Kii Pond May 14 on one day only (RC). An immature Laughing or Franklin Gull with no band on its tail was seen completely out of season at Kaluapuhi Pond, O., several times between June 6 and July 12 (RC, RP).

Gray-backed Tern--Numerous individuals flying and alighting on Moku Manu were watched through a Questar scope from Ulupau Head, O. during the HAS trip Apr 13, and again June 28 (RP).

Sooty Tern--These pelagic terns, normally seen only from coastal headlands or near offshore nesting islands, were reported onshore as follows: 1 Feb 18 sitting on the ground at Kaluapuhi Pond, O. (PD), 10 on Apr 18 high in the air over Kii Pond (RP) where they are seen occasionally in summer, and 1 at Kii Pond June 18 being chased by stilts (RC).

Least Tern--The surviving bird at Tern I., FFS in July remained until Oct 20 (VB). One was seen at Kii Pond Oct 27 and Nov 4 (RP, MO, et al.).

Caspian Tern--The state's first recorded Caspian Tern was seen frequently at Kaluapuhi Pond through Sep 24, then again on Oct 21 (RP), in Mid-November (TC), on the Christmas Count Dec 16, and regularly from January 14

through May 1980 (RC, *et al.*). Meanwhile, 1 turned up at Kealia Pond, M. Oct 6 (TB) and was seen there again Oct 25, 27 and 28 (JW) and 30 (CK). It was not found at Kealia on the Christmas Count Dec 31. No reports are available from Kaluapuhi or Kealia on other dates between September and January. Thus, it is not clear whether or not this may have been the same bird moving back and forth between Oahu and Maui.

Black Tern--This very rare visitor to Hawaii, a bird moulting into winter plumage, was found at Mohouli Pond, adjoining Waiakea Pond in Hilo, H., Sep 6 (PPa, LM). Good photos were obtained, and detailed notes are on file.

White Tern--Still being seen more and more frequently in the downtown Honolulu area. Some selected reports: up to 4 around Foster Gardens occasionally from Aug 31 through the fall (MO, JM); one at Library of Hawaii on Punchbowl St. as HAS members gathered for the Sep 13 field trip; 2 at H-1 freeway and Punahou St. Apr 18 (RP); and at least 3 pairs on the grounds of the Governor's mansion on Beretania St. through July (CJR). Elsewhere on Oahu, 2 were coming regularly to a coconut tree in a yard at Lanikai (PH), and 1 was at Kii Pond July 24 (RC).

Parakeet Auklet--Three individuals were picked up dead on the beach at Sand I., Midway on Feb 5 (salvaged as a study skin), 6 (salvaged as a skeleton) and 15 (skeleton) (all *fide* GG). Another was found dead at Kure Atoll Mar 11 and salvaged as a skeleton for the Bishop Museum (GG). Dead remains found at Midway during the winter of 1962-63 are apparently the only other records of this species in Hawaii.

Barn Owl--Individuals were reported on Oahu at Waipio Aug 14, Sep 1 and Dec 15 (MO, RP), and on the Lihue, K. Christmas Count Dec 15 (WS). One bird, seen Apr 27 on Kahoolawe I., is the first known record from that dry, barren military target island (FH, *et al.*).

Hawaiian Owl (Pueo)--Four were seen at Sand I., Midway Feb 11, and 3 on Feb 21 (GG). These, and 1 seen at Green I., Kure Mar 11 (GG), may well have been casual stragglers from northern Asia or N. America rather than strays of the endemic race from the main Hawaiian Islands. One found at Waipio Feb 18 (PD) shows that the species still persists on Oahu, although now very rarely seen.

Gray Swiftlet (Guam Edible-nest Swiftlet)--One individual was seen briefly on

Halawa Ridge for the Honolulu Christmas Count Dec 16 (FH).

Belted Kingfisher--One more occurrence of this species in the state was reported at Hana Bay, M. on Feb 3 (BT). The bird was first noticed hovering a short distance offshore from a dock, then it flew to shore and was lost among trees. The distinctive call was heard, and the bill and crest seen with and without binoculars well enough to identify it. The observer, a visitor to Hawaii, is very familiar with the species on the mainland. This is the first known record for any island other than Hawaii.

Skylark--This species, now scarce on Oahu, has been reported regularly at Waipio by numerous observers during the past year (Aug, Nov, Dec, Feb, Mar, etc.). Single birds also were observed Dec 8 at both Kii and nearby Punamano Ponds, O. (MO, RP). At Bellows Field, an unexpected locality, 2 were found Sep 12, 1 on Sep 20 and 1 on Dec 6, all seen on the ground (OJ).

Hawaiian Crow ('Alala) (En)--John Ross, a visitor from Ohio, writes about his sighting of a Hawaiian Crow: "observed on January 26th just before dark in the Kaloko Mauka Subdivision. I had gone to the end of the road, climbed a mountain and, discouraged, started down before dark set in. About a half to 3/4 mile down the road on my left, just off the road, about 25' up (was) the crow. (It) was very sluggish, and appeared to be trying to open a fruit or nut (hard) approx. 3/4" to 1" in diameter. Other than spreading its tail and turning around on its limb occasionally, it seemed to be concentrating totally on the object held in its feet. Even clapping my hands (hoping to get in view for a picture) barely drew a look. I left after about 15 minutes when visibility was gone, and the bird was still there."

Also on Hawaii I., U.S. Forest Service researchers Howard Sakai and David Jenkins followed nests of the Hawaiian Crow during early summer in cooperation with state biologists in the Kona District. Fledgling success was generally poor, apparently due to infertility of the eggs, for reasons not yet known.

Greater Necklaced Laughingthrush--Two were reported on Nonou Forest Trail, back of Wailua, K., Apr 6, by Henri Picciotto, a visitor from California.

Red-vented Bulbul--This species continues to increase on Oahu, and is now being seen in forested areas along the higher ridge

trails. Also, several were seen Apr 27 at the new Malae Kakana State Park on the north coast near Laie (TB). Lillian Viguers reports that Red-vented Bulbuls have been frequenting a large banyan tree in her yard in Ewa Beach "for several years," and have been pecking on papayas, mangos and avocados.

Mockingbird--Two were seen regularly at Tern I., FFS from Aug 11 until last seen Oct 20 (VB, RSch). None were seen through the fall, on this tiny islet with little vegetation with observers continuously in residence. But one to three were seen again from December through May 10, when they again disappeared (*fide* JA). In recent years there have been other reports of Mockingbirds on Tern I. It seems very unlikely that these birds could have remained on the island undetected during the intervening periods, yet hard to understand why successive "invasions" would occur of this landbird, and no other landbirds, from the main Hawaiian Islands.

Fifteen Mockingbirds were reported along the Na Laau Trail, O. in early September (DS), and one was observed at Punamano Pond, James Campbell NWR near Kahuku, Oct 27 (RP).

Japanese Bush-Warbler--One heard Apr 4 and 8 in Hauola Gulch is the first report of this species for Lanai I. (PaC, 'Elepaio 40:169). One was reported July 5 on Kaluanui Ridge (GC), near the extreme southeast corner of Oahu and the closest point to Molokai and Lanai Islands where the species has recently been found.

Nihoa Millerbird--Low numbers of Millerbirds were found during a survey of Nihoa May 31 to July 6. They were just beginning to nest (SC, MC).

Common Myna--Twenty-five of these birds tallied on the Christmas Count at Sand I., Midway Dec 27 (GG) demonstrates that the species is apparently now well-established there.

Indian Hill-Myna--Two birds seen in a yard on Alani Drive in upper Manoa Valley, O., Apr 6 (SC) were probably the birds from nearby Lyon Arboretum, where a flock of about 15 (reportedly all males) released during the 1960's has now dwindled to 2 birds.

Rothschild (Bali) Myna--Obituary: This handsome white myna, a popular cagebird and an endangered species in its homeland in Java, was found dead on the Hale Koa Hotel grounds Sep 20 (PD). It was a well-known figure around the Hale Koa in Waikiki for several years. Last reports of it alive were on Aug 21 (GC) and Sep 16 (MO, RP).

Kauai 'O'o ('O'o 'a'a) (En)--This species, feared to be about gone, was observed again in the Alakai Swamp on Kauai. One was seen in early May carrying what may have been nesting material, and other observations during monthly survey trips by the U.S. Forest Service this spring indicated at least one other individual may also have been present (DB, MC).

Maui Creeper--Six were found Mar 2 in Hosmer Grove, an easily accessible forested area in Haleakala National Park, M. (DP).

Maui 'Akepa (En)--This very rarely reported honeycreeper was seen several times through the spring (PPy) during the US F&WS Forest Bird Survey. All birds seen were in green plumage.

Maui Nuku-pu'u (En)--One was under observation for 5 minutes in the upper Hana Forest Reserve, M. near 5000' elevation (PPy) during the US F&WS Forest Bird Survey.

'Akiapola'au (En)--A nest of this species was monitored by Forest Service biologists in the Keauhou Ranch area on Hawaii I. until the young fledged successfully in late May (DB, *et al.*). One individual was seen during the first week of March in a more accessible area near Puu Laau (DP).

'Apapane--A stray 'Apapane was seen Nov 4 on the Woodlawn Trail about 200 yards up from its start on Alani Drive (MO, *et al.*). Nearby, in a yard on Alani Dr., a single bird was sighted almost daily from Dec 26 through Jan 6 (SC, PaC). These occurrences are at unusually low elevation for this species on Oahu, and in an area of primarily exotic forest. On Lanai I., where 'Apapane are exceedingly rare and probably the only native forest species still present, 3 to 4 were found Mar 2 in Kapohaku Gulch (PaC, 'Elepaio 41:15).

Crested Honeycreeper (En)--An accessible location for seeing this uncommon honeycreeper involves an hour's hike on an old ranch road from Hosmer Grove in Haleakala National Park, M. (MS). Three were found at this location Nov 27 (DS) and three again on Dec 1 (MO).

'I'iwi--Several were seen and heard Mar 29 in the West Maui mountains about 2 miles above Haela'au Cabin on the trail to Puu Kukui (RP, *et al.*).

Lavender Fire-Finch--This species seems to have persisted better than some of the other exotic finches in the Kapiolani Park-Na Laau area of Oahu, although it is sometimes difficult to find. Fifteen, an unusually

high number, were found on Na Laau Trail in early September (DS), and they were reported to be numerous there on Mar 1 (DP). One individual was carefully observed for 3 minutes Oct 20 by Arthur Cropper in his yard in Wilhemina Rise, about 15 km (9 miles) directly inland from Na Laau Arboretum. The sighting is well-described, and is the observer's first in that area since he moved there in 1972.

Orange-cheeked Waxbill--Four were observed July 26 feeding with Spotted Munias near the Golf Driving Range in Kapiolani Park (PD), where waxbills now are rarely seen. Two Orange-cheekeds and 2 Red-eared Waxbills were found on the Na Laau Trail Mar 1 (DP).

Red Munia--A flock of 5 including one male in good plumage seen near Kii Pond Dec 8 (RP, MO) is another of the occasional reports of this species far from its home base at Waipio.

Warbling Silverbill--Four found Aug 24 on Lanai I. are the first reported from that island (LH, 'Elepaio 40:119). On Hawaii I., at least 6 were seen Nov 11 to 13 at Keauhou Golf Course in South Kona (MO). One individual sighted Dec 15 by Karl Weber in Bird Park, Hawaii Volcanoes National Park, and 2 found Mar 5 one-half mile from South Point (DP), were well outside the currently known range of this species.

Java Sparrow--This species continues to increase and expand its range on Oahu. A flock of about 75 was observed on the grounds of Tripler Hospital Jan 26 and 27 (MO), and they also are common residents now in the Kahala area (MO). On the windward side of Oahu, recent sightings include 3 at Bellows Field Oct 28 (OJ), one in a yard in Kaneohe occasionally during April and May, and one on a lawn in Kailua May 6 (LP).

Pin-tailed Whydah--A few apparently are still present around Kapiolani Park as 2 were seen there feeding together on July 10 and 11. Both were males with tail streamers full length on one bird and half grown on the other (MT, *et al.*). Sean McKeown reports seeing several on more than one occasion during spring in Kapiolani and adjoining Paki Parks.

Bishop (Red) and Napoleon (Yellow) Weavers--Single bright males of both species were seen near each other in Kapiolani Park Nov 4 (MO, *et al.*). No females of these species have been brought into Hawaii as far as is known, but individual males have been reported regularly for a number of years around

Kapiolani Park and occasionally elsewhere in southern Oahu.

Yellow-faced Grassquit--Several were heard but none were seen under less than ideal conditions during the HAS trip to Manana Trail, O. June 8.

Yellow-billed Cardinal--Peg Moore, a visitor from Canada, watched 2 adults feeding 4 young Mar 11, 12 and 13 in and around a large monkeypod tree in the parking lot of the Kona Isles condominium, about 2 miles south of Kailua-Kona, H. A nest of reasonable size for this species was near the top of the tree. The young had brown heads and stumpy tails. On the adults, the dark back, yellow bill and no crest were seen well. The adults were seen again Mar 14. This location is well south of the previously known nesting location at Honokohau Harbor. Between Honokohau and Aimakapa Pond, more than 10 were seen the first week in March (DP).

Common Canary--Forty-five were found at Sand I., Midway for the Christmas Count Dec 27 (GG).

Yellow-fronted Canary--Six to 10 were seen Nov 1 at Bellows Field (OJ), a new locality for them on Oahu.

Saffron Finch--About 10 recorded at Hapuna Beach and Spencer Parks near Kawaihae, H. Oct 6 and 7 (PB) indicate the bird is still increasing and spreading on that island. On Oahu, the species is holding its own in Kapiolani Park with at least 8 seen at once and almost certainly more in total found July 3 (PD).

Snow Bunting--A male in winter plumage under close observation from Nov 9 to 15 at Tern I., FFS (RSch, SSchl) is at least the third recorded occurrence of the species in the state, all in the Northwest Hawaiian Islands. Only one or two other passerine species have been recorded more than once as apparently bona fide stragglers reaching Hawaii under their own power.

ABBREVIATIONS AND OBSERVERS--FFS (French Frigate Shoals), H (Hawaii I.), K (Kauai I.), L (Lanai I.), M (Maui I.), O (Oahu I.), HAS (Hawaii Audubon Society), NWR (National Wildlife Refuge).

John Andre, Barry Brady, Dawn Breese, Phil Bruner, Tim Burr, Omer Bussen, Vernon Byrd, Tom Cajsky, George Campbell, Rick Coleman, Mark Collins, Patrick Conant, Sheila Conant, Peter Connally, Arthur Cropper, Evelyn Dobbs, Peter Donaldson, Lorin Gill, Gilbert Grant, Lorraine Hartshorne, Larry

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FEBRUARY TALK: BANANA POKA CAPER

Anne Marie LaRosa will show slides and discuss the status of the noxious weed, banana poka (*Passiflora mollissima*) in Hawai'i's native forests. This plant is perceived by many conservationists to be the worst exotic plant presently confronting Hawai'i's forests. Over 100,000 acres on Hawai'i and Kaua'i Islands are presently infested and it continues to spread and smother infested areas. Ms LaRosa of the Botany Dept, UH Manoa is presently researching its ecological aspects for a Master's degree. She is also active in on-going conservation efforts to convince legislators and others to support research directed towards its ultimate biological control, the last apparent feasible alternative many feel remains.

FIELD TRIP TO OBSERVE EXOTIC BIRDS NEAR DIAMOND HEAD

The Society field trip on February 8 will visit Kapiolani Park and Na La'u Trail to observe the status of exotic birds. Meet at 7AM at Hawai'i State Library on Punchbowl Street, or at the Waikiki Aquarium at 7:30AM. Warning: it is strongly advised to avoid parking in the Aquarium visitors parking area. Leader: John Mitchell (524-3872).

GREEN TURTLE SYNOPSIS AVAILABLE

The recently issued (October 1980) report entitled "Synopsis of Biological Data on the Green Turtle in the Hawaiian Islands" by George H. Balazs is currently available at no cost to libraries and organizations.

Requests should be sent to:

National Marine Fisheries Service
Honolulu Laboratory
P.O. Box 3830
Honolulu, Hawaii 96812

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Winifred Yamashiro.

ALOHA TO NEW MEMBERS

The Society welcomes the following new members and hopes that they will join in our activities to further the protection of Hawai'i's native wildlife:

Joint with National: E. Banning, Kailua-Kona; Donald Joe Digby, FPO San Francisco; Robert E. Durick, Jr., Aiea; Guam Zoological, Tamuning, Guam; Kathryn A. N. Holck, Kailua; B. M. Johnson, Honolulu; Paul A. Johnson, Honokaa; L. MacKay, Honolulu; Mrs. Erva Marche, Honolulu; Walter Nakama, Honolulu; Mrs. M.L. Randolph, Honolulu; B. Santos, Honolulu; S.S. Sofos, Honolulu; Robbrecht Troost, Haleiwa; Mrs. Michael Weight, Kailua; D. Wong, Honolulu.

HAWAII AUDUBON SCHEDULE OF EVENTS

(for more details, see inside back page)

February 2 (Monday). HAS Board Meeting
at home of George Balazs, 992-A Awaawaanoa
Pl., Hawai'i Kai. Phone: 395-6409.

February 8 (Sunday). Field Trip to Kapiolani
Park and Na La'au Trail on Diamond Head,
O'ahu. Meet at 7AM on Punchbowl St. at
the State Library or at 7:30AM in front
of the Waikiki Aquarium. Leader: John
Mitchell (524-3872).

February 16 (Monday). Regular Meeting at
the McCully-Moiliili Library, 7:30PM.
Anne LaRosa will speak on the *Banana
Poka Caper*.

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