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THE WHITE-FACED IBIS IN HAWAII

by H. Douglas Pratt

The ibises of the genus *Plegadis* present a difficult problem in identification both in the field and in museum specimens. The Glossy Ibis (*P. falcinellus*) occurs widely in the Old World, the West Indies, and eastern North America (Cramp 1977). Its counterpart in western North America is the White-faced Ibis (*P. chihi*) (Palmer 1962). The two species are sympatric in a narrow area of coastal Louisiana (Lowery 1974); J. Morony, pers. comm.). Of the two, the White-faced Ibis is much the more likely species to stray to Hawaii, since the Glossy Ibis does not occur in eastern Asia and its migrations take it nowhere near the islands (Cramp 1977). Ibises of this genus have been recorded in Hawaii on several occasions, but none have yet been unequivocally identified to species. Scott et al. (1978) listed the ibis species pair among other difficult-to-identify visitors to Hawaii.

The first specimen from the islands was an immature bird taken by Knudsen in 1872 on Kauai and deposited in the United States National Museum (USNM 61528). On the basis of soft-part colors (see below), Ridgway tentatively identified the specimen as a White-faced Ibis (Stejneger 1887). A second immature specimen, also only tentatively identified as *P. chihi*, was taken on Maui in 1873 and prepared as a specimen in Honolulu (Henshaw 1902). This individual may well be the totally unlabelled mounted ibis now in the Bishop Museum collection. Also in that collection is a fluid-preserved specimen lacking data; a badly faded mount (BBM 2218) with only the notation "prob. Hawaii;" and a specimen (BBM 7090) collected by Munro on Molokai in 1900 (apparently erroneously reported as 1903 in

Munro 1960). All of these specimens are immature birds whose specific identity has never been fully established. Munro (1960) also reports several sight records without sufficient detail to establish which species of dark ibis was involved. Since 1976, an ibis of the genus *Plegadis* has been repeatedly observed on Waipio Peninsula, Oahu. The bird was still present on 17 September 1980 when I visited the area with Peter Donaldson.

The most obvious field mark separating these two species is the presence of a border of white feathers around the bare facial skin in the breeding plumage of the White-faced Ibis (Pratt 1976). The Waipio bird has survived several seasons in Hawaii but has never been seen in the adult breeding plumage. Possibly the Hawaiian environment, far removed from the bird's usual haunts, lacks something critical to the normal cycling of plumages. Fortunately, breeding plumage is not the only means of separating Glossy and White-faced ibises in the field.

In *Plegadis* ibises the color of the "soft parts" can be diagnostic. The facial skin of the White-faced is a brilliant maroon during the breeding season, whereas that of the Glossy Ibis is slate gray with a pale blue border (Pratt 1976). Traces of these colors may be retained by birds in winter plumage. Immatures of both species have dusky grey facial skin, and also dark brown irides. The Glossy Ibis retains this eye color throughout its life, but the iris of the White-faced Ibis becomes deep red early in the first year. Thereafter, unlike the plumage and facial skin, the iris color does not change seasonally. Observers in the zone of sympatry

in Louisiana use this character as the only reliable means of identifying dark ibises during the winter. Since the Glossy Ibis never has a red eye, any red-eyed ibis can be considered a White-face. A brown-eyed bird can be either a Glossy or a first-winter White-face (Pratt 1976).

As with the plumage, the Waipio bird has frustratingly maintained the dusky facial skin color of an immature bird throughout its sojourn in Hawaii. However, its iris has been noted by several observers including the author as being maroon-red. Because this feature is a diagnostic identifying mark of the White-faced Ibis, the Waipio bird can be unequivocally identified as that species. The Kauai specimen (USNM 61258) was noted by Ridgway (in Stejneger 1887) as having a reddish bill, lores, and feet. Thus we can be relatively certain that it, too, is a White-faced Ibis. Among the specimens in the Bishop Museum, only Munro's Molokai bird carries notations as to soft part colors. It had a brown iris, but since the plumage is that of a first-winter bird (Pratt, pers. obs.), the iris color is useless for identification. Thus none of the Bishop Museum specimens can be identified with certainty.

Based on the positive identification of the Waipio ibis and Knudsen's Kauai specimen, we can now unequivocally list the White-faced Ibis among the birds of Hawaii and remove it from the "species-pair" category to which it is presently relegated (Pyle 1977).

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Museum of Zoology
Louisiana State University
Baton Rouge, Louisiana 70893

KI'I PONDS FIELD TRIP REPORT

Clear, hot weather and brisk trade winds greeted Hawaii Audubon Society members and guests on the 14 October 1979 field trip to the James Campbell National Wildlife Refuge at Ki'i Ponds, Kahuku. The trip followed relatively recent rains, and we were warned that the road might be too muddy for some of the cars. Consequently, we parked just inside the first gate and walked into the refuge, and so had the opportunity to scan the Lowe Aquafarm shrimp ponds for birds. These ponds, many of which had only recently been filled, contained 5 species of birds: 6 Cattle Egret, 2 'Auku'u (Black-crowned Night Heron), 14 'Alae ke'oke'o (Hawaiian Coot), and 1 Sharp-tailed Sandpiper.

In the kiawe-*Pluchea* scrub on the north side of the refuge we observed Barred Dove, Mockingbird, Spotted Munia, and Red-crested Cardinal. In the ponds themselves we observed 11 species, counting the numbers of individuals only of the less common forms: 4 'Auku'u; 2 Koloa (Hawaiian Duck); American Wigeon, 4 Northern Shoveler, about 20 'Alae ke'oke'o (Hawaiian Coot), including 1 chick and 3 adults with a narrow, red-topped frontal shield; Kōlea (Golden Plover); 8 'Ūlili (Wandering Tattler); 'Akekeke (Ruddy Turnstone); Huna kai (Sanderling), 18 Āe'o (Hawaiian Stilt); and one Least Tern. All the hikers managed to get an excellent view of the Least Tern through spotting scopes. The group left the refuge at about 12:30 p.m.

Sheila Conant
Department of General Science
University of Hawaii at Manoa
2450 Campus Road
Honolulu, HI 96822

HAWAII BIRD OBSERVATIONS

MARCH THROUGH JULY 1979

by Robert L. Pyle

Observations for August 1979 through July 1980 are in preparation.

After a winter season of frequent rains that were particularly heavy in February, the weather in spring and early summer reverted to the dry, sunny conditions characteristic of recent years. Total rainfall at Honolulu from March through July was less than 30% of normal. Tradewinds were generally weak through the summer, and daily maximum temperatures usually were near (and on several occasions exceeded) the record highs for the date.

Laysan Albatross--Three chicks fledged in June from the nesting area near Kilauea Pt., K., were the first young successfully raised in this new colony after several years of trying (VB, TT, see 'Elepaio 41:1). Two adults were seen flying over Ki'i Pond, O. (RC) and 100 m offshore from Ki'i (PB, AB), both on March 31. Two were watched just offshore in the same locality July 24 (PB). Observations of Laysans in this area the previous spring were the first for O'ahu in many decades. Perhaps these striking birds may now be scouting for another nesting site in the main Hawaiian Islands.

Sooty Shearwater--A fairly fresh carcass entangled in a piece of gillnet was found on the beach at North I., Pearl & Hermes Reef, during the spring (MR).

Newell's Shearwater--Individuals of this officially Threatened species were heard calling near a breeding area in the Ha'upu Mtns., 5 mi. north of Koloa, K., on April 6, the earliest return date for this species in more than 10 years of observation (JS). An estimated 250 had returned to the area by April 23. Numerous individual Newells were heard and seen on Moloka'i I. during the summer forest bird survey (MSC).

Hawaiian Petrel (En)--More than 100 of this species were seen and heard between 7 and 8 p.m. June 29 in Kumoa Gulch on Munro Trail, Lana'i I., during the evening of June 29 (PC).

Bulwer Petrel--One adult found in a nesting crevice on Manana I. April 22 had been banded in the mid-'60's and recorded again in the same crevice in 1969 (RSh, see 'Elepaio 40:47).

White-tailed Tropicbird--On O'ahu, where these birds are infrequently reported, one was observed closely April 3 as it flew in

from the sea low over the top of Diamond Head, and another was seen July 5 in Haha'ione Valley, Hawai'i Kai (both, GC). Three were recorded in Lualualei Valley during the HAS trip to Palikea Trail June 9, and one was at the Kahuku Golf Course July 24 (PB). On Hawai'i I., one was watched for 15 minutes while it circled above the parking lot at Hapuna Beach Park May 13 (PP, TBe).

Red-tailed Tropicbird--Two Red-tails were found at Manana I. during the Sierra Club trip April 22, but no nesting activity was evident (RSh). Nearby, during observations from Makapu'u Point above the Lighthouse, groups of 2 or 3 were seen frequently in late June and early July. On 3 occasions courtship flight was observed (MSt). HAS field trippers saw one further up the coast at Ulupa'u Head April 28. At the north end of O'ahu a single bird was seen "hanging around" the Cattle Egret rookery near Ki'i Pond on May 7 and 23 (RC), and again in the same area July 10 (PB).

Cattle Egret--A group of 20 on Maui I. flying toward Kanaha Pond April 18 (MO), and 15 seen on Moloka'i I. in mid-July (PP) are interesting numbers for those islands. One bird at Sand I., Midway, seen first March 13, has apparently taken up residence there (JR).

Laysan Duck (En)--At Laysan I., 154 were counted March 15 (EK).

Hawaiian Duck (Koloa) (En)--Eleven at Waipi'o, O., July 4 (RL) is a good count.

European Wigeon--A male at Laysan I., was in good plumage when the observer (EK) arrived March 15, then gradually moulted into eclipse plumage by the time the observer departed August 18.

Garganey--A good male in full breeding plumage was seen at Ki'i Pond March 28 (RC).

Golden Eagle--This legendary bird was seen again on Kaua'i, flying over the stable area at Princeville on April 4, 5 & 6 (*fide* VB).

Osprey--The bird at Waiawa Unit, Pearl Harbor NWR, O. was seen repeatedly until at least May 8 (RC, RL).

Japanese Quail--A hen with five newly hatched chicks was discovered at 'Ainapo Ranch near Hawaii Volcanoes National Park, H., on June 7 (PP). This is one of the very few recorded observations of breeding activity by this species, which has been established in Hawai'i since the 1920's.

Bristle-thighed Curlew--Spring observations near Ki'i Pond included 1 (in rusty breeding plumage) on March 10 and 2 on April 11 (PB). One bird there July 13 (RC) was out of season. On Laysan I., however, from 25 to 50 individuals were seen regularly from April into August (EK).

Golden Plover (1), Ruddy Turnstone (21), Wandering Tattler (2) and Sanderling (3)--found at Kaluapuhi Pond, O., July 8 (RP), were all in drab winter plumage and evidently were over-summering.

Sharp-tailed Sandpiper--Two spring migrants were noted at Laysan I., March 29 (EK)

Pectoral Sandpiper--One was recorded on Laysan I. April 15 (EK), and one was caught in a mist net at Ki'i Pond April 20 (RSH).

Dowitcher--A bird in winter plumage seen at Kure Atoll March 20 through April 12 was tentatively identified (by call) as a Short-billed Dowitcher (MR). Another at Kealia Pond, Maui I., on March 17 gave the Long-billed call (CK). Three (no calls given) were at Ki'i Pond March 31 (RP, *et al.*).

Bar-tailed Godwit--One turning gradually into breeding plumage was seen regularly at Kure Atoll from March 15 to May 9; one in full breeding plumage was at Lisianski I. May 12-14; and 3 in winter plumage were at Laysan I. May 15 (all by MR). Two remained at Laysan until August (EK).

Glaucous Gull--One in 2nd year plumage was seen regularly at Kure Atoll from March 15 to April 1 (MR).

Western Gull--The near-adult wintering at Paiko Lagoon, O., remained there through the spring and summer.

Laughing Gull--The two at Ki'i Pond were last seen together March 10 (DS). One remained until April 10 (RC) when it was collected. Its identification was subsequently confirmed at the U.S. National Museum.

Sooty Tern--Flocks of 10 to 20 were seen frequently throughout April flying high (100-300 m) over the Kahuku area of O'ahu (RC). They probably were from the nesting colonies on Moku Manu and Manana Is., 20 to 30 miles distant.

Gray-backed Tern--Five of these graceful terns seen flying low over Ki'i Pond April 13 (RC) is a remarkable record. In the main Hawaiian Is., Gray-backs nest only on Moku Manu islet in small numbers, and are virtually never reported anywhere else in the main islands.

Least Tern--On July 24 an adult was seen feeding a juvenile-plumaged bird on Tern I., French Frigate Shoals, and a freshly dead adult was found nearby (VB).

Caspian Tern--This individual, the first of its species recorded in Hawai'i, remained at Kaluapuhi Pond, O. well beyond the end of July (RC, *et al.*).

White Tern--A chick was under observation on the grounds of the Honolulu Zoo from June 4 to 17. Seven adults were in the same banyan tree with it on the 16th (JL).

Barn Owl--Single Barn Owls were sighted on O'ahu in Hawai'i Kai May 30 (RSk) and along the old spur road to Makapu'u Light-house June 16 and July 3 (MSt). On Moloka'i I., they were heard frequently at night during July at Oneali'i Beach Park, including 5 different individuals heard one morning in the pre-dawn hours (PP).

Hawaiian Owl (Pueo)--Pueo, now very scarce on O'ahu, were reported March 31 near Ki'i Pond (RP, *et al.*); on Palikea Trail June 10 (at least 2, HAS trip); and at Waipi'o July 4 (RL). A Short-eared Owl found at Kure Atoll April 16 was last seen flying to sea toward Midway (MR), where 4 were present during January. These owls that turn up occasionally at the northwest end of the Hawaiian chain are more likely to be stragglers from Asia or Alaska than Pueo from the main Hawaiians.

Hawaiian Crow ('Alala) (En)--A pair of 'Alala under observation on Hawai'i Island attempted to nest 3 times during May and June, finally fledging a youngster on the third try. Eggs were laid in all 3 attempts, demonstrating a renesting potential which may be of significant help in management efforts to rescue this highly Endangered Species from the brink of extinction (CJR).

Red-vented Bulbul--One bird March 14 (PB) and 2 birds April 5 (chasing Cardinals-AB) on the BYU campus at La'ie, O. supplement prior sightings near La'ie and help affirm that this species is now resident in virtually all parts of O'ahu.

Hawaiian Thrush (Kama'o) (En)--The very rare Kaua'i subspecies of Hawaiian Thrush was heard on June 1 in the Alaka'i Swamp near Halehaha Stream (JS).

Japanese Bush-Warbler--This introduced species was found on Moloka'i I. in April and May (LP, *et al.*, see 'Elepaio 40:27), the first report of it on any island other than O'ahu.

O'u (En)--At least 2 were heard on the trail to Pig-free Kipuka in Hawaii Volcanoes National Park, H., April 11 (DR, *et al.*). On Kaua'i, in the Halehaha Stream area of the Alaka'i Swamp, John Sincok saw one male on April 17 and a pair on June 1.

Warbling Silverbill--The population discovered on Maui I. last December is thriving. At least 35 were seen along Pulehu Road in Kula March 28 (CK).

Java Sparrow--Two seen near Salt Lake, O., March 21 (RL) document the continuing spread of this species from the original locality near Diamond Head. Two others coming to a feeder at Pohai Nani in Kane'ohe through most of May (TBu) probably indicate

a casual wandering rather than an established range extension.

Red-crested Cardinal--Although common on O'ahu, these striking cardinals are very rarely reported from other islands. On Hawai'i I., two were observed May 31 in Hilo (PP, *et al.*), where they have been seen occasionally in the past.

Abbreviations

Main islands: Hawai'i (H), Kaua'i (K), O'ahu (O); Endangered Species (En); Hawaii Audubon Society (HAS).

Observers

Tim Bertrand, Andrea Bruner, Phil Bruner, Tim Burr, Vernon Byrd, George Campbell, Rick Coleman, Peter Conally, Craig Harrison, Cameron Kepler, Eric Knudtson, Rey Larsen, Jaan Lepson, Michael Ord, Leilani Pyle, Peter Pyle, Robert Pyle, C.J. Ralph, Mark Rauzon, D. Reeser, Jennifer Richardson, Michael Scott, Rob Shallenberger, John Sincock, Roger Skolman, Dan Snider, Maile Stemmermann, Tom Telfer.

741 N. Kalahoo Ave.
Kailua, HI 96734

A BUFF-BREASTED SANDPIPER ON KAUAI

by H. Douglas Pratt

On September 5 1980 I and 22 other members of a National Audubon Society tour group observed a Buff-breasted Sandpiper (*Tryngites subruficollis*) on the golf course at Princeville, Kauai. The bird was observed through binoculars and spotting scopes of various magnifications in excellent light. It exhibited all identifying characteristics of the species and could well be described as a "picture-book" example. It fed among Golden Plovers (*Pluvialis dominica*), Western Meadowlarks (*Sturnella neglecta*), and Barred Doves (*Geopelia striata*), but did not flock with them.

The single documented previous report of this sandpiper in Hawaii was that of Ralph and Pyle ('Elepaio 39:140, 1979) of a bird at Kii Pond, Oahu. Thus our observation is the second for the state and the first for Kauai. The Princeville golf course is located on a promontory at the northern extreme of the main Hawaiian Islands and is thus a likely spot for migratory stragglers such as this one to occur.

Museum of Zoology
Louisiana State University
Baton Rouge, Louisiana 70893

HELP WANTED - VOLUNTEERS

We need volunteers to help with a number of activities essential to the Society's programs. If you can give even a little time to any of the following interesting tasks, please call the contact indicated.

Periodical Exchange

Receive (from the Society's mail box attendant) all periodicals received by HAS, most of them exchanges for 'Elepaio. Scan them, and call to attention of 'Elepaio editor any items of possible interest to our readers. Also, bring (or arrange for someone else to bring) recent periodicals to HAS evening meetings for members to see and borrow. After six months, dispose of older issues to an Oahu library. Call Robert Pyle: 262-4046.

Accountant-Consultant

Be a source of advice to the Treasurer in organizing and maintaining the Society's financial bookkeeping. Call Norris Henthorne: 734-7562.

Conservation Committee

Members needed to follow one or two environmental issues (whales, Makiki Park development, etc.), assist with preparing testimony and letters. Call Peter Galloway: 235-4082.

'Elepaio Mailing

Assist Chief mailer in labeling and sorting new 'Elepaio's for mailing once each month. Call George Campbell: 941-1356.

Typist

Help on the 'Elepaio a couple of hours a month. Call Carol Ralph: 988-6921 (after Dec. 20).

ENVIRONMENTAL

CONSERVATION FELLOWSHIPS

National Wildlife Federation is again offering its annual Fellowships to assist research programs in conservation and management of the nation's natural resources. Grants are in various amounts up to \$4,000. A recent project supported by this program was Stephanie Nagata's research on the endangered Hawaiian Gallinule. For more information and applications, contact Dr. Sheila Conant, Department of General Science, University of Hawaii (948-8241).

1980 CHRISTMAS BIRD COUNTS

Five or six Christmas Bird Counts are planned for December on Kauai, Oahu, Maui and the Big Island. Each of the counts can use more counters, including people not familiar with the birds of a particular island. Get in touch with a compiler if you are interested.

WAIPIO, OAHU

Sat., December 20

The Waipio Count, now in its fourth year, is centered near Mililani town, and covers some of the best birding areas on Oahu: "hot spots" for birds such as Waipio Peninsula and Poamoho Trail are included in the count circle. Several parties are needed for the different sectors which extend from Pearl Harbor to the Schofield area in the North-South direction, and from the crest of the Koolaus to the crest of the Waianae in the East-West direction. All interested observers are welcome and needed! For more information contact Maile Stemmerman, compiler, home telephone: 949-3430, or leave message at University of Hawaii Zoology Department, 948-8617.

LIHUE, KAUAI

Sat., December 20

The Lihue Count extends from the Wailua River around to the Hanapepe River, including the area from the mountains to the ocean. This will be the tenth annual count for this area. This count always produces good numbers of the lowland birds as well as the possibility of exciting water and shorebirds. Aside from the regular counters, people counting around their homes and/or bird feeders, or those at sea fishing on the count day would be appreciated. Contact the compiler, Mrs. Winona Sears, at 190 Lulo Road, Kapaa, Kauai 96746; telephone 822-3045.

HONOLULU, OAHU

Sun., December 21

The Honolulu Christmas Count, initiated in 1939, covers a 15 mile diameter circle centered near Nuuanu Pali overlook. The area extends from Aiea Trail to Paiko Lagoon on the Leeward side of the island, and from Kahaluu to Waimanalo on the windward side. The long series of counts in this same area provides a good indication of trends in bird populations, particularly for certain introduced species undergoing significant increases or decreases over a period of years. One

or two parties are assigned to each of ten sectors within the count area. All potential participants are welcome for a day of birding. The compiler is Robert L. Pyle, 741 North Kalaheo Ave., Kailua, Oahu 96734; telephone 262-4046.

KAPAA, KAUAI

Mon., December 22

The Kapaa Count extends from the Wailua River around the North Shore to Hanalei National Wildlife Refuge. It includes all this area from the mountains to the sea. This count includes the very productive and scenic taro fields of the refuge and nearby areas. Yard counters or fishermen at sea are solicited for counts of the count day. The compiler is William Vilanueva, P.O. Box 55, Kilauea HI 96754. Telephone: (morning) 828-1739; (1:30 - 9:30 p.m.) 245-8913.

VOLCANO, HAWAII

Sat., December 27

The Volcano Christmas Count, with its 15-mile diameter circle centered at Kulani Cone, features a variety of rich and critical habitats on Mauna Loa and Kilauea Volcano. Areas covered in the past include Keauhou Ranch, Kilauea Forest Reserve, Kulani Correctional Facility, Upper Waiakea Forest Reserve, Hawaii Volcanoes National Park, Olaa Forest Reserve, and the Volcano community. A total of 12 endemic bird species have been recorded in past counts, of which 6 are endangered.

If you would like to participate in a day of bird counting in this area on 27 December, please contact Dawn Breese, P.O. Box 433, Volcano HI 96785. Home phone: 967-7311.

PUU O KALI, MAUI

Sat., January 3

This count, initiated in 1978, will include some shore and water bird areas as well as forest bird habitat. It extends from the open ocean off leeward Maui to the 8650' level on the slope of Haleakala, one of the largest altitudinal spans of any Christmas count in the country. All participants are urged to contact the compiler, Cameron B. Kepler, before December 17 or after December 30, at 248 Kaweo Place, Kula, Maui, 96790; telephone 878-1418.

HAWAIIAN MONK SEAL ENTANGLED IN FISHING NET

by John B. Andre and Ruth Ittner

Balazs (1979) reviews previous occurrences of Hawaiian Monk Seal (*Monachus schauinslandi*) entanglement with man-made objects. Kenyon (1980) also reports Monk Seal entanglement in pieces of fishing nets on the seal's basking beaches in the Northwestern Hawaiian Islands. No case has been reported of a Monk Seal entangled in a net in the water. The purpose of this paper is to document such a case.

On 2 July 1980 near Round Island, French Frigate Shoals, we saw a recently weaned Monk Seal thrashing around on top of a large flat coral reef about 100 m northwest of the island. We could see that the seal was caught in a piece of fishing net. One end of the net was around the seal's neck and the other end was snagged on the coral. The tethered seal was able to move around in the one-half meter deep water and keep its head in the air. Since the seal was alert and active we decided to allow it time to work itself free from the net. Returning to the site approximately one hour later, we found the seal still entangled and decided to free it from the net before it became exhausted and drowned or was attacked by a shark. We radioed Bob Schulmeister, Hawaiian Islands National Wildlife Refuge assistant manager, for assistance and he, S. Schulmeister and E. Flint arrived with a knife attached to a short pole to cut the net. Schulmeister carefully inserted the knife blade between the seal's neck and the twisted net strands and cut the net (Fig.1). After the seal was free, it swam about, investigating us and our boats for a few minutes. Then it swam toward Round Island.

We removed the piece of net from the reef. It measured nine meters long and two meters high. It was made of 3-strand green polypropylene line, 2.3 mm in diameter, with a 15 cm (6 in.) mesh measured diagonally. It was probably a portion of a trawl net (G. Balazs, pers. commun.).

The curious and playful attitude of Monk Seal pups probably led to the entanglement of this seal in the discarded or accidentally lost fishing net. We have observed recently weaned seals readily investigating and often playing with foreign objects in the water. This incident suggests that Hawaiian Monk Seals become entangled in pieces of fishing

nets while in the water. Although seals are legally protected within the waters of the Hawaiian Islands National Wildlife Refuge, as elsewhere, commercial fishing activities outside the refuge boundaries partially negate this protection. Any evaluation of the effects of commercial fishing on refuge wildlife must address the question of entanglement of the endangered Hawaiian Monk Seal in fishing nets.

ACKNOWLEDGMENTS

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U.S. Fish and Wildlife Service
P.O. Box 87
Kilauea, Kauai,
Hawaii 96754



Rob Schulmeister and John Andre rescue entangled Monk Seal pup.

photo by Susan Schulmeister

UNUSUAL FEEDING BEHAVIOR OF A BROWN BOOBY

by Robert P. Schulmeister

Brown Boobies (*Sula leucogaster*) are primarily inshore feeders, taking food by plunge diving from heights of 10-15 meters. Nelson (1978, *The Sulidae*, Oxford Press, pp. 500-503) reviews variations in feeding behavior of the species. He recorded Brown Boobies using rocks as lookout posts but described no feeding from these sites.



Brown Booby

photo by Robert P. Schulmeister

At 10:30 a.m. on 17 January 1980 I observed an unusual feeding behavior at Tern Island, French Frigate Shoals, Hawaii. I saw a Brown Booby sitting on a steel retaining wall (Fig. 1) made of 1 m x 4 m corrugated steel sheets that have been driven into the ground to prevent the ocean from eroding the island. The booby plunged eight times into 15 cm of water, catching small (6 cm) iao, or silversides (*Pranesus insularum*). On each plunge the bird leaned forward and fell 1.8 m into the water without any wing motion. When the bird hit the water, only the head and neck would submerge. Then the bird would surface and immediately fly back onto the retaining wall and shake off excess water. The time spent on the wall between dives varied between 90-160 seconds. This interval was apparently related to the reschooling of the

fish at the outer edge of a submerged pile of scrap steel bars. After the eighth dive the bird returned to the wall, shook off excess water, preened and rested for eight minutes before leaving the area.

U.S. Fish and Wildlife Service
P.O. Box 87
Kilauea, Kauai, Hawaii 96754

BROWN BOOBY CAPITILIZES ON KLEPTOPARISITISM OF GREAT FRIGATEBIRD

by G. Vernon Byrd

On 20 November 1978 and 4 March 1980 single Brown Boobies (*Sula leucogaster*) were observed taking food regurgitated by Red-footed Boobies (*Sula sula*) under attack by Great Frigatebirds (*Fregata minor*). The Brown Booby followed below and behind the frigatebird and Red-footed Booby apparently in anticipation of a feeding opportunity. When food was dropped by the Red-footed Booby, the Brown Booby caught the fish, once in mid-air and once just as it hit the surface of the water.

Brown Boobies roosted on Mokuaeae Island year around, and this type of behavior may have been more frequent than my limited observations indicate.

I think Mr. and Mrs. Doug Cheesman who called my attention to the first encounter.

Aladdin Route Box 160 E
Colville, WA 99114

CHRISTMAS ISLAND TRIP

The Hawaii Geographic Society is sponsoring a trip to Christmas Island, Jan. 28 to Feb. 3. Departure will be preceded by a dinner and program on the evening of January 27 (dinner not mandatory). The program will be the H.G.S. colorfilm documentary on *Kiribati*, and is open to the public as well as those planning for the trip. Readers who enjoyed Bob Pyle's account of his Christmas Island trip in the November issue may wish to follow suit -- contact the Hawaii Geographic Society, P.O. Box 1698, Honolulu 96806; telephone 538-3952.

CHRISTMAS BIRD COUNTS

In December the Society's field activities are concentrated on the annual Christmas Bird Count. This year six counts are scheduled: two on Kauai, two on Oahu, and one each on Maui and Hawaii islands. See page 50 for the Compilers and other details for each count. More birders, beginners as well as experienced, are needed to help with all counts, especially those on the outer islands. Perspective participants should contact the appropriate count compiler directly. There is a participant's fee of \$1.50, which goes to National Audubon Society to help (only partially) defray the costs of publishing all of the nationwide counts in the July issue of *American Birds* magazine.

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Robert Shallenberger, and C.J. Ralph.

DECEMBER PROGRAM: ENDANGERED TREE SNAILS OF NEW GUINEA

Betsy Harrison Gagne will show slides and discuss the status of the green tree snails of Manus Island, Papua New Guinea, on the December general meeting, Dec. 15 at Manoa Library. These snails, which are endemic to Manus Island, were among the first molluscs to be placed on the Endangered Species List. Like the rare Achatinellid tree snails of O'ahu, these New Guinea snails are threatened by a number of factors, including collection and habitat alteration. Mrs. Gagné conducted field work on the snails in the late summer of 1979.

ELECTIONS SLATED FOR DECEMBER GENERAL MEETING

The annual meeting of members will be held December 15, 7:15 p.m., at the Manoa Library, 2716 Woodlawn Drive. *Please note this change of meeting place.* Members will vote for officers and directors for 1981. The Nominating Committee, consisting of Wayne Gagné, Peter Galloway, and C.J. Ralph, proposed the following slate of officers at the November general meeting:

President	George Balazs
1st Vice-President	Wayne Gagné
2nd Vice-President	Peter Galloway
Treasurer	Norris Henthorne
Recording Secretary	Fanny Dale
Corresponding Secretary	Marilyn Milberger
Directors:	George Campbell
	Richard Coleman
	Sheila Conant
	Robert Pyle
	Susan Schenck

Those unable to attend the meeting may mail proxy ballots to the Recording Secretary, Anita Manning, P.O. Box 22832, Honolulu HI 96822. Additional nominations may be made from the floor at the annual meeting, provided the consent of the nominee has been obtained in advance.

REPRINTS OF ARTICLES

Reprints of articles in the *'Elepaio* are available to authors and others at the following rate. For 100 copies, \$10 per page of the article. For each additional 100 copies, add \$3.00 per page.

HAWAII AUDUBON SCHEDULE OF EVENTS

(for details, see inside back cover)

- Dec. 8 (Mon.). Board meeting at the home of Sheila Conant, 3663 Alani Dr., Manoa. Telephone: 948-8241 (daytime). Members welcome.
- Dec. 15 (Mon.). General meeting, 7:30 p.m., will include election of officers. *Different meeting place: MANOA LIBRARY, 2716 Woodlawn Dr., Manoa.* Program by Betsy Harrison Gagne: *Green Tree Snails of Manus Island, Papua New Guinea.*
- Dec. 20 (Sat.). Waipio, Oahu Christmas Bird Count. M. Stemmermann, compiler (949-3430).
- Dec. 20 (Sat.). Lihue, Kauai Christmas Bird Count. W. Sears, compiler (822-3045).
- Dec. 21 (Sun.). Honolulu, Oahu Christmas Bird Count. R.L. Pyle, compiler (262-4046).
- Dec. 22 (Mon.). Kapaa, Kauai Christmas Bird Count. W. Vilanueva, compiler (828-1739, am; 245-8913, afternoons and evenings).
- Dec. 27 (Sat.). Volcano, Hawaii Christmas Bird Count. D. Breese, compiler (967-7311).
- Jan. 3 (Sat.). Pu'u O Kali, Maui Christmas Bird Count. C.B. Kepler, compiler (878-1418).

TABLE OF CONTENTS

Number 6, December 1980

The White-faced Ibis in Hawaii	
H. Douglas Pratt	45
Ki'i Ponds Field Trip Report	
Sheila Conant	46
Hawaii Bird Observations, March - July '79	
Robert L. Pyle	47
A Buff-breasted Sandpiper on Kauai	
H. Douglas Pratt	49
Hawaiian Monk Seal Entangled in Fishing Net	
John B. Andre and Ruth Ittner	51
Unusual Feeding Behavior of a Brown Booby	
Robert P. Schulmeister	52
Brown Booby Capitalizing on Kleptoparasitism of Great Frigatebird	
G. Vernon Byrd	52

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HAWAII AUDUBON SOCIETY
P. O. Box 22832
HONOLULU, HAWAII 96822

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