



Migrants on Guam, Fall 1983

Janet M. Williams¹ and Patricia C. Grout²

From 16 August to 26 October 1983 we made daily observations of shorebirds on the island of Guam, 13° 25' N, 144° 45' E, the southernmost of the Marianas Islands, as part of a study of migration over the western Pacific Ocean. Guam is approximately 48 km long and 10 km wide covering an area of about 549 sq. km. The island is surrounded by a coral reef, except at river mouths and harbors. Due to the fringing reef, there is little beach or mud flat area suitable as shorebird habitat. We made regular sightings at three areas on the island: Duncas Beach, a tidal mudflat inside the reef on the west coast, Togcha Beach, a tidal coral flat inside the reef on the east coast, and along the runways and cut grassy areas of Andersen Air Force Base on the northern end of the island (see Fig. 1). The sites at Duncas and Togcha were the locations previously used by the Division of Aquatic and Wildlife Resources of Guam for a shorebird census (Jenkins, 1981).

During our study we identified 28 migrant species, 23 of which have been previously reported for Guam (Ashman, 1983; Drahos, 1977; King, 1962; Jenkins, 1981 and 1983; and Owen, 1977). Four of the remaining five are new sightings for Guam: the Nordmann's Greenshank (*Tringa guttifer*), the Little Curlew (*Numenius minutus*), the Pectoral Sandpiper (*Calidris melanotos*), and the Dunlin (*Calidris alpina*). The fifth, the Terek Sandpiper (*Xenus cinereus*), is listed in an unpublished 1981 Job Progress Report of the Division of Aquatic and Wildlife Resources on Guam; thus, we are including a description of it here. We also describe five other species, the Common Ringed Plover (*Charadrius hiaticula*), the Greater Sand Plover (*Charadrius leschenaultii*), the Common Greenshank (*Tringa nebularia*), the Rufous-necked Stint (*Calidris ruficollis*), and the Common Tern (*Sterna hirundo*), as previous reports only listed them for Guam. In addition, we include some notes on species difficult to distinguish in the field.

On 21 September, Tropical Storm Forest passed to the south of Guam. During the two days following the storm, we noticed the arrival of three species which we had not previously seen on the island: the Common Ringed Plover, the Greater Sand Plover, and the Pectoral Sandpiper. A second Terek Sandpiper also arrived at this time. The Common Ringed Plover and the Greater Sand Plover remained on Guam throughout the duration of our stay.

Specimens of a Golden Plover (*Pluvialis dominica*), a Whimbrel (*Numenius phaeopus*) and a Sharp-tailed Sandpiper (*Calidris acuminata*), which had been killed on the runways of Andersen Air Force Base and collected by the Safety Officer during our study, were deposited in the collection of the Division of Aquatic and Wildlife Resources on Guam.

Table I lists the 28 species identified during our study and the maximum number of each species seen at any one time. The

nomenclature and order follow the AOU Checklist (1983); for Asian birds not listed by AOU, we have used King et al. (1983).

SPECIES ACCOUNTS

Common Ringed Plover (*Charadrius hiaticula*): A Common Ringed Plover was first seen on Duncas Beach on 23 September, and we continued to see this bird nearly daily after that date on the same beach throughout our stay on Guam. It was seen feeding on the mud flats near Wandering and Gray-tailed Tattlers (*Heteroscelus incanus* and *H. brevipes*), the Greater Sand Plover, the Terek Sandpipers and the Wood Sandpiper (*Tringaglareola*). It had yellow-orange legs, and was easily separable from a Little Ringed Plover (*Charadrius dubius*) by its white wing bars, noticeable in flight.

Greater Sand Plover (*Charadrius leschenaultii*): A Greater Sand Plover was first seen on 23 September. The bird was feeding on the

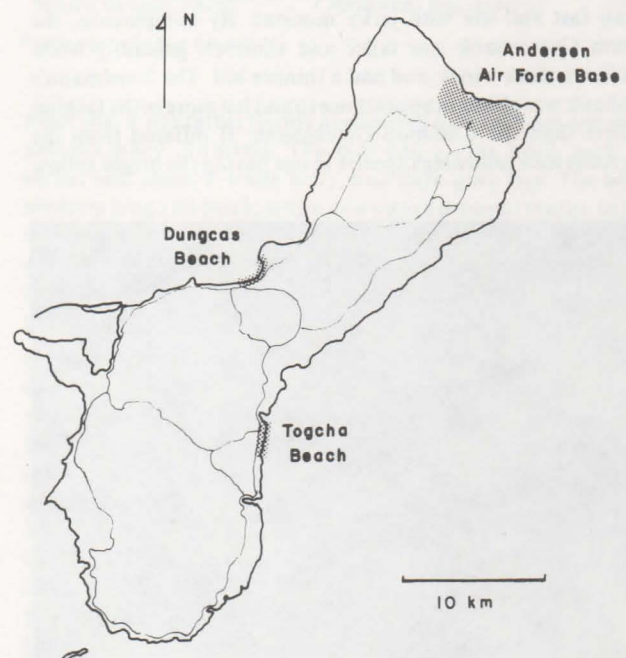


Figure 1. Map of Guam indicating the locations of our visual observations on the island. The fine lines represent the major roads.

mud flats of Duncas Beach with tattlers, the Common Ringed Plover, the Terek Sandpipers, and the Wood Sandpiper. The Greater Sand Plover was distinguished from Mongolian Plovers (*Charadrius mongolus*), which we saw on a regular basis both on Duncas Beach and at Togcha, by its slightly larger size, its longer and flatter bill, its whiter belly with no hint of rust or brownish color in the breast, and the lighter color of its legs. We continued to see the Greater Sand Plover on nearly a daily basis, usually on Duncas Beach, until the end of our study. On three occasions we saw a Greater Sand Plover at Togcha, perhaps the same bird.

Common Greenshank (*Tringanebularia*): A Common Greenshank was seen regularly on Togcha Beach from 30 August through the end of our observations. This bird was usually feeding alone, always at the water's edge (see photograph), but was noticeably larger than the Golden Plovers near which it sometimes fed. It had a tall, erect posture, was mostly white to light gray except for its dark wings, and had a white rump, a fairly long slightly upcurved black bill, and distinctly green legs. The Common Greenshank is a larger bird than the Marsh Sandpiper (*Tringa stagnatilis*), which is even whiter in winter plumage and has a shorter more pointed, needle-like bill.

Nordmann's (or Spotted) Greenshank (*Tringa guttifer*): A Nordmann's Greenshank was seen on 29 September on Duncas Beach feeding with tattlers, the Wood Sandpiper, and the Terek Sandpipers. On 1, 12 and 15 October we saw it again on Togcha Beach feeding near tattlers and Whimbrels. It was larger than the tattlers and smaller than the Whimbrels. The back was gray, with noticeable white tips on the feathers, the undersides white, and the head gray with a wide white eye stripe coming to a V over the beak. The bill was long, thick, straight and appeared all black; we did not notice a yellowish tinge to the basal half. The legs were yellow to light green, and the end of the tail, seen in flight, was barred. The bird ran fast and ate with jerky motions. By comparison, the Common Greenshank was taller and slimmer, generally white except for its dark wings, and had a thinner bill. The Nordmann's Greenshank was closer in appearance to and fed more in the fashion of tattlers than the Common Greenshank. It differed from the North American yellowlegs species in not having the bright yellow



Common Greenshank, Togcha Beach, 23 October 1983.

Photo by Janet Williams

legs or erect stance, and it was more stocky in appearance than either the yellowlegs or the Common Greenshank.

Wandering and Gray-tailed Tattlers (*Heteroscelus incanus* and *H. brevipes*): We saw both of these species on a regular basis at both Duncas and Togcha during our observations on Guam. We were able to distinguish the two species by their calls and by the heavy barring on the chest and belly and the darker gray color of the Wandering Tattler. The Gray-tailed Tattlers were always much more numerous, outnumbering the Wandering Tattlers by as much as 35 to one.

Common Sandpiper (*Actitis hypoleucos*): We regularly saw one or two Common sandpipers on Duncas Beach after 24 August; on two occasions we saw one at Togcha Beach. The birds usually fed above the water's edge in the vicinity of, but not with, other shorebirds. Whenever we saw both Common Sandpipers they were feeding near each other. The Common Sandpipers bobbed nearly continuously, had dark gray backs with gray shoulder patches, white bellies, and distinct white wing bars noticeable in flight. Most of the other shorebirds were still in partial or complete breeding plumage on their arrival on Guam in August, but there were no signs of spots on either of these two birds, suggesting that they were not Spotted Sandpipers (*Actitis macularia*), which have not been recorded in this area of the western Pacific. In addition, the tail of the Common Sandpiper extends well beyond the wing tips, as can be seen in the photograph.

Terek Sandpiper (*Xenus cinereus*): We first saw a Terek Sandpiper on Duncas Beach on 31 August and then almost every day after that. On 22 September, a second Terek Sandpiper appeared on the same beach and immediately joined the first. From then on the two birds were seen together until 8 October, after which neither was seen again. The Terek Sandpipers were usually eating on the mudflats in the vicinity of tattlers, Rufous-necked Stints and Golden Plovers. Both birds had upcurved bills, short, bright yellow-orange legs, and grayish backs with lighter underparts. The Terek Sandpipers were a little smaller than the tattlers, but much shorter, and ate in a fashion similar to the tattlers and the Common Sandpipers. See photograph.



Common Sandpiper, Duncas Beach, 14 September 1983.

Photo by Janet Williams

Little Curlew (*Numenius minutus*): A Little Curlew was first seen on 9 September on the mudflats of Duncas Beach, and then on 20 more occasions at the same beach until 12 October, after which it was not seen again. Sometimes it was seen in the vicinity of Whimbrels or Golden Plovers, but often it fed alone. The Little Curlew was smaller than the Whimbrels but larger than the Golden Plovers, and its bill was shorter and less decurved than the Whimbrel's, appearing almost straight with the curvature at the end of the bill. It had a light eyebrow and crown stripe, and the feathers on its back were brown, similar to the Whimbrel's, but with each feather having a clear outline. The undersides of its wings were buffy with dark barring visible in flight. Its call in flight was a harsh and husky "tchew, tchew, tchew", as described in King et al. (1983).

Rufous-necked Stint (*Calidris ruficollis*): From one to fifteen Rufous-necked Stints were seen nearly every day during our observations; on some days we saw them at both Duncas and Togcha. They usually fed near each other, and almost always in the vicinity of other shorebirds, particularly Golden Plovers and Ruddy Turnstones. The stints were the smallest shorebirds that we saw on Guam, had gray-brown backs and heads, and white bellies with varying amounts of rust in the breast and neck feathers. They had black legs and short, straight black bills.

Pectoral Sandpiper (*Calidris melanotos*): We saw a Pectoral Sandpiper on Duncas Beach on 23 September; it was feeding with a flock of 158 Golden Plovers. The Pectoral Sandpiper was smaller than the plovers but had a more erect posture. It had the characteristic sharp cut-off line between the brown breast feathers and the white belly, a brown back, a rich brown color on the top of its head, and a relatively short, but fine, pointed black bill. We saw Sharp-tailed Sandpipers on several occasions during our study, and the Pectoral Sandpiper, by comparison, did not have the rusty color characteristic of the Sharp-tailed Sandpiper's back and cap.

Dunlin (*Calidris alpina*): A single Dunlin was first seen on the mudflats of Duncas Beach on 10 October by Bob Beck and Gary Wiles of the Division of Aquatic and Wildlife Resources, and we then saw it on 12 and 14 October. On 15 October it was joined by a second one, and thereafter the two were regularly seen together. The first Dunlin was seen feeding near the other shorebirds on the



Terek Sandpiper, Duncas Beach, 29 September 1983.

Photo by Janet Williams

Table I
Migrant birds on Guam 16 August-26 October 1983

Species		Maximum Number
Cattle Egret	<i>Bubulcus ibis</i>	28
Northern Shoveler	<i>Anas clypeata</i>	1
Black-bellied Plover	<i>Pluvialis squatarola</i>	2
Lesser Golden Plover	<i>Pluvialis dominica</i>	300
Mongolian Plover	<i>Charadrius mongolus</i>	23
Common Ringed Plover	<i>Charadrius hiaticula</i>	1
Greater Sand Plover	<i>Charadrius leschenaultii</i>	1
Common Greenshank	<i>Tringa nebularia</i>	1
*Nordmann's Greenshank	<i>Tringa guttifer</i>	1
Wood Sandpiper	<i>Tringa glareola</i>	1
Wandering Tattler	<i>Heteroscelus incanus</i>	11
Gray-tailed Tattler	<i>Heteroscelus brevipes</i>	49
Common Sandpiper	<i>Actitis hypoleucos</i>	2
*Terek Sandpiper	<i>Xenus cinereus</i>	2
Whimbrel	<i>Numenius phaeopus</i>	23
*Little Curlew	<i>Numenius minutus</i>	1
Black-tailed Godwit	<i>Limosa limosa</i>	1
Bar-tailed Godwit	<i>Limosa lapponica</i>	2
Ruddy Turnstone	<i>Arenaria interpres</i>	211
Sanderling	<i>Calidris alba</i>	1
Rufous-necked Stint	<i>Calidris ruficollis</i>	15
*Pectoral Sandpiper	<i>Calidris melanotos</i>	1
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>	2
*Dunlin	<i>Calidris alpina</i>	2
Ruff	<i>Philomachus pugnax</i>	5
Common Tern	<i>Sterna hirundo</i>	1
Black-naped Tern	<i>Sterna sumatrana</i>	1
White-winged Tern	<i>Chlidonias leucopterus</i>	3

*new records for Guam

mudflats; it was rather flighty and moved quickly from one place to another when disturbed. The bird had a gray head, neck, back throat and chest, a white belly, and dark gray legs. The bill was medium long and black, with a downward droop at the tip. In flight, the bird had white wing bars and white outer tail coverts which extended to the end of the tail. The second Dunlin was in eclipse plumage and still had some of its black belly feathers (see photograph).

Common Tern (*Sterna hirundo*): On the morning of 28 September we observed two terns flying away from Duncas Beach. Later the same day we saw two terns sitting on a runway at Andersen Air Force Base, and that evening saw them again at the north end of the same runway. Presumably all these sightings were of the same birds, as migrant terns are rare on Guam. We again saw the two terns on Duncas Beach on 29 September, but then only one of them on 1 October. Neither bird was seen after that date. We were able to observe the terns for more than an hour on both Andersen Air Force Base and Duncas Beach. We identified one of the birds as a Common Tern, and did not make a positive identification for the second one. The second bird had light gray wings with dark wing tips; in flight the wings looked light gray, almost white, with the dark wing tips clearly noticeable. Its legs were short and dark red to black. By way of contrast, the Common Tern had darker gray wings with a dark line along the "shoulder" edge, and in flight the wings



Dunlin, Duncas Beach, 17 October 1983.

Photo by Janet Williams

appeared uniformly gray. Its legs were red. Both birds had black eyes and black on the top of the head coming down to a V on the nape, with white above the thin black bill. Neither bird had a deeply forked tail.

ACKNOWLEDGEMENTS

We would like to express our sincere thanks to the various members of the Division of Aquatic and Wildlife Resources, Tino Aguon, Gary Wiles, Julie Savidge, Bob Anderson, and most especially to Bob Beck for their help, cooperation and support throughout the time of our stay on Guam. Bob Beck collaborated with us on several of the bird sightings. We are also indebted to the staff of the Marine Laboratory of the University of Guam who provided us with laboratory space, endless advice and continual support in our project. Capt. Jack Wright, U.S.A.F., kindly drove us around the runways of Andersen Air Force Base, enabling us to extend our counts on the base. John Engbring very patiently and meticulously went through our notes on the descriptions of birds. We would like to thank Timothy Williams, Bob Pyle, Peter Pyle and John Engbring for their help with the manuscript. This research was supported by National Science Foundation grant BNS 8309823, the Explorer's Club, Research Corporation and Swarthmore College. This paper is contribution number 205 of the University of Guam Marine Laboratory.

LITERATURE CITED

- American Ornithologists' Union, 1983. Checklist of North American Birds, Sixth Ed. Allen Press, Inc., Lawrence, KS.
- Ashman, P.R., 1983. First Mariana Islands record of a ruff. 'Elepaio 43:61.
- Drahos, N., 1977. Additions to the avifauna of Guam. Micronesica 13:45-48.
- Jenkins, J.M., 1981. Seasonality and relative abundance of Guam shorebirds. Micronesica 17:181-184.
- Jenkins, J.M., 1983. The native forest birds of Guam. Ornith. Monogr. 31: 1-61.
- King, B., M. Woodcock & E.C. Dickinson, 1983. A field guide to the birds of Southeast Asia. South China Printing Co., Hong Kong.

Owen, R.P., 1977. A checklist of the birds of Micronesia. Micronesica 13:65-81.

¹Department of Biology
Swarthmore College
Swarthmore, PA 19081

²RD #3, Jones Road
Gouverneur, NY 13642

SIERRA CLUB LEGAL DEFENSE FUND INSERT

The enclosed August 1985 issue of the Sierra Club Legal Defense Fund's (SCLDF) *In Brief* deals largely with habitat destruction and "critical habitat" litigation of endangered species in Hawaii. In one case, Palila versus State DLNR, we are asking the federal court to find the State Division of Land and Natural Resources (DLNR) in violation of the Federal Endangered Species Act (ESA) for maintaining Mouflon Sheep for hunting purposes within the critical habitat of the endangered Palila, a Hawaiian honeycreeper, on Mauna Kea. Since this court had previously ruled that feral sheep and goats had jeopardized the Palila, and since federal, state, and other scientific expertise had written of or admitted to the Mouflon's destructive activities when deposited, our attorney, Mike Sherwood, will ask federal judge Sam King to rule in our favor on a "Motion for Summary Judgement" to be heard on 1 Nov. 1985 at 9:30 am in Honolulu. If Judge King rules in our favor, we win; if not, the case goes to trial. Meanwhile, the hunter's attorney (the State will also have a Deputy Attorney General Watson to present its case) has indicated that he intends to file a countermotion contesting the constitutionality of the Federal ESA. This may indicate how thin their basis of argument may be.

Meanwhile, the Safari Club International, an affluent Tuscon-based trophy hunter advocacy group, has filed a motion to intervene in the Palila case. This motion is scheduled to be heard before the Federal magistrate in Honolulu on 28 October. Should this motion be granted, Sherwood believes that the Safari Club will immediately ask for a postponement of our "Motion for Summary Judgement" to try to stall our suit. Informed sources suggest that the Safari Club is also under-writing the legal costs for hunter interests who oppose removal of Mouflon from Mauna Kea by court order.

Sherwood has also indicted that, unless the National Marine Fisheries Service designates "critical habitat" for the endangered Hawaiian Monk Seal at least out to the 20 fathom line, as urged by the Monk Seal's recovery team and other experts in the field, SCLDF will file suit under both the ESA and the Marine Mammal Protection Act for its clients, the Sierra Club and Greenpeace. Further detail on this, the Palila case, and Hawaiian Humpback Whale harassment and others can be found in the enclosed copy of *In Brief*.

When we contest government action or inaction, whether it be State or Federal, we are in effect paying twice for attorney fees, once for the government opposition's lawyers through taxes, and somehow through fund-raising for our side. Which leads to the purpose of inserting *In Brief* in the 'Elepaio. It costs money to prepare and file legal briefs, take depositions to strengthen our case, pay staff and attorney wages, cover transportation to and from San Francisco, etc. If we win, we can ask for payment of our attorney fees, but such is not guaranteed, nor can we count upon being awarded all that is due us. You can help the cause of protecting the Palila and other native wildlife by donating to the SCLDF.

It would help SCLDF if you would indicate that you are doing so as a Sierra Club or Hawaii Audubon Society member, or both, on the inside of the envelope attached to *In Brief*.

Dean Horvath and Wayne Gagné

NO NA LEO 'OLE

The Conservation Committee continues to receive information and requests from various groups that share with Hawaii Audubon Society an awareness of environmental matters. Some of the issues, such as habitat destruction and introduction of alien species, are as old as the first arrival of man on Hawaii. Other issues are newer problems, as for example, the use and misuse of Paraquat and other herbicides.

WATERSHED DESTRUCTION BY FERAL PIGS:

On Maui and other islands, feral pigs pose an increasing threat to watershed areas and needed legislative relief remains stagnated in the state House and Senate. Conservation Committee member Wayne Gagné spoke about the problem to the Sierra Club during

a meeting in August. He reported that wild pig populations on Maui in particular appear to be skyrocketing. As a result, watershed and wildlife habitat is being destroyed and fecal matter from the pigs as well as soil erosion from their rooting are contaminating the drinking water. The pigs are directly and indirectly killing native plants, birds, and insects. Hunters generally stalk the pigs only at roadside areas, without deeply penetrating the watersheds. Many hunters and the National Rifle Association are opposed to declaring water production as the prime function of native rainforest, since they feel that it would diminish future hunting opportunities.

In the State legislature, three bills addressing the problem remain stalled. House Bill 1551, "Relating to forest reservations" and House Bill 1565, "Making an appropriation for fencing", both remain held by State Representative Calvin Say, Chairman of the Committee on Water, Land Use, Development, and Hawaiian Affairs. A companion bill, Senate Bill 620, remains held in State Senator James Aki's Economic Development Committee. The House bill was introduced by Representative Virginia Isbell (R), and the Senate bill by Senator Ann Kobayashi (R). Earliest action on the bills could come during the 1986 legislative session, if there is sufficient public outcry and pressure about this international disgrace.

CORAL REEF PROTECTION ACTIVITY:

The Department of the Interior is preparing a report for submission to Congress in October that will make recommendations for additions or deletions to the Coastal Barriers Resource Act of 1982. Although the period for public comment will have passed by printing time, there may be good news for Hawaii in the expansion of coastal barriers. Shoreline in the Hawaiian Islands is included in the proposed expansions. The Honolulu Group of the Sierra Club recommended to the Interior Department that Hawaii's coral reefs and associated aquatic environments be included in the expansion. This is in line with the Interior Department's broadened definition of "coastal barriers" to include fringing mangroves, coral reefs and associated aquatic environments. Areas included within the coastal barrier resource system become excluded from federally funded or subsidized projects, such as bridges, roads, development loans, and flood insurance. This provides protection to such areas from environmentally undesirable development.

SUPERFUND REAUTHORIZATION:

According to Sierra Club, the level of relief for the cleanup of toxic waste provided for by 1980's "Superfund" may be in jeopardy. The legislation that created the fund is before Congress for reauthorization. The major threat to toxic waste cleanup super-funding comes from a bill introduced in Congress by John Dingell and James Broyhill. The House Commerce Subcommittee, leaning away from voters and towards the chemical industry, is critical of the Superfund. The Dingell-Broyhill bill (H.R. 2817) is the vehicle proposed to reduce significantly the funds and public rights associated with toxic waste cleanups. The major shortcomings of the Dingell-Broyhill bill are:

(1). Persons in imminent danger from an abandoned toxic waste dump site would not be allowed to sue its owner to clean up the hazard. Such suits are provided for under the law that currently governs operation of hazardous waste facilities. The Dingell-Broyhill bill grants unique immunity to the owners of hazardous waste dumps from such citizen action. Additionally, if a hazardous waste dump site in your area is not on the Environmental Protection Agency's (EPA) limited national priority list, you would have no legal right for action.

(2). The Dingell-Broyhill bill would limit information available to state and local governments about the use of toxic substances in their communities. This would include information about the transportation, manufacture, and discharge of hazardous materials. This federal action would be at odds with current practice of allowing state and local governments to establish standards for air, water, and the use of pesticides.

(3). The Dingell-Broyhill bill allows the EPA to continue performing partial and perfunctory cleanups at waste dumps. Under H.R. 2817 such superficial cleanups could stand as final even if contrary to other federal or state regulations.

(4). H.R. 2817 requires no timetable for cleanup activities, allowing jobs to remain uncompleted indefinitely.

There was a bill more beneficial to efforts to conduct toxic waste cleanups, but the Commerce Subcommittee rejected it last year. The bill, H.R. 2560, authored by Representative James Florio (D-NJ), was a generous one that would help maintain a strong and effective superfund.

The Sierra Club encourages concerned people to express their views to their elected representatives. They suggest that you ask them to vote for a strong superfund, and ask

them to oppose H.R. 2817. They also ask that you encourage them to support alternative bills like H.R. 2560, or seek improvements to H.R. 2718, should it reach the full House.

PARAQUAT ON POT:

A Maui group, SAFE SOLUTIONS, is soliciting support to prevent the use of certain herbicides to kill *Cannibis* (marijuana). SAFE SOLUTIONS says that Paraquat, 2-4D, and glyphosate are to be used to eradicate *Cannibis* both on the mainland and in Hawaii. They state that these herbicides can cause cancer, genetic damage, birth defects, and irreversible lung disease. Since these herbicides would be sprayed, wind vectors could cause them to affect endangered and other native plants and animals, agriculture, watersheds, homes, pets, and people. SAFE SOLUTIONS seeks help in any form, and encourages that letters stating opposition to the use of these herbicides be sent to members of Congress, the EPA, the Drug Enforcement Administration, the Attorney General and the President. For more information, contact SAFE SOLUTIONS PO BOX 11634 LAHAINA MAUI, 96761.

Dean Horvath and Wayne Gagné

SEPTEMBER MEETING REPORT

Our speaker for the September 16th program, introduced by Peter Stine, was Dick Wass, who obtained his Master's and Ph.D. degrees from the University of Hawaii on a study of sharks. For the past year and a half he has been the Refuge Manager for the U.S. Fish and Wildlife Service for most of the remote islands of the Northwest Chain of the Hawaiian Islands, such as Laysan, Pearl and Hermes, French Frigate Shoals, and others. He has previously worked in Samoa in an ecology program.

Currently, there is an ongoing conflict between the State of Hawaii and the Federal Government about the boundaries of the Northwest Hawaiian Islands Refuge.

The Northwest Islands of the Hawaiian Archipelago extend about 1,000 miles in a northwesterly direction. Dick showed slides of the various islands beginning with Nihoa (next one north of Niihau); there are remnants and artifacts of early Polynesian culture on both Nihoa and Necker Islands, which have a basaltic base; otherwise, most of the islands beyond have been eroded away and are coral atolls. Pearl and Hermes reef and island is the northernmost refuge island and one of the homes of Hawaii's Monk Seals, an extremely endangered species. Monk Seals are

limited to the Northwest Islands; their diet consists mostly of fish and shell fish. The young are nursed and weaned in 5 weeks, after which they are on their own. Approximately half of the Monk Seals inhabit French Frigate Shoals. Seals are sometimes censused by aerial photography.

The Green Sea Turtle, 95% of which breed on the Northwest Islands, is a threatened species. Their eggs, laid and buried in sand, hatch in about 60 days, but hatchlings must dig their way out of the sand nest, and do so in many cases by helping each other. They hatch at night and escape to the sea.

In addition to slides of these remote island refuges, Dick showed slides of the Hawaiian Monk Seal, its young, Green Sea Turtles, Nihoa Millerbirds, Nihoa Finches (about 9,000 exist), Laysan Finches (about 11,000 exist), and Laysan Ducks (400-500). The last-named eat shrimp and other invertebrates found in the Laysan Lagoon.

The main attraction on these refuges are the up to 14 million sea birds, of which there are 18 species. The most common are the Sooty Terns, which nest in large, noisy colonies. Brown and Black Noddies are frequent, as are the beautiful Fairy (White) Terns. These last-named do not build nests, but lay a single egg on a tree limb or in the crotch of a tree. There were delightful slides of this most beautiful snow white bird and its fluffy chick.

Wedge-tailed Shearwaters nest in burrows, and depart for life at sea during the night. There were also slides of a Red-tailed Tropicbird (noted for its spectacular, acrobatic, aerial courtship); a Red-footed Booby with a fuzzy chick; Brown and Masked Boobies; also, the Great Frigatebird in spectacular array during its breeding season. Despite their great wing span of seven to eight feet, the Great Frigatebird weighs only about two pounds, a small weight in proportion to its wing span.

The largest colony of Laysan Albatrosses inhabits Midway Island; they feed their young by regurgitation and are famous for their courtship dance. Birds are not hunted, so they are tame, easy to approach, and to photograph.

Equally interesting and numerous are the tropical fish, such as Manini, Parrotfish, Snappers, and other giant fish. Like the birds, they are tame, approachable, and readily photographed.

Dick said most of the photos of birds were not taken by him, but by others, including Rob Shallenberger. A most interesting, delightful, and informative evening was enjoyed by all present.

Betty L. Johnson

NOMINATING COMMITTEE REPORT

The Society's 1985 Nominating Committee (Suzan Harada, Steve Montgomery, and Marie Morin) has settled on the slate of officers it will nominate for this December's election for next year's Board of Directors. The slate that will be offered by the Nominating Committee is:

President:	Phillip Bruner
First Vice-President:	Andrew Engilis
Second Vice-President:	Peter Luscomb
Treasurer:	Mary Engilis
Recording Secretary:	Tim Ohashi
Corresponding Secretary:	Michael Hall
Directors:	Allen Allison
	David Boynton
	Peter Connally
	Mae Mull
	Elizabeth Powell
	Tim Sutterfield

Should any member wish to nominate additional "write-in" candidates, the Bylaws do allow for this possibility. The nominator must send, in writing, his or her nomination to the Nominating Committee (c/o Hawaii Audubon Society, P.O. Box 22832, Honolulu, HI 96822) so that it is received by **21 November 1985**. The nominator should also include a two or three line bibliography of the candidate that will be published on the ballot that goes out with the December 'Elepaio. The written nomination must be accompanied by, or the Committee must receive, also by **November 21**, written consent from the person being nominated that he or she is willing to run for election and to serve on the Board of Directors.

1985 CHRISTMAS BIRD COUNTS

The annual Audubon Christmas Counts will take place again this year. On Kauai, those interested in the Lihue Count should contact Winona Sears, 822-3045. On Oahu, those interested in the Honolulu Count should contact Robert Pyle, 262-4046 and the Oahu Waipio Count will be organized by David Bremer, 623-7613. On Hawaii, a count will probably be scheduled for Volcano. A count may also be planned for Maui. More details will appear in the December 1985 issue.

NOVEMBER PROGRAM: BIRDS OF THE MARIANAS

The guest speaker for the Monday 18 November general meeting will be Dr. Thane Pratt. He will present a slide show about birds and the wildlife program of the Commonwealth of the Northern Mariana Islands. Thane was a wildlife biologist for the Commonwealth for two years.

The meeting will be held at the McCully-Moiliili Library on S. King St., Honolulu, at 7:30 pm. The public, as well as all Audubon members, are welcome to attend this free presentation.

VOTE BY MAIL

Local and joint-with-National members may vote in the election of Hawaii Audubon Society officers without being present at the HAS annual meeting. We encourage all eligible members to participate in the mail-in vote, especially if a member is not able to attend the annual meeting (votes may also be handed in at the beginning of the annual meeting). Eligible members include Joint Members, Local Members residing in Hawaii and the Pacific Basin, and Local Members residing on the mainland who have been Local Members continuously since 1976.

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

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

Since all Hawaii Audubon annual memberships expire on 31 December 1985, Local Members may wish to return their 1986 dues along with their ballot. Joint Members will receive an invoice from National Audubon.

NOVEMBER FIELD TRIP: BYU MUSEUM AND JAMES CAMPBELL NWR

The 10 November 1985 HAS field trip is to the north shore of Oahu to first visit the Natural History Museum of BYU Hawaii in Laie and then to proceed to Kahuku to tour the James Campbell National Wildlife Refuge Kii unit.

Our purpose at the Museum will be to examine specimens of birds we are likely to see on our trip to Kahuku and to learn what resources are available to researchers, school groups and general public.

People on the Honolulu side can meet on Punchbowl Street next to the State Library. Be there ready to leave at 7:00 am. People on the Windward side can meet in front of BYU campus, near the circle with the flagpoles at 8:00 am. Bring binoculars, something to drink, sun tan lotion, and rain gear.

MEETING NOTICE:

THE EUROPEAN PIG IN HAWAIIAN RAIN FOREST

On Wednesday, 13 November, 7:30 pm, McCully-Moiliili Library, Charles Stone, National Park Service scientist and Wayne Gagné of the Bishop Museum, will present a slide show "The European Pig in the Hawaiian Rain Forest; Its History, Diseases, and Impacts." The talk is free to the public.

HELP WITH 'ELEPAIO

The December issue of the 'Elepaio will be pasted-up 23 November (Sat.) beginning at 12 noon at 1415 Victoria St. #1515. If you want to help, call Marie at 533-7530 for the entry phone number and directions. No experience necessary! We train!

HAWAII AUDUBON SOCIETY

BOARD OF DIRECTORS

President	Sheila Conant	948-8241
1st V.P.	Phillip Bruner	293-3820
2nd V.P.	Peter Stine	395-2191
Treasurer	Mary Engilis	
Rec. Secy.	Keith Fukumoto	395-1106
Cor. Secy.	Suzan Harada	845-6704
Directors	David Boynton	335-5008
	George Campbell	941-1356
	Carl Christensen	847-3511
	Carl McIntosh	262-4337
	Ray Tabata	948-8191
	Rick Warshauer	967-7476

COMMITTEES

Adopt-A-Refuge	Phillip Bruner(Chair)	293-3820
Conservation	Carl Christensen(Chr)	373-3437
	David Boynton	335-5008
	Wayne Gagné	941-5659
	Libby Powell	988-4956
Education	Suzan Harada(Chair)	845-6704
	Ray Tabata	948-8191
	David Boynton	335-5008
Field Trips	Andrew Engilis(Chair)	
	Peter Donaldson	456-5662
	Suzan Harada	845-6704
	Robert Pyle	262-4046
Finance	Audrey Newman(Chair)	732-7572
	Mary Engilis	
	Norris Henthorne	
	Marie Morin	533-7530
	Michael Ord	
	Robert Pyle	262-4046
Grants	Sheila Conant(Chair)	988-3960
	Robert Kinsey	
	Clifford Smith	
	C. Causey Whittow	
Mail Distrb.	Leilani Pyle	
Membership	Robert Pyle(Chair)	262-4046
	Susan Schenck	488-4974
Programs	Peter Stine(Chair)	395-2191
Publicity	Vacant	
Special Pubs.	Sheila Conant(Chair)	948-8241
	Phillip Bruner	293-3820
	George Campbell	941-1356
	Norris Henthorne	
	Robert Pyle	262-4046
Sales	Martha McDaniel(Chair)	235-6636

'ELEPAIO

Editors	Marie Morin, Peter Galloway (Send articles to Marie Morin, 1415 Victoria St. #1515, Honolulu, Hawaii 96822)
Production	Lee Bauer, Robert Pyle, Susan Schenck, Joel Simasko, Jill Sondeen, and Irene Judd

ISLAND REPRESENTATIVES

Maui	Mary Evanson	572-9724
Lanai	Peter Connally	565-6242
Kauai	Winona Sears	822-3045

IF NOT A MEMBER, PLEASE JOIN US

JOINT MEMBERSHIP

(National and Hawaii Audubon Societies)

Individual.....	\$ 30.00
Family.....	38.00
Sustaining.....	50.00
Supporting.....	100.00
Contributing.....	250.00
Donor.....	500.00
Life (single payment).....	1500.00
Dual Life (single payment).....	2000.00

Special rates for full-time students and Senior Citizens (65 years of age or older) are available. Please write for application form.

LOCAL MEMBERSHIP

(Hawaii Audubon Society only)

Regular.....	\$ 6.00
Junior (18 and under).....	3.00
Subscriber (non-Hawaii residents)....	6.00
Life (payable in three equal annual installments).....	150.00

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

CALENDAR OF EVENTS

- Nov. 10 (Sun.) Field trip to BYU-Hawaii Museum and James Campbell NWR. See page 48, or call Leader Phil Bruner at 293-3820.
- Nov. 12 (TUESDAY) Board meeting at the home of Dr. Conant at 3663 Alani Dr., Honolulu, at 7:00 pm.
- Nov. 18 (Mon.) General meeting at McCully-Moiliili Library with Dr. Thane Pratt, on *Birds of the Marianas*. See page 48. Meeting starts at 7:30 pm.

TABLE OF CONTENTS

Vol. 46 No. 5, November 1985

Migrants on Guam, Fall 1983	
Janet M. Williams and Patricia C. Grout..	41
Sierra Club Legal Defense Fund Insert	
Dean Horvath and Wayne Gagné.....	44
No Na Leo'ole	
Dean Horvath and Wayne Gagné.....	45
September Meeting Report	
Betty L. Johnson.....	46

Reprinting of material from the 'Elepaio is permitted if credited to " 'Elepaio, the journal of the Hawaii Audubon Society".

By-laws available by request.

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

Non-Profit Organization
U.S. POSTAGE
PAID
Honolulu, Hawaii
Permit No. 1156

ADDRESS CORRECTION REQUESTED

