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New Bird Records and Migrant Observations from Micronesia, 1977-1984.

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Between March 1982 and May 1984, the United States Fish and Wildlife Service (USFWS) conducted bird surveys in the Northern Mariana and Caroline Islands, Micronesia. The focus of these surveys was to gather baseline data on the resident forest birds, but observations were made on a number of migrant, vagrant and introduced species, some of which represent new records for the various island groups. These new records, along with other noteworthy observations of migrants, are reported herein. Additionally, three new records, two of which are hypothetical, are reported from Palau, where Engbring served as a Peace Corps Volunteer from 1977 to 1979.

Island groups surveyed and dates of observations at each locale were: the Northern Mariana Islands of Rota, Agiguan, Tinian, and Saipan, 19 March to 5 June 1982; Pohnpei, including Ant Atoll, 29 June to 4 July 1981, 10-14 June 1982, and 7 May to 30 June 1983; Kosrae, 30 June to 29 July 1983; Truk, including 18 islands, 31 July to 5 August 1983 and 23 March to 29 April 1984; and Yap, 9-13 August 1983 and 28 April to 29 May 1984. A total of 33 bird observations new to particular island groups were recorded during the survey, with the number per group generally reflecting the amount of previous ornithological work. Observations were made under satisfactory lighting and viewing conditions and by observers familiar with the respective species and their identification. This paper includes documentation of these records and a listing of other migrants observed, except for the Lesser Golden-Plover *(Pluvialis dominica),* Wandering Tattler *(Heteroscelus incanus),* Gray-tailed Tattler *(H. brevipes),* Common Sandpiper *(Actitis hypoleucos),* Whimbrel *(Numenius phaeopus),* and Ruddy Turnstone *(Arenaria interpres).* These commoner species were generally found in accordance with their status and distribution as reported in Baker (1951). Four species detailed in this report are considered to be hypothetical records.

USFWS employees who participated in the survey were Celestino Aguon, Philip Ashman, John Engbring, David Jickling, Jim Moore, Peter Pyle, and Fred Ramsey. Marie Morin, formerly of the Hawaii Division of Forestry and Wildlife, also contributed. New island records are highlighted in the species accounts by writing the island name in capitals after the scientific name. Initials of observers who were present at each new record observation are given under the species accounts. For interesting migrant records of previously reported species, the dates and high count observed per island are listed in parentheses following each island group. Bird names and order follow those of the sixth American Ornithologist's Union (AOU) Check-list (1983). For species not included by the AOU, King *et al.* (1975) is used. An asterisk (*) following the island group indicates that an identifiable photograph is on file with the USFWS in Honolulu. In the following species accounts, reference to occurrence in Micronesia is based on Pyle and Engbring (1985), which is based largely on Owen (1977) and Baker (1951).

SPECIES ACCOUNTS

Black-footed Albatross *(Diomedea nigripes).* PALAU (Hypothetical). A large, brownish-black albatross was observed resting on the lagoon on 5 May 1978 (JE). The individual was approached to within 30 m before it flushed, whereupon it flew low over the lagoon and settled again on the water. The bird was slightly paler on the underparts than the upperparts, but otherwise appeared all dark. Binoculars were not in hand when the observation was made, and, although in all probability it was a young Black-footed Albatross, the possibility of a young Short-tailed Albatross *(D. albatrus)* cannot be ruled out; we thus consider this a hypothetical record. In Micronesia, the Black-footed Albatross has been recorded from Wake, the Marshall Islands, and the Northern Marianas.

Wedge-tailed Shearwater *(Puffinus pacificus).* PALAU*. A solitary, brownish-black (dark phase) individual was sitting on the lagoon near Koror Island on 12 July 1978 (JE). The bill was all dark, and the feet were a flesh color. The wings were dark with no evident pattern; the tail was relatively long. The bird was approached to within 3 m and flushed three times. The Wedge-tailed Shearwater has been recorded from all other island groups in Micronesia, but this is the first record from Palau. On 27 June 1978, an all-dark shearwater, possibly this species, was recorded just outside the Palau Lagoon (Pratt and Bruner 1981).

Christmas Shearwater *(Puffinus nativitatis).* KOSRAE. An individual was observed from a fishing vessel about 12 km east of Lelu on 28 July 1982 (PA, JE, DJ, PP). It was in a flock of seabirds which included large numbers of Black Noddies *(Anous minutus)* and Brown Noddies *(A. stolidus),* two or three Audubon's Shearwaters *(P. lherminieri),* and a Wedge-tailed Shearwater. It was midway in size between the Audubon's and Wedge-tailed Shearwaters and had stockier proportions than either. The tail was short and rounded, and the plumage was entirely dark brown, including the underwing lining, which also showed a very slight sheen. The bill was thin, and both it and the legs were black. The flight was buoyant, with more wing-flapping and less gliding and arcing than is typical of the similar Sooty and Short-tailed Shearwaters *(P. griseus* and *P. tenuirostris).* All other shearwaters and large petrels are ruled out by structure and plumage features. In Micronesia, the Christmas Shearwater has been reported from Wake, the Marshall Islands, and the Northern Marianas and would be expected in the vicinity of Kosrae.

Red-footed Booby *(Sula sula).* POHNPEI*. Approximately 2,000 birds were found roosting on Wolauna Island, Ant Atoll on 12 June 1982 and 25 June 1983 (PA, JE, DJ, PP, FR). Active nests were observed on both occasions. An estimated 80-90% of the birds were white phase. A complete account of this and other species found roosting and nesting on Wolauna will be published separately. This is the first documentation of this species in the Pohnpei area, although local residents have long been familiar with the colony. The Red-footed Booby is recorded from most other Micronesian groups.

Lesser Frigatebird *(Fregata ariel).* KOSRAE. Two birds, a male and a female, were seen on 12 July 1983 near Malem (PA). The pair was flying overland toward the ocean. The male was entirely black, except for white patches extending a short distance out onto the underwings from the abdomen. The female had a black throat and upper chest and a white belly. These features distinguish this species from the similar Great Frigatebird *(F. minor).* This is the first occurrence of this species on Kosrae, though records exist from most other Micronesian locales.

Green-backed Heron *(Butorides striatus).* TRUK. An individual was briefly observed in a mangrove area near the north end of Uman on 26 April 1984 (PP). It was flushed across an opening and into a thick stand of mangroves. It was identified by its size (approximately one and a half times that of nearby Yellow Bitterns,*Ixobrychus sinensis),* squat proportions, and grayish upperpart coloration with darker cap. The latter feature is characteristic of the subspecies found in Asia *(B. s. striatus).* As it flew, it raised its crest and gave the distinctive "keeyuk-keeyuk" call characteristic of this species. Green-backed Herons have been recorded from Palau and the Marianas, but this is the first record for Truk.

Cattle Egret *(Bulbulcus ibis).* This widespread species has been reported from all Micronesian island groups, from Pohnpei westward. We observed them in the N. Marianas (25 on Rota and 30 on Tinian, 1-29 Apr 1982), Pohnpei (eight, 8-15 May 1983), Truk* (27 on Moen, 1-5 Aug 1983; 34 on Moen and 1 on Uman, 23 Mar to 29 Apr 1984), and Yap (fifteen, 1-29 May 1984). It has yet to be reported from Kosrae.

Intermediate Egret *(Egretta intermedia).* We recorded this species in the N. Marianas (1 on Rota and 2 on Saipan, 5 Apr to 29 May 1982), Truk* (1 on Moen and 1 on Pata, 8-16 Apr 1984) (Fig. 1) , and Yap (four, 1-29 May 1984). In Micronesia, it has previously been recorded from these locales and Palau.

Figure 1. Intermediate Egret (center) with Cattle Egrets. Moen, Truk. 8 April 1984.

Photo by P. Pyle

Northern Pintail *(Anas acuta).* TRUK. Single adult drakes were observed in a fresh water pond on Romanum, 11 April 1984 (JE, DJ) and in a mangrove area near the north end of Uman on 26 April 1984 (PP). They were easily identified by the characteristic brown head and neck pattern and the distinct long-necked and pin-tailed appearance. We also recorded a drake in the N. Marianas (Tinian, 20 Apr 1982). Though reported before from Palau and the Marianas, this is the first record for Truk.

Oriental Pratincole *(Glareola maldivarum).* We recorded up to six individuals near the old airport on Yap*, 6-29 May 1984 (Fig. 2). A bird collected in June 1978 (Pratt and Bruner 1981) is the only other report of this species from Yap. It has also been recorded in Palau, Truk, and the Marshalls.

Figure 2. Oriental Pratincole. Yap. 15 May 1984.

Photo by P. Pyle

Black-bellied Plover *(Pluvialis squatarola).* We recorded this species in the N. Marianas (1 on Rota, 31 Mar 1982), Truk (1 on Uman and 1 on Pata, 7-17 Apr 1984) and Yap (two, 4 May 1984). Previous records exist for these groups, Palau, and the Marshalls.

Mongolian Plover *(Charadrius mongolus).* POHNPEI*. Two winter-plumaged birds were seen on the lagoon beaches of Parshaki Is., Ant Atoll on 26 June 1983 (PA, DJ, PP). The birds lacked complete chestbands and had indistinct brown upperparts, black eye lines and gray legs. They also had smaller bills than is typical of the similar Greater Sand-Plover (see below). We also observed Mongolian Plovers in the N. Marianas (6 on Rota and 6 on Saipan, 31 Mar to 15 May 1982), Truk* (16 on Moen, 1 on Dublon, 15 on Uman, and 8 on Onei, 27 Mar to 28 Apr 1984) and Yap* (one, 11-12 Aug 1983 and fifteen, 1-29 May 1984). Pohnpei is the only Micronesian group which lacked previous records.

Greater Sand-Plover *(Charadrius leschenaultii).* TRUK. Two individuals were recorded in a mangrove area near the west end of Onei on 16 April 1984 (JE, PP). They were easily separated from adjacent Mongolian Plovers by larger size, longer and brighter yellow legs, and larger and distinctly-shaped (narrower in the middle) bills. In addition, the plumage features seemed "cleaner" especially about the head, and the call notes were distinct, being a dry turnstone-like "rattle" as opposed to the higher-pitched and shorter "twitters" frequently given by the Mongolian Plovers. We also recorded two individuals near the old airport on Yap*, 1-20 May 1984 (Fig. 3). In Micronesia, this species has been previously recorded from Palau, Yap, the Marianas, and Kosrae.

Figure 3. Greater Sand-Plover (left) with Mongolian Plovers. Yap. 20 May 1984.

Common Redshank *(Tringa totanus).* Two individuals were recorded on Yap*, 11-12 Aug 1983. The species has been previously noted here and in Palau.

Common Greenshank *(Tringa nebularia).* While on Yap*, we recorded three individuals of this species throughout May 1984. Previous records exist from Palau, Yap, the Marianas, and Truk.

Marsh Sandpiper *(Tringa stagnatilis).* TRUK* and YAP. On Truk, two winter-plumaged birds were observed on Moen from 26 March to 29 April 1984, one frequenting the airport runway and the other, a small muddy area in Pou bay near the high school. The latter bird was joined by a third bird in breeding plumage on 28 April (JE, DJ, JM, PP). On Yap, an individual in breeding plumage was recorded near the old airport from 28 April to 1 May 1984 (JE, DJ, JM, PP). Identifying characteristics included long, greenish legs and thin, black bill; mostly white tail and white triangle up the back; and call note, a high-pitched and sharp "tchew-tchew-tchew." The winter-plumaged birds were very pale, with darker wings. The breeding-plumaged birds had grayer backs and fine streaking on the upper breasts. This species has been reported previously in Palau and the Marianas; these are the first records for Truk and Yap.

Wood Sandpiper *(Tringa glareola).* TRUK. Three birds were noted in the antenna field adjacent to the airport on Moen on 30 March 1984 (JE, DJ, JM, PP). They were medium-sized and had dark gray upperparts with white speckling, white eye rings and white rumps in flight. Their distinctive "jif-jif-jif" calls were heard as they circled the field after being flushed. We also recorded this species in the N. Marianas (9 on Tinian, 24 Apr to 1 May 1982) and Yap (five, 11-12 Aug 1983 and six, 28 Apr to 10 May 1984). Though previously recorded from Palau, Yap and the Marianas, this is the first report from Truk.

Terek Sandpiper *(Xenus cinereus).* YAP*. An individual was observed near the mouth of Colonia Harbor on 13-16 May 1984 (JE, DJ, JM, PP). The longish, up-turned bill; short, bright yellow legs; plain, gray upperparts; wide, white trailing edge to the wings in flight; and active feeding behavior were observed and are diagnostic for this species. It has been reported before from Palau and the Marianas; this is the first record from Yap.

Bristle-thighed Curlew *(Numenius tahitiensis).* Bristle-thighed Curlews were observed on Wolauna Island, Ant Atoll, Pohnpei* (two, 12 Jun 1982 and three, 25 Jun 1983), and in Truk* (2 on Moen, 23 Mar to 10 Apr 1984). The species has been recorded previously from both locales and throughout most of Micronesia.

Far Eastern Curlew *(Numenius madagascariensis).* TRUK* and YAP*. This species was recorded near the mouth of Colonia Harbor (one bird) and at the airport (two birds), Yap, on 12-13 August 1983 (JE, FR). On Truk, an individual was observed in a mangrove area near the north end of Uman on 7 and 26 April 1984 (JE, DJ, JM, PP). The birds were identified by their large size; uniform brown coloration of the head, back, underwings and tail; very long and decurved bills; and husky "cur-lew" call notes. Though recorded previously from Palau and the Marianas, these are the first observations from Truk and Yap.

Black-tailed Godwit *(Limosa limosa).* TRUK. An emaciated individual was observed in a mangrove area near the north end of Uman on 7 April 1984 (JE, PP). It had plain gray upperparts and, in flight, bold white wing stripes and a white rump with a broad, black, terminal tail band. It also had white underwing linings, which rules out the similar Hudsonian Godwit *(L. haemastica).* We also recorded a bird at Okat Harbor, Kosrae* throughout most of July 1983 (Fig. 4). In Micronesia, this species is known from Palau, Yap, Guam, and Kosrae. This is the first report for Truk.

Figure 4. Black-tailed Godwit. Okat Harbor, Kosrae. July 1983.

Bar-tailed Godwit *(Limosa lapponica).* This trans-pacific migrant has been recorded throughout the islands of the Central Pacific. We observed them on Kosrae (three, through July 1983) and Truk (3 on Moen, 5 on Uman, 1 on Onei, 3 flying between Pata and Polle, and 1 on Udot, 26 Mar to 26 Apr 1984).

Great Knot *(Calidris tenuirostris).* TRUK. An individual was noted in a mangrove area near the north end of Uman on 7 April 1984 (JE, PP). It was identified by its relatively large and chunky size, long bill, scaled gray and white upperpart plumage, white rump in flight, and heavy, splotchy streaking to the upper breast. In Micronesia, it was previously recorded only from Palau.

Sanderling *(Calidris alba).* POHNPEI* and TRUK. Sanderlings were recorded on Wolauna Island, Ant Atoll, Pohnpei on 25 June 1983 (2 birds; PA, JE, DJ, PP) and on a sand spit at the north end of Siis, Truk on 25 April 1984 (JM, PP). All birds were in winter plumage; we noted the stocky proportions, white plumage features, and black shoulder patches. We also found a summer plumaged bird at Okat Harbor, Kosrae, on 1 July 1983. Pohnpei and Truk were the only Micronesian groups lacking previous records.

Rufous-necked Stint *(Calidris ruficollis).* TRUK*. We recorded 14 individuals of this species in Truk: 10 on Uman, 3 on Onei, and 1 on Pata, from 7-26 April 1984 (JE, DJ, JM, PP). Many were entering breeding plumage, and these were easily separated from other stint species by the rufous wash present on the throat, neck, and upper breast. Birds in winter plumage were carefully distinguished from the similar Little Stint *(C. minuta)* by their stouter proportions, shorter and stouter bills, and high-pitched call notes. Up to 33 Rufous-necked Stints were also observed near the old airport and elsewhere on Yap* throughout May 1984. This species has been recorded from Palau, the Marianas, and Yap. This is the first record for Truk.

Long-toed Stint *(Calidris subminuta).* TRUK* and YAP*. Three individuals were found on Truk: 2 around the airport on Moen and 1 near the north end of Uman, 31 March to 26 April 1984 (JE, DJ, JM, PP). On Yap, up to 3 individuals frequented ponds near the old airport, 28 April to 17 May 1984 (JE, DJ, JM, PP). The birds had slender proportions for stints, yellow legs, and brown upperpart coloration with slightly redder caps and distinct patterning of the scapulars. The combination of these features eliminates all other small sandpipers. Previously reported from Palau and the Marianas, these are the first records for Truk and Yap.

Pectoral Sandpiper *(Calidris melanotos).* NORTHERN MARIANAS. A bird was observed around cattle ponds in the Carolinas District, Tinian on 27 April 1982 (CA, PA, JE, PP). The medium size and erect posture; brown, scaly upperparts lacking rufous; densely streaked upper breast abruptly ending in the pectoral region; and yellow legs were observed and eliminate all other species. We also observed a Pectoral Sandpiper in the Madolenihmw District, Pohnpei, on 29 May 1983. In Micronesia, this species has been previously reported from Palau, Pohnpei, and the Marshalls.

Sharp-tailed Sandpiper *(Calidris acuminata).* This species has been recorded in all Micronesian groups. We observed them in the N. Marianas (1 on Rota, 20 April 1982), Truk (8 on Moen, 6 on Uman, 3 on Onei; 30 Mar to 26 April 1984), and Yap (four, 28 April to 20 May 1984).

Curlew Sandpiper *(Calidris ferruginea).* YAP*. One bird was seen at the antenna field near the old airport on 11-12 August 1983 (JE, FR). The relatively long, decurved, black bill and medium size were noted. The bird was an adult and still retained portions of its summer breeding plumage, notably, reddish splotches on the head, neck and breast. The combination of these characters is distinctive. In Micronesia, this species has previously been recorded only from Palau.

Buff-breasted Sandpiper *(Tryngites subruficollis).* POHNPEI*. One individual was present on recently burned, open fields near Kolonia from 10-13 May 1983 (JE, MM). Field traits included rich brown upperparts, the feathers distinctly edged with buff; uniform buffy head (including cap), neck and breast; buffy belly, somewhat paler than the breast; relatively short, dark bill; and yellow legs. In flight, the upperparts were all dark, with no white pattern on the wing or tail; the underwings were white with black marks near the elbows. The bird was smaller and more slender than the Lesser Golden-Plovers *(Pluvialis dominica)* with which it associated. The Buff-breasted Sandpiper is a Nearctic species and a vagrant in Micronesia. It has previously been recorded here only in the Marshalls.

Ruff *(Philomachus pugnax).* TRUK*. A female was observed in the vicinity of the airport on Moen, 24 March to 20 April 1984 (JE, DJ, JM, PP). Its medium size; longish, straight bill; brown upperparts with two white ovals on the sides of the rump in flight; and distinctive, short-necked posture were noted. Ruffs have been recorded in Palau and the Marianas. This is the first record from Truk.

Swinhoe's Snipe *(Gallinago megala).* TRUK* and YAP. Snipes carefully identified as this species were recorded in the antenna field adjacent to the airport, Moen, Truk on 26-30 March 1984 (JE, DJ, JM, PP) and near the old airport on Yap, 1 May 1984 (JE, DJ, JM, PP). The birds were large; lacked white in the trailing edge of the wings; had dark and distinctly patterned upperpart plumage features; flew with a direct and "heavy" flight; and gave distinct, relatively high-pitched call notes transcribed "tsaayp." The lack of white in the trailing edge and straight flight pattern rule out Common *(G. gallinago)* and Latham's *(G. hardwickii)* Snipes, and we feel the call notes, heaviness of flight and distinct back patterning eliminates the very similar Pintail Snipe (see below). We also identified Swinhoe's Snipes, using the same criteria, in the N. Marianas (2 on Tinian, 29 Apr to 9 May 1982). Records of this species exist from Palau and the Marianas. These are the first records for Truk and Yap.

Pintail Snipe *(Gallinago stenura).* NORTHERN MARIANAS (Hypothetical). Snipes hypothetically identified as this species were studied in the Pontan-Asufani District, Rota, on 1-5 April 1982 (2 birds) and in a cattle pond of the Mogoyo District, Tinian, on 4 May 1982 (CA, PA, JE, PP). The birds lacked a white trailing edge on the wings and flew straight and direct. Weaker call notes, transcribed "scaauh;" "lighter" and more rapid flight behavior; and paler, less distinct upperpart patterning were field characteristics noted and used to separate these from the Swinhoe's Snipe, which was seen during the same week as the 4 May bird (Pyle and Ashman unpublished ms.). Pintail Snipe has yet to be confirmed in Micronesia, but has been recorded on Kure in the Hawaiian Islands (Clapp and Woodward 1968).

Franklin's Gull *(Larus pipixcan).* TRUK*. A bird in adult plumage was seen at Moen Harbor on 2-4 August 1983 (JE, FR) (Fig. 5). Clearly seen were the black head, uniform gray upperparts with a white trailing edge on the wings, dusky red bill, and black feet. The wing-tips were white with a subterminal black band. These features eliminate several similar species. The Franklin's Gull, a vagrant from the Americas, has been recorded once in Micronesia, in 1976 in the Marshalls (Anderson 1978). The present record extends the known westward occurrence of the species here by nearly 2,000 km.

Figure 5. Franklin's Gull. Moen, Truk. 2 August 1983.
Photo by Fred Ramsey

Common Tern *(Sterna hirundo).* TRUK and YAP*. Individuals were noted off Fefan, Truk, on 4 April 1984 (JE, PP) and around Colonia Harbor, Yap, 2-28 May 1984 (JE, DJ, JM, PP). The birds were medium-sized and had angular wings and deeply-forked tails, as is typical of the genus *Sterna.* They had opaque gray backs and upperwings, relatively large black bills and legs, and indistinctly defined black borders to the tips of the underwings. The Yap bird, which was often observed plunge-diving for food, also had black shoulder patches indicating a first year individual. These traits eliminate all other tern species including the Black-naped *(S. sumatrana),* Arctic *(S. paradisaea),* and Roseate *(S. dougallii)* Terns. In Micronesia, records of Common Tern exist from Palau and the Marianas. These records are the first for Truk and Yap.

Little Tern *(Sterna albifrons).* TRUK. Individuals of this species were observed feeding off Fefan on 4 April 1984 and off Polle on 18 April 1984 (JE, DJ, JM, PP). They were identified by their small size and distinctive short-winged shape, diving feeding behavior, and white rumps and tails. The latter feature was used to separate them from the very similar Least Tern *(S. antillarum).* In Micronesia, Little Terns have been recorded from Palau, the Marianas, and Pohnpei, and Hayes (1985) records this species or Least Tern from Kosrae. This observation is the first from Truk.

Rock Dove *(Columba livia).* POHNPEI and TRUK. Small groups of pigeons were observed around Kolonia, Pohnpei in July 1981 and in May-June 1983, and near the Continental Hotel, Moen, Truk in March-April 1984 (PA, JE, DJ, JM, PP). The birds were free-flying but were probably domestic, as they seemed to rely on humans for food. Residents at both locales informed us that increasing numbers of this species were being kept as pets, and wild populations may eventually become established. This is the first time Rock Doves have been reported from either group, though they have evidently been kept as pets on these islands in the past (R. Owen, pers. comm.).

Long-tailed Cuckoo *(Eudynamys taitensis).* This migrant from New Zealand has been recorded in all Micronesian groups except the Marianas. We recorded them on Kosrae (three, 6-26 Jul 1983), Pohnpei (one, 1 Jul 1981), and Truk (1 on South Tol and 1 on North Tol, 13-15 Apr 1984).

Short-eared Owl *(Asio flammeus).* YAP (Hypothetical). On 12 May 1984, on Gagil-Tomil, we found an owl pellet on the ground in open savanna. The pellet contained fur and bones of a rodent and measured 50 × 30 × 30 mm. In years past, there have been reports of an occasional owl on the island (M. Falanruw, pers. comm.), and there are indeed several species of Asiatic owls that could reach Yap. A likely candidate is the Short-eared Owl, a savanna or grassland species which is recorded as a migrant in the Marianas and the Philippines. Based on the habitat in which the pellet was found and the size of the pellet, we have hypothetically identified the owl as a Short-eared Owl.

Barn Swallow *(Hirundo rustica).* Two birds were recorded near the Yap airport, 12-13 August 1983. The species has previously been reported from all Micronesian groups except Kosrae.

Great Reed-Warbler *(Acrocephalus arundinaceus).* PALAU (Hypothetical). A large reed-warbler was heard and observed in a vacant lot of a residential area of Koror on 21 December 1977 (JE). The bird voiced a loud and continuous song similar to the song of the Nightingale Reed Warbler *(A. luscinia)* found in other parts of Micronesia. The bird was secretive and remained within coarse, tall grass; it was briefly attracted into the open by squeaking noises. The upperparts were a buffy-brown, and the underparts were a pale buff. No distinct markings were noticed. Based on its size, song, and color, the individual was identified as a Great Reed-Warbler, a common migrant to Japan and the Philippines. However, there are several similar species, all unfamiliar to the observer, which could reach the Western Carolines as migrants, for example, the Thick-billed Reed Warbler *(A. aedon)* or the Clamorous Reed-Warbler *(A. stentoreus).* Thus, this remains a hypothetical record.

Eurasian Tree Sparrow *(Passer montanus).* YAP*. On 9-12 August 1983, several small flocks were noted in the town of Colonia, and two to four birds were seen in the antenna field near the airport (JE, FR). At least this many were noted again in May 1984 (JE, DJ, JM, PP). They showed the rusty cap and black ear mark that separates this species from the similar House Sparrow *(P. domesticus).* Evidence of breeding (young begging from parents) was noted on both occasions, indicating an established and possibly growing population. This species has become established in Micronesia in the Marianas and Marshalls. Its introduction to Yap is apparently recent, as it was not recorded in 1976 by Pratt *et al.* (1977).

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Parakeet Auklet at Midway Atoll

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On Sand Is., Midway Atoll, on 21 February 1985, I found a dead Parakeet Auklet *(Cyclorrhynchus psittacula)* on the beach near the old "O" Club. It was partially decomposed, and thus we prepared it as a complete skeleton (LACM Catalogue #102, 667). The ovary measured 4 × 3 mm and was smooth with no follicles differentiated. The culmen measured 15.9 mm; the unflattened wing, 150 mm; the tarsus, 28.0 mm; and the tail, 47 mm. The plumage was fresh, and no feathers were molting. The specimen was emaciated, and the stomach contained 70 rounded discs about 5-7 mm by 2-3 mm. Several were volcanic rock, several were fish intervetebral discs or vertebrae, and the remainder were a plastic-gooey material that flamed and melted when ignited. Fisher (Condor 67:357, 1965) reported two dead Parakeet Aulkets on Midway in late January 1963 after severe storms, and C.S. Robbins reports finding 3 specimens on Midway in the winter of 1962-63, which are in the US National Museum (pers. comm. to R.L. Pyle). Four dead Parakeet Auklets were found in February-March 1980 on Midway and Kure Atolls (Grant and Pettit, 'Elepaio 41:84, 1981) and one on Midway in March 1981 (Grant and Pettit, 'Elepaio 43:3, 1983). Maura Naughton (American Birds 37:342, 1983) found six of these auklets on Midway in February 1983. The species appears to occur in small numbers, but fairly regularly, on Midway. Parakeet Auklets breed in Alaskan and Siberian waters, but their wintering distribution at sea in the central-north Pacific remains unknown. Are Parakeet Auklets becoming more common on Midway, or are ornithologists more common and more aware of finding specimens?

Natural History Museum, 900 Exposition Blvd., Los Angeles, California 90007.

CONSERVATION NEWS

PALILA WINS MAJOR COURT VICTORY

Editors' note: the following article was paraphrased from the December 1986 issue of the Audubon Leader, *Western Region and a report by Wayne C. Gagne to the Sierra Club.*

In a major victory for the endangered Palila,an endemic Hawaiian honeycreeper now found only on the upper slopes of Mauna Kea on the island of Hawaii, federal judge Judge Samuel P. King ruled that a species of introduced sheep was destroying vegetation that provided critical habitat for the Palila and ordered the sheep population removed.

The dispute over the Palila pitted conservation interests including the Hawaii Audubon Society, the National Audubon Society, and the Sierra Club Legal Defense Fund against the Hawaii Department of Land and Natural Resources, which asserted that both mouflon sheep valued for sport hunting and Palila can coexist on Mauna Kea. Judge King ruled that such a multiple-use approach was clearly inappropriate in this case.

This decision will be officially recorded in the developing case law for federal endangered species and will serve as an important precedent for similar cases in Hawaii and elsewhere. Of particular importance is Judge King's interpretation that "harm" to an endangered species does not require the death of or injury to individual members of the species, or even the present decline of the population--degradation of habitat that prevents the species as a whole from recovering is sufficient to constitute "harm."

In passing the Endangered Species Act the judge noted it was "beyond doubt that Congress was aware that the primary threat to endangered species was destruction of habitat. Thus one of the main purposes of the Act was conservation and preservation of the ecosystem upon which endangered species depend. It is clear, then, that Congress intended to prohibit habitat destruction that harms an endangered species."

The court order requiring removal of mouflon sheep will be combined with an earlier decision also involving the Palila and other introduced grazing animals, the feral goat and feral domestic sheep. Goats on Mauna Kea also had jeopardized the Palila and sheep are being removed via court order. Mouflon sheep were excluded from the previous court action because of insufficient field research implicating their possible role in Palila habitat loss.

At present there are approximately 2200 Palila in existence. The species depends totally on the mamane and mamane-naio forests for its existence. It feeds on the pods, flowers, buds, and leaves of the mamane, and the berries of the naio tree. The bird also depends on the mamane for shelter and nesting sites.

The species was first discovered in 1876. Once common on the Big Island,its range was reduced through habitat destruction by grazing animals and other factors, possibly avian disease. It is now largely restricted to a forest area less than 5 square miles in size.

Once the DLNR signs the Judgement and Order to remove Mouflon Sheep from the Critical Habitat of the Palila on Mauna Kea, they will have about a month to decide whether to approach the Ninth Circuit Court of Appeals to try to get the ruling reversed. If the past victory on behalf of the Palila is any guide, their chances would appear slim indeed.

MOVEMENTS OF SNAKES VIA CARGO IN THE PACIFIC REGION

The Brown Tree Snake *(Boiga irregularis)* from the Papua New Guinea and northern Melanesian region of the Pacific has reached high population levels and become a harmful introduced pest species on Guam since the early 1950s. On Guam the snakes have virtually eliminated the native bird fauna, invaded urban and natural habitats, and caused frequent power outages by shorting high voltage electrical lines.

The possibility that the Brown Tree Snake will ultimately colonize other Pacific Islands just as it has Guam is related to a variety of factors. Among these are: the high populations of the snake in Guam; the occurrence of snakes in urban areas, military installations, cargo dispatch areas, aircraft maintenance areas, and maritime port facilities; the volume of air and ship traffic from Guam to other islands lacking snakes but with comparable climates; and the complexity of communicating the risk to the large numbers of people shipping, handling, inspecting and receiving materials from Guam.

Although no exhaustive search for records of snakes moving in cargo from Guam or other tropical areas has been possible, several incidents are known that point to the high probability that snakes will disperse from Guam to other islands where the Brown Tree Snake could produce damages similar to those known in Guam.

The Brown Tree Snake is a good colonizer with the help of man. As a nocturnal snake, it hides during the day in nearly any structure that affords protection from bright sunlight and high daytime temperatures and can be carried onto ships and airplanes as a passive stowaway in cargo. It is capable of surviving long periods without food and thrives in disturbed and urban habitats not tolerated by many snake species. The following examples illustrate the tendancy of the Brown Tree Snake and other snakes to arrive on islands as a result of civilian and military traffic between islands.

Guam--The Brown Tree Snake was first reported in Guam in the early 1950s (Savidge, J. A. In press. Ecology) and probably arrived in military ship cargo. Transportation of surplus government property to Guam from the Papua New Guinea area where the snake is native was common for several years after World War II.

Wake Island--A Brown Tree Snake was discovered near a naval facility on Wake Island in post war years (Bryan, E. H., Jr. 1959, Atoll Research Bulletin 66:1-22). Ship traffic supplied the Wake Island military facilities at that time, and the snake was likely in materials from a ship returning from the South Pacific.

Pohnpei Island, Federated States of Micronesia--In August or September 1986, a snake ulimately identified as *Lycodon auliculus,* rear-fanged colubrid snake, was killed and preserved after being discovered in a shipment of lumber delivered to Pohnpei by ship. The lumber had originated in the Philippine Islands but was transhipped via Guam where it was held for at least three weeks. Although the possibility existed that this snake entered the lumber in Guam, the identification of it as a species native to the Philippine Islands strongly suggests that the snake originated from the point where the lumber was shipped in the Philippines and remained in the cargo while it was on land in Guam.

Saipan, Commonwealth of the Northern Mariana Islands (CNMI)--An unidentified snake was observed at night on the commercial dock (Charlie Dock) in June 1986. The snake was seen near a stack of used wooden utility poles recently off-loaded from the ship *Tumon*, which hauls small cargo from Guam to the CNMI. The snake eluded capture despite an extensive search of the area and adjacent warehouse facility.

Diego Garcia, Indian Ocean--A report exists of a Brown Tree Snake being discovered onboard a supply ship as it came to anchor off the Island of Diego Garcia. Diego Garcia is an important military base in the Indian Ocean area, and a possibility exists of transhipment of the snake in Naval cargo from Guam.

Submarine Tender *Proteus* in transit between Guam and the Philippine Islands--A snake tentatively identified as a Habu *(Trimeresurus)* was discovered in the machine shop on board ship on 17 February 1986. This venomous genus is unknown on Guam but is extremely common in Okinawa. Although other species of the genus occur in forested areas of the Philippines, the specimen in question is much more likely to have originated in Okinawa.

Records of Snakes in Hawaii

The State of Hawaii, Department of Agriculture, Plant Quarantine Branch is responsible for inspecting for snakes and investigating reports of snakes arriving or discovered in the state. Hawaii has no native snakes,

and has strict regulations and active programs to prevent the arrival of snakes. During a visit to Dr. Stan Higa's office in Honolulu, Ernest Kosaka and I discussed recent snake sightings with Dr. Higa and other plant quarantine personnel, examined several specimens of interest, and recorded information on selected snakes which appeared to be associated with military or civilian transportation facilities. Examples exist of venomous snakes arriving in Hawaii and, in at least two cases, the snakes were identified as the Brown Tree Snake which may be particularly suited for colonizing other Pacific Islands. Among the records and specimens examined were the following:

Boiga irregularis (Brown Tree Snake)--This snake was found on Hickam AFB by a stream in back of Building 3242 (Transit Maintenance) by Mr. Mato, Entomology Shop, 15th CES Hickam AFB on 5 May 1986. Since flights arrive from Guam nearly daily and Guam represents the only island having both an Air Force Base and Brown Tree Snakes, a high probability exists that this specimen arrived from Guam on a military aircraft.

Boiga irregularis (Brown Tree Snake)--This juvenile specimen was found in the customs area of Honolulu Airport in April 1981. It was originally labeled as *Boiga kraepelini* but the specimen is indistinguishable from specimens of the Brown Tree Snake found on Guam.

Spalerosophis diadema (no common name)--This nonvenomous colubrid snake native to India was found dead on 15 July 1986 at Matson Container Yard (Matson Navigation Co.) by A. Damaso, an employee, on Sand Island P-51. It was originally identified as *Boiga irregularis* by the Honolulu Zoo, but I was able to correctly identify the specimen after borrowing it for detailed examination.

Boa constrictor (Common Boa Constrictor)--This juvenile specimen was found in a wheel well of an aircraft on Hickam AFB on 6 March 1979. The plane was reported to have arrived from Acapulco, Mexico.

Python molurus (Indian python)--The snake was in air cargo on 10 October 1976 and probably originated in Bangkok, Thailand.

Bungarus fasciatus (Banded Krait)--This venomous snake was in the cargo pit of aircraft, date unknown. The presence of a Banded Krait in extralimital situations is important because of the seriousness of the bite to humans.

Conclusions

The tendancy for snakes to successfully hide in cargo, survive transport over long distances, and be discovered on extralimital islands is illustrated by examples from the Pacific region. In comparison to many Pacific Island governments, the State of Hawaii is better prepared to prevent the successful colonization of its islands by exotic snakes. Hawaii has a law specifically prohibiting the importation or possession of snakes without permit, and has designated the Plant Quarantine Branch of the Department of Agriculture to inspect for snakes and respond to sightings. However, there is a need for commercial and military transportation personnel, cargo handlers and the general public to be aware of the threats posed by exotic animals to Pacific Island environments and life styles. Better methods of detecting and capturing snakes in areas where they already occur are needed to prevent their entrance into cargo and transportation facilities from which they could establish additional extralimital populations.

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HAS GRANTS AND SCHOLARSHIP AWARDED

The Hawaii Audubon Society annually awards a natural history undergraduate scholarship and several research grants. The $1,000 Tuition Scholarship is provided to lend financial assistance to outstanding undergraduate students majoring in natural science, especially those interested in Hawaiian natural history. Research grants are awarded to aid research projects on Hawaiian or Pacific natural history. Grants are aimed at small scale projects or projects that receive funding from sources other than the Society; these grants generally do not exceed $500.

The recipient of the undergraduate scholarship for the 1987 spring term is Carl McIntosh, a senior at the University of Hawaii Manoa campus. Over the last several years Mr. McIntosh has contributed much time and effort to various research and conservation projects, and he came highly recommended as a recipient of the scholarship.

Three research grants were awarded in January 1987: Ann Marshall, Ph.D. candidate at Ohio State University; Doug Woodby, Ph.D. candidate at University of California Santa Barbara; and Dr. Michael Hadfield, Professor of Zoology at the University of Hawaii.
Ms. Marshall is studying the reproductive behavior of the endangered Laysan Duck, a species endemic to Laysan Island. With the completion of her study it is hoped that better management techniques can be developed for this resource. Mr. Woodby plans to conduct research that will assess the impact of predation by introduced rats on the viability of populations of Bonin Petrels at Midway Atoll. Observations of breeding success of petrels subject to predation will be made, and a simulation computer model of the population dynamics will be developed.
Dr. Hadfield is conducting a long-term study of endangered Hawaiian tree snails, genus *Achatinella*. The work proposed is a continuation of field studies begun in 1983 on Molokai and Oahu and is aimed at determining what life history characteristics underlie the high extinction rates for this subfamily.

The HAS congratulates the above recipients and hopes that their efforts will aid in the conservation and preservation of the unique natural resources of the Pacific.

The HAS Awards Committee is presently accepting applications for the 1987-1988 Tuition Scholarship and for research grants. The application deadline for the scholarship in the 1987-1988 school year is June 1. The deadline for grants to be awarded in summer and fall 1987 is April 1. For information and application forms, write or call John Engbring, Awards Committee, P.O. Box 4443, Honolulu, HI 96812: phone (business) 541-2759.

John Engbring

SCHOLARSHIP DONATED IN MEMORY OF CLARA GRENVILLE HATCH

This year again, the Hawaii Audubon Society was very fortunate to receive $1,000 from an anonymous donor to encourage undergraduate studies in natural history. The contribution was made in memory of Clara Grenville Hatch.

Grenville Hatch is known to Hawaii Audubon old-timers as a charter member of the Society, long-time editor of the *'Elepaio*, and librarian at Roosevelt High School, where she encouraged many young people to take an interest in natural history.

These funds will be applied to awards given by the Grants and Scholarship Commitee.

Donations such as this enable the Society to carry out its commitment to education and research within Hawaii. *Mahalo!* to our generous donor.

NOVEMBER 1986 PROGRAM

Our program speaker for the November meeting, Dr. Leonard Freed, was introduced by Peter Luscomb. Dr. Freed (Lenny to his friends) has taught vertebrate zoology at the University of Hawaii since 1983 and received his Ph. D. degree from the University of Iowa. His subject, enhanced by slides and charts, was "The Mating System of Tropical House Wrens." According to Dr. Freed, tropical wrens differ from wrens of the temperate zone in these major ways: (1) they lay fewer eggs per clutch; (2) they live as pairs and are non-migratory; and (3) females as well as males sing. In addition to fewer eggs per clutch, the incubation and fledgling periods are longer. Only the females incubate the eggs. Tropical wrens, barring the death of a mate, mate for life. Although House Wrens range from southern Canada to Tierra del Fuego, Freed's area of study for tropical wrens was the Republic of Panama. The study area was limited to 140 hectares, with nest boxes (preferred by the wrens) spread throughout the area.

Shady meadows are the preferred habitat. Wasps also used these nesting boxes. Ants were predators in consuming both eggs and nestling wrens, as well as the wasps.

Wrens are born naked following 14 days of incubation. Subsequently, they remain in the nest for 19 days as nestlings and require 27 days for fledgling. The usual clutch of 3 eggs is laid on successive days, and egg-laying may overlap the previous fledgling stage. The nesting season is considered to be from April to October, the wet season, and there may be three consecutive successful clutches. Not all tropical wrens reproduce in the dry season, but do so during the wet season.

Dr. Freed determined that a mist net was the best means of capture, and he used different colored bands to show year of birth. He also found wrens were permanently monogamous, as when one was caught, it almost invariably was followed by its mate. A new male or female in a pair's territory was the primary cause of nestling mortality. A replacement male will mate with the resident female and

breed anew. "Floating males" may kill eggs and nestlings, mate with the female, then go on to another territory and nest, and may continue in more than one take over. Most "floaters" are males, resulting in bigamy of females.

Freed did not find single males unmated and trying to attract females in the tropical wrens as compared with temperate zone wrens. Females can breed 90 days after leaving a nest; 50% breed during one season; 25% during a 2nd season, but only a small fraction live as long as 5 years. Two years or so is more typical.

Betty L. Johnson

DECEMBER 1986 PROGRAM

Peter Luscomb introduced our December speaker, Dr. Sheila Conant, who spoke on "Geographic Variation in Laysan Finches," illustrated with slides and charts. Sheila was born and grew up in the Hawaiian Islands, attended the University of Hawaii, and recieved her Ph. D. from Oklahoma University. For her research, she has concentrated on the Northwest Islands of the Hawaiian chain.

Biologists and conservationists are both interested in variations within a species for several reasons: (1) are variations genetically based? (2) did environment cause geographic variation? (3) is it "genetic drift"- the genetic outcome when a population is reduced to very small numbers (say 10 females)?

The Laysan Finch *(Telespyza cantans)* is endemic to Laysan Island, only one and one-half square miles. Ordinarily 18 species of sea birds also breed here. Originally guano-rock was collected and shipped commercially, as well as albatross eggs. Introduced rabbits defoliated grass and other vegetation, causing three birds to become extinct: the Millerbird, Laysan Rail, and Laysan Honeycreeper. Laysan Ducks still exist in small numbers (100-500) and are very tame. Hawaiian monk seals and green sea turtles are other endangered species on the Northwest Hawaiian Islands.

The campsite on Laysan has tents which may be occupied as long as 6 months. Marie Morin lived there for that length of time studying finches. Introduced in 1967 to Pearl and Hermes Reef, Laysan Finches there may now have differentiated morphologically from finches on Laysan. Pearl and Hermes Reef has less than 50 acres suitable for finch habitat, while Laysan has a total of 450 acres suitable for finches. Sharks are a hazard, so swimming is safe only in the lagoon. A big pod of porpoise swim off Pearl and Hermes Reef along with turtles and monk seals.

Laysan Finches are very curious and friendly, so readily become tame, becoming "camp followers" as they are fed by campers, a practice to be discouraged. Immature finches are streaked all over, but females are paler in streaking. Third-year plumage marks an adult, which can breed at one year of age. Many different measurements are taken of bill length and width, weight of bird, and wing length, among other statistics. The Laysan Finch was compared with its near relative the Nihoa Finch. The Laysan can raise two broods a year, with 5 eggs the maximum clutch size.

Living conditions on these small islands are limited and rugged; water must be brought in as well as all food (hunting is not permitted), and camping, other than overnight, is limited to 2-6 persons for 6 months. Sheila's presentation was enlivened by maps of the islands and reefs described, slides of the Laysan Finch, and interesting shots of monk seals and green sea turtles. There were also humorous ones of the Laysan "yacht club" and social activities taken during Sheila's 4 recent trips there. A question and answer period followed.

Betty L. Johnson

HAWAII AUDUBON SOCIETY'S HAWAIIAN WILDLIFE PHOTO/ART EXHIBIT

The Hawaiian Wildlife Photo/Art Exhibit will run through the month of March in the exhibit room at Hoomaluhia Botanic Garden in Kaneohe. Entries will be received on Saturday, 21 February 1987 and Sunday, 22 February 1987 from 9:00 AM to 3:00 PM in the exhibit room at Hoomaluhia. The reception will be held on Sunday, 1 March from 4:00 to 6:00 PM.

Participants must be Hawaii Audubon Society members or become HAS members at the time the work is submitted (membership and entry forms will be available.)

GUIDELINES: Subject matter should pertain to plants, animals, scenery or people and nature in Hawaii. There will be a $3 donation per piece to help pay for exhibition costs and awards, and a 6-piece maximum per person. There are no size restrictions; however, all participants will be required to have their pieces framed or neatly presented (pieces will be exhibited as they are submitted). Pieces must be picked up from 1 April to 8 April at Hoomaluhia.

Awards will be provided by the following stores: The Frame Shack, Light Incorporated, and Hawaiian Graphics.

For more informaiton call: Patric Ching 839-2866 or Bruce Eilerts 941-5974.

HAVE YOU BEEN HIKING IN THE WAIANAES?

Have you seen or made collections of rare plants in the Waianae Mountains?

If so, The Nature Conservancy's Hawaii Heritage Program would like to talk to you. We are updating collection information on rare plants in the Waianaes for a contract we are currently working on. We would particularly like to receive information on observations or collections made in the last 5 years.

Please call Christa Russell or Audrey Newman at the Nature Conservancy's office (537-4508) (Mon.-Sat.), or leave a message if we are not in.

KE KUKUI O MOANALUA

Moanalua Gardens Foundation invites the general public to enjoy life in Hawai'i and learn more about its special places and people. The Foundation's Ke Kukui O Moanalua series of lectures and field trips begins in February and continues through June. There will be a visit to archaeological sites in Kailua and Waimanalo; an exploration of Waihee Stream, Spring Tunnel, and Waterfall; a hike in the Waianae Mountains to view Oahu's special geological formations; a visit to Manana Island (Rabbit Island); and a day trip to a West Maui Mountains cloud forest.

The prices for these lectures and field trips range from $6.00 to $120.00, with discounts for Foundation members. For more information and registration forms, call Moanalua Gardens Foundation at 839-5334.

SPEAKING OF PARROTS...

Last fall, a flock of 34 amazon parrots roosted in the Kapiolani Park area of Honolulu. They have since disappeared. The State Div. of Forestry and Wildlife is seeding information on the where-abouts of these birds, as well as other feral parrots on Oahu. Observers interested in reporting sightings are asked to call Thane Pratt or Ralph Saito at 548-8850. Thanks for your *Kokua!*

DONATIONS SOUGHT FOR 'ELEPAIO COMPUTER

For the past ten years, the newsletter portion of the *'Elepaio* has been typed out on the Society's IBM typewriter. This faithful machine has begun to falter in recent months. Rather than replace it with a newer model, the editorial committee has recommended, and the HAS Board has approved, the purchase of a computer, printer, and software appropriate for producing our journal. By entering the world of "desk top publishing," we hope to streamline the typing and layout while improving the style of the journal. The new machinery has been priced at $8,000. The Society is now soliciting donations to cover part or all of the purchase. If you would like to contribute towards this improvement of our journal, please send your donation to:

'Elepaio Fund
Hawaii Audubon Society
Box 22832
Honolulu, HI 96822

IMPORTANT NOTICE

This will be the last issue of *'Elepaio* sent to 1986 local members and subscribers who have not renewed for 1987. If you have not yet paid 1987 local dues, please send your $6 dues to the Society at the Post Office Box address.

This does not apply to joint members of the National Audubon and Hawaii Audubon Societies, who will receive separate renewal notices from the National Society when their Joint Memberships expire.

POSTCARDS AVAILABLE

Post cards of the Hawaiian Monk Seal hauled out alongside a Hawaiian Green (Sea) Turle are still for sale by the Hawaii Audubon Society. The cards come in packets of 50 and sell for $6.00 a packet. Please send requests and checks to:

Hawaii Audubon Postcards
c/o Marjorie F. Ziegler
45-636 Liula Place
Kaneohe, Hawaii 96744

FEBRUARY PROGRAM

Nature Conservancy's
Islands of Life Campaign

Alan Holt will discuss The Nature Conservancy's role in the conservation of Hawaii's ecosystems.

The Nature Conservancy of Hawaii is an affiliate of The Nature Conservancy, an international non-profit organization devoted to the protection of natural areas that best preserve the diversity of life on earth. The Hawaii office was established in 1980 by a group of concerned community, business, and scientific leaders. Some 3500 citizens, corporations, and foundations have joined together since then to help Hawaii raise more than 3 million dollars and protect more than 24,000 acres of habitat critical to the survival of 14 of Hawaii's endangered forest bird species and countless other native plants and animals.

The meeting will be held at 7:30 P.M. on Wednesday, 18 February 1987, at the McCully-Moiliili library.

FEBRUARY 1987 FIELD TRIP

Sunday, 15 February
Aiea Ridge Trail
Leaders: Bruce and Robin Eilerts, 941-5974

Starting from the easy Aiea Loop Trail, this ridge trail of intermediate difficulty runs to the Koolau Summit. There will be many interesting native plants and an opportunity to see 'Amakihi, 'Apapane, and possibly, 'I'iwi and 'Oahu Creeper. Meet at the State Library on Punchbowl Street at 7:30 AM or at the Aiea State Park upper parking lot at 8:15 AM. Bring sunscreen and rain gear, binoculars and a lunch. Call Bruce or Robin Eilerts at 941-5974 for further information.

ERRATA

Our apologies to Mae E. Mull for a typographical error in her article "Geothermal Energy Development on Big Island Conservation Lands" (*'Elepaio* 46:193-194). Omitted were two lines on page 194, middle of the first column, starting with the sentence: "In October 1986..." The correction should read: "In October 1986 both houses of Congress passed a bill approving the federal acquisition of Tract 22. President Reagan signed the bill into law before the month was out." Omitted section is underlined above.

HAWAII AUDUBON SOCIETY

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FREE ICE CREAM!

Will again be served to those volunteers who help with the typing, proof-reading, or paste-up of next month's *'Elepaio* at Thane Pratt's house, 1022 Prospect St. on Saturday, 22 February, at 1:00 PM. Phone 524-8464 for more information. Authors of articles, notices etc. must submit these by 15 February to be included in the March issue.

Many thanks to David McCauley for helping with the preparation of this issue.

'ELEPAIO

Editors	Thane Pratt	524-8464 (hm) 548-8850 (wk)
	Sheila Conant	948-8241 (wk)
Production	Robert Fleischer, Marie Morin, Robert Pyle	
Mailing	George Campbell, Susan Schenk, Alan Ziegler	

(NOTICE TO CONTRIBUTORS: The *'Elepaio* invites authors to submit scientific articles on natural history of Hawaii and the Pacific. Scientific articles are subject to peer review. The *'Elepaio* also serves as a newsletter to inform members of conservation issues, Society events, and other subjects of interest to members. Manuscripts of articles and newsletter items may be sent to Thane Pratt at 1022 Prospect St., Apt. 1103, Honolulu, HI 96822. Articles not subject to peer review MUST be received by the 15th of each month to be considered for publication in the next month's issue.)

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Life (payable in three equal annual installments)	150.00

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

CALENDAR OF EVENTS

Feb. 8 (Mon.) Board Meeting at Bishop Museum at 7:00 PM. Call Phil Bruner, 293-3820 (wk).

Feb. 15 (Sun.) Field Trip to Aiea Ridge Trail. Meet at State Library on Punchbowl St. at 7:30 AM. Announcement on page 22.

Feb. 18 (WEDS.) General Meeting at McCulley-Moiliili Library at 7:30 PM. Announcement on page 22.

Feb. 22 (Sat.) *'Elepaio* paste-up at Thane Pratt's house at 1:00 PM. Call 524-8464.

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