

NOTE

Recent Bird Records for the Southern Mariana Islands, with Notes on a Colony of Black Noddies on Cocos Island, Guam

GARY J. WILES, ROBERT E. BECK, JR., CELESTINO F. AGUON

Division of Aquatic and Wildlife Resources, P.O. Box 2950, Agana, Guam 96910

KENNETH D. ORCUTT

Marianas Audubon Society, P.O. Box 4425, Agana, Guam 96910

This paper documents noteworthy bird records, involving 28 species, for Guam, Rota and Saipan in the southern Mariana Islands of western Micronesia. Most are new records for the islands noted, or confirm earlier hypothetical records of a species for an island. One photographic record is provided to confirm a previous sight record. The following observers participated in sighting, recording, or evaluating the records: C. F. Aguon (CA), R. D. Anderson (RA), R. E. Ballard (BB), E. R. Beck (EB), R. E. Beck, Jr. (RB), T. Clements (TC), P. J. Conry (PC), R. Cruz (RC), R. E. David (RD), G. Davis (GD), R. Frew (RF), D. R. Herter (DH), D. S. Klotzback (SK), A. F. Maben (AM), R. E. Mumford, Jr. (RM), G. Neubauer (GN), K. D. Orcutt (KO), S. L. Pimm (SP), J. D. Reichel (JR), C. G. Rice (CR), M. W. Ritter (MR), R. H. Rons (HR), M. Santana-Bendix (MSB), D. W. Stinson (DS), T. Sutterfield (TSu), T. M. Sweet (TSw), G. J. Wiles (GW), G. J. Witteman (GWt), and E. Wood (EW). Agencies and institutions named in the text are abbreviated as follows: Guam Division of Aquatic and Wildlife Resources (GDAWR), Museum National d'Historie Naturelle (MNHP), and National Museum of Natural History (USNM).

Juan Fernandez Petrel (*Pterodroma externa*). A single live bird was found by W. Mendoza on a highway in Yigo, Guam at 0730 on 27 July 1992. It was emaciated and died the following day after being given to the GDAWR. The petrel was deposited in the USNM (USNM 597645), where it was distinguished from the similar White-necked Petrel (*P. cervicalis*) by the relatively small amount of white on the inner web of the central rectrix and by the dark brownish gray, rather than light gray as in *P. cervicalis*, coloring of the tips of the two outermost rectrices (R. Clapp, pers. comm.). The bird also featured a whitish band circling the back of the neck, which is a trait present on some individuals with worn plumage (King 1967, Harrison 1985, Spear et al. 1992). Other characters included a dark brown cap extending below the eye, a white forehead, and a heavy black bill. The back was dark grayish brown with many feathers having light gray fringes, while the upper wings were largely dark brown except for paler grayish brown

lesser and median wing coverts. The undersides of the abdomen and wings were mostly white aside from a small black mark at each wrist and a small dark gray extension of the mantle onto each side of the breast. Leg color was pink, and the feet and webbing were mostly black.

P. externa breeds in the Juan Fernandez Islands off Chile and disperses northward towards the middle latitudes of the north Pacific from May to November (Harrison 1985, Pratt et al. 1987, Kuroda 1991, Spear et al. 1992). This is the first record for western Micronesia, although it is possible that a few *P. externa* with pale collars, similar to this specimen, have been mistakenly included with records of *P. cervicalis* near the Mariana Islands (Tanaka & Inabi 1981).

Audubon's Shearwater (*Puffinus lherminieri*). Reichel & Glass (1991) considered Audubon's Shearwater to be a hypothetical visitor to Guam because of Safford's (1904) reference to a specimen (reported as *P. tenebrosus*) in the MNHP in Paris. We have checked with the museum and found that their only specimen of an Audubon's Shearwater from the Marianas is a bird (MNHP 5666) collected on Rota in 1888 by A. Marche (J.-F. Voisin, pers. comm.). A second label attached to this specimen identifies it as *P. obscurus* and gives only the name "Mariannes" as the collecting locality. This specimen is probably the source of Seale's (1901) record of this species (reported as *P. obscurus*) for the island chain. Safford (1904) perhaps mistakenly assumed from Seale (1901) that the bird was collected on Guam.

We are able to provide the first positive record of *P. lherminieri* for Guam, based on a dead bird (USNM 597584) recovered on a city street in Agana early on the morning of 9 March 1992 by KO. The bird was found at the bottom of a steep 25-m-tall hillside, where it may have attempted to roost during the previous night.

This small shearwater (total length = 330 mm) was separated from the similar Little Shearwater (*P. assimilis*), Fluttering Shearwater (*P. gavia*), and Hutton's Shearwater (*P. huttoni*) by measurements of culmen, tarsus, tail, and wing chord (R. B. Clapp, pers. comm.). The bird displayed dark brown feathering on the nape and upper half of the head extending to below the eye. Its back, upperwings, and tail were also entirely dark brown. The underparts and lower portion of the face were white, except for dark plumage indenting the sides of the breast and mottled brownish and white feathering on the undertail coverts. The bird's underwings were bright white bordered by fairly wide dark margins. Other features included a slender black bill, and legs and feet that were mostly pink with blackish outer sides.

Audubon's Shearwaters occur widely in tropical oceans, however, the species is rare and not known to nest in the Mariana Islands (Harrison 1985, Reichel & Glass 1991). Our bird was identified as belonging to the subspecies *P. l. bannermani* (R. B. Clapp, pers. comm.), which breeds in the Ogasawara (=Bonin) and Iwo (=Volcano) Islands to the north of the Marianas (Harrison 1985, Brazil 1991).

Red-tailed Tropicbird (*Phaethon rubricauda*). GW and CA observed a pair of Red-tailed Tropicbirds flying low over the strand forest on Cocos Island, Guam,

on 29 May 1992. The birds made a number of passes along the length of the island during a 45-minute period. Thin, elongated red tail feathers were visible on one individual, but were lacking on the second bird. Both birds had entirely white upperwings and backs, orange bills, and prominent black feet. The Red-tailed Tropicbirds gave distinctive calls and appeared larger and more robust in body and wing size than a White-tailed Tropicbird (*P. lepturus*) that flew by during our observations. On 21 April 1993, another pair of Red-tailed Tropicbirds was seen on the island (GW). This species ranges over large areas of the Pacific and Indian Oceans (Harrison 1985), including much of Micronesia (Pyle & Engbring 1985). Although Red-tailed Tropicbirds breed on nearby Rota and most other Mariana Islands (Reichel 1991, Reichel & Glass 1991), this is the first record of their occurrence on Guam.

Cormorant sp. (*Phalacrocorax* sp.). An unidentified cormorant was observed flying inland at Abo Cove between the entrances of U.S. Naval Station and Camp Covington in Santa Rita, Guam on 23 December 1989 (JR, DS, GW). The sighting occurred in poor light at dawn, but the bird was noted to have a distinctive cormorant-like flight profile and an entirely dark body. Based on geographic ranges and rare sightings in the tropical Pacific, the bird may have been a Great Cormorant (*P. carbo*), which has been recently recorded from Yap and Pagan (Wiles et al. 1987, Glass et al. 1990), or a Pelagic Cormorant (*P. pelagicus*), which is known from three records in the Northwestern Hawaiian Islands (Pratt et al. 1987; R. L. Pyle, pers. comm). Other candidate species of dark cormorants would include the Little Black Cormorant (*P. sulcirostris*) of Australasia and the Japanese Cormorant (*P. capillatus*) of eastern Asia.

Gray Heron (*Ardea cinerea*). A Gray Heron was recorded at the commercial fish ponds on both sides of the Agfayan River in Inarajan, Guam on 18, 21, and 24 December 1991 (GW, RB, KO, RF). In the initial observation, the bird was seen flying over the ponds. It was very large, about 1.5–2 times larger than a Pacific Reef-Heron (*Egretta sacra*) that flushed soon after, and had bicolored wings with dark gray outer flight feathers and pale gray upper wing coverts. Small bright white slashes were visible at each wrist. The rest of the body was grayish in appearance and the legs were dull yellow. In subsequent observations, the bird was seen clearly as it stood and preened at nearby ponds. The head featured a grayish crown and heavy black eyebrow, while the lower half of the face, throat, front of the neck, breast, and belly were white. Black streaks formed a line down the front of the neck. The remainder of the neck and flanks were pale gray. The back and wing coverts were darker gray, with white and black markings on the shoulder. The upper and lower mandibles were black and orange, respectively.

A probable Gray Heron was seen flying along the northern coast of Rota on 26 April 1987 (SP, RB). The bird was large, had a heron-like flight profile, and the coloration of the dark flight feathers contrasted with much paler gray upper wing coverts. Other features were not seen. These traits also characterize several other species of herons, namely the Purple Heron (*A. purpurea*), White-faced Heron (*A. novaehollandiae*), and Great Blue Heron (*A. herodias*), which occur in

neighboring regions or have been previously seen in Oceania. Therefore, a positive identification of the Rota bird was not made.

The Gray Heron has an extensive distribution through Eurasia and Africa. Other records from Micronesia include three confirmed sightings from Saipan (Glass et al. 1990; D. W. Stinson, pers. comm.) and a hypothetical sighting from Palau (Owen 1977a).

Great Egret (*Casmerodius albus*). A Great Egret was observed feeding with a flock of four Intermediate Egrets (*Egretta intermedia*) at a small wooded pond along the Liyog River in Merizo, Guam on 19 December 1992 (GW). The bird was seen again on 20–21 February 1993 in the company of eight Intermediate Egrets and three Little Egrets (*E. garzetta*) at a drained aquaculture pond on the north side of the Agfayan River in Inarajan (GW, RB). The Great Egret had a longer, heavier yellow bill and neck than the other birds, and its white body was larger and heavier. Leg color was black. The only other records of the species for Micronesia are from Saipan, where individuals were seen from December 1987 to February 1988 (Glass et al. 1990) and from 14 December 1992 to 15 January 1993 (D. W. Stinson, pers. comm.). Records also exist for the Ogasawara and Iwo Islands (Brazil 1991).

Little Egret (*Egretta garzetta*). Sightings of this species were made annually at several sets of commercial fish ponds in southern Guam between 1987 and 1992. The first observation occurred along the Ajayan River on 8 November 1987 (GW, RB, BB), with subsequent sightings made on both sides of the Agfayan River on 17 December 1988 (JR, BB), 23 December 1989 (GW, PC, JR, DS), 9 December 1990 (GW), 27 October to 24 December 1991 (GW, KO, CA, RB), and 12 December 1992 to 21 February 1993 (GW, CA, RB). Another Little Egret was seen on 27 October 1991 on a sandy beach at the mouth of the Inarajan River (GW, KO). Most of the birds were solitary, however, a pair was noted in 1990 and four individuals were seen in 1992. On 15 September 1992, three Little Egrets were observed feeding in the shallow pools of a narrow reef bench between Fadian Point and Marbo Basin along the eastern coast of Guam (GW). All of the egrets were identified by their all white plumage, black legs, dull yellow feet, thin black bill, and gradually sloping forehead. At least two of the birds had grayish facial skin. Several of the egrets in October 1991 and September 1992 were seen to run repeatedly in catching prey and to walk in shallow water with a high-stepping motion. Both behaviors characterize this species (King & Dickinson 1975, Slater et al. 1989). The Little Egret is a widespread Old World species that regularly visits Palau in small numbers (Owen 1977b, Engbring 1988). It is rare elsewhere in western Micronesia, with previous records known for the Marianas from Saipan and Pagan (Engbring & Owen 1981, Stinson et al. 1991).

Chinese Pond-Heron (*Ardeola bacchus*). A pond-heron was observed at the southern end of the Fena Valley Reservoir in south-central Guam on 3 February, 16 March, and 16 April 1987 (RB, SK, GN, GW). On each occasion, the bird was well seen in flight and when perched in coconut and pandanus trees. It was in winter plumage in February and March and could not be identified to species among Chinese, Javan, or Indian Pond-Herons (*A. bacchus*, *A. speciosa*, and *A.*

grayii). Features noted when the bird was standing were a solid brown back, brown streaking on the breast and head, a white belly and vent, yellowish legs and feet, and a pale bill tipped in black (Figure 1a). In flight, the pond-heron's white wings contrasted strongly with its brownish body (Figure 1b). Body size was noticeably larger than that of a Yellow Bittern (*Ixobrychus sinensis*), which is a common resident of the island.

By 16 April, the bird had changed into breeding plumage, allowing observers to identify it positively as a Chinese Pond-Heron. Diagnostic traits were a distinctive chestnut head and upper breast, black back, and white wings. This is the first record of this species in Micronesia. Chinese Pond-Herons are resident to the east Asian mainland and Borneo (Hancock & Elliott 1978). Eastward wanderings to Japan, the Ogasawara and Iwo Islands, and the Philippines are rare (duPont 1971, Wild Bird Society of Japan 1982, Brazil 1991).

Green-backed Heron (*Butorides striatus*). Jenkins (1983) listed this species for Guam, but because no description accompanied the record, its presence was considered hypothetical by later authors (Pyle & Engbring 1985, Reichel & Glass 1991). On 21 and 24 December 1991, two Green-backed Herons were observed at a fish pond on the north side of the Agfayan River, Inarajan, Guam (GW, RB, KO, RF). Both birds had a black cap, pale gray lower face, pale cere, a dark upper mandible, and a bicolored lower mandible that was palest near the face. Underparts were light gray except for a thin white streak down the center of the throat and breast. The wings and backs of the birds were dark gray, with a few feathers thinly edged in white. Both individuals stood and walked with hunched-over postures, which is typical for this species (King & Dickinson 1975). The Green-backed Heron is a widespread and variable species. In Micronesia, it has been previously reported from Palau, Chuuk, and Saipan (Baker 1951, Engbring & Owen 1981, Pyle & Engbring 1987).

Black-crowned Night-Heron (*Nycticorax nycticorax*). GW and MR retrieved an injured juvenile Black-crowned Night-Heron from a small mudflat surrounded by mangroves near the mouth of the Laguas River in Piti, Guam on 14 December 1989. The bird was later sacrificed because of the extent of its injuries (USNM 596603). It was distinguished from a juvenile Rufous Night-Heron (*N. caledonicus*) by its gray, rather than rufous, tail feathers and thin pale streaking on the crown (R. B. Clapp, pers. comm.). Black-crowned Night-Herons occur nearly worldwide and are rare visitors to central and western Micronesia (Pratt et al. 1987). Previous records in the Marianas come from Tinian and Saipan (Marshall 1949, Glass et al. 1990).

Gadwall (*Anas strepera*). A single Gadwall was recorded at a small wooded pond along the Liyog River in Merizo, Guam from 6 January to 20 February 1993 (GW, MR, RB). It was observed at close range for periods of 10–15 minutes on several days. A small rectangular white mark was visible on both wings while the duck was swimming, but during preening, we were able to clearly see the diagnostic white and black squares on the speculum. The bill was orange on the sides and blackish on the top. Plumage was almost entirely mottled brown except for a paler vent and a white belly. A photograph of the Gadwall is on file with

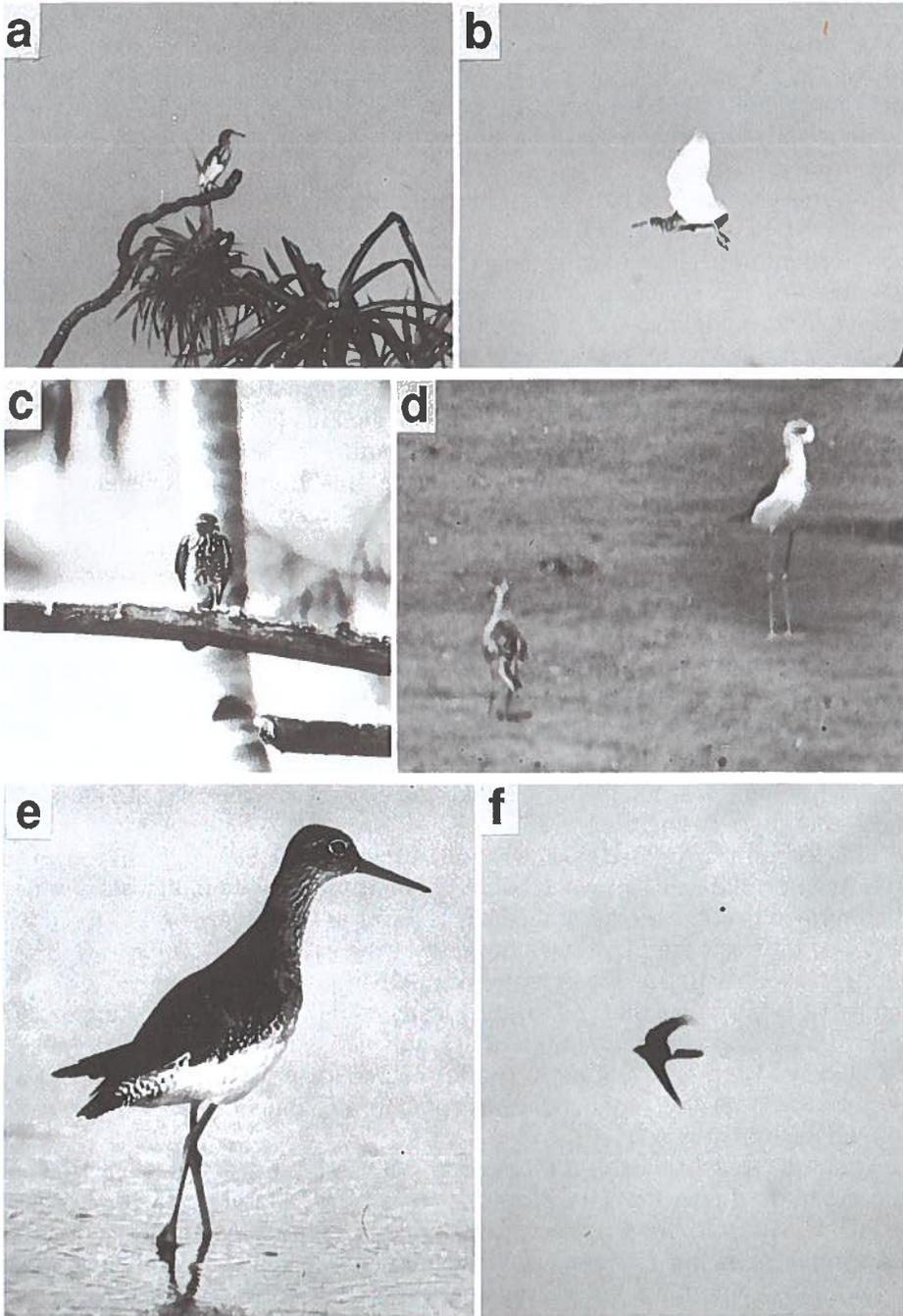


Figure 1. Photographs of previously unrecorded birds for Guam. (a, b) Chinese Pond-Heron at Fena Valley Reservoir. Photos by Robert E. Beck, Jr. (c) Chinese Goshawk on Cocos Island. The unmarked under wing coverts, which are diagnostic of this species, are visible here. Photo by Celestino F. Aguon. (d) Black-winged Stilt with a Lesser Golden-Plover (left foreground) in Inarajan. Photo by Celestino F. Aguon. (e) Common Redshank at Polaris Point, Piti. Photo by Robert E. Mumford, Jr. (f) Fork-tailed Swift at Pati Point. Photo by Celestino F. Aguon.

the GDAWR, Mangilao, Guam. This holarctic migrant has been noted several times in the Marianas (Wiles et al. 1987, Glass et al. 1990), including three birds on Saipan from 11 November 1992 to 4 January 1993 (D. W. Stinson, pers. comm.).

Chinese Goshawk (*Accipiter soloensis*). Unusual numbers of small hawks passed through the southern Marianas during the autumn of 1992. At least 10 sightings occurred throughout Guam from mid-September to mid-October, including two flocks with five to six birds seen soaring over the northern part of the island. Several additional sightings were made until mid-January 1993. Only one positive identification was made, that being of four Chinese Goshawks seen on Cocos Island, Guam. This species was also observed several times on Saipan and specimens were obtained from Tinian and Rota during the same time period (D. W. Stinson, pers. comm.). Because raptors are normally rare on Guam, it is likely that most of the birds recorded on the island were *A. soloensis*. Pratt et al. (1987) listed this hawk for Guam without providing any supporting details, which caused Reichel & Glass (1991) to list it as a hypothetical species for the island. Our report is the first confirmed record for Guam.

The goshawks on Cocos Island were observed in a patch of strand forest from 17 September to early October 1992 (RC, GW, RB, CA). They were relatively tame and allowed us to make close observations for 45 minutes during the initial sighting. We witnessed the birds hawking several large flying insects and capturing a lizard during this time. Two birds gave repeated "skee, skee, skee . . ." calls, with each syllable inflected upward. Three individuals had immature plumage, with brownish upperparts broken by several scattered white spots on the lower back and nape. Underparts were white with thin stripes on the chin, broader striping down the breast, and large brown spots in rows across the belly (Figure 1c). Other features were a faint white eyebrow, yellow eyes, a yellow cere and legs, and 3–4 dark bands on the tail. In flight, the birds had unmarked under wing coverts, which separates this species from other small Asian accipiters.

The fourth goshawk had dark gray upperparts and appeared several centimeters smaller in size than the other birds, suggesting that it was an adult male. It also had several white spots visible on the nape and back. Its cheeks were pale gray and the chin was grayish white. The breast had a buffy wash with no barring evident, and the belly and vent were white. The bird had an orange-yellow cere and legs, and its irises were a subtle tinge of dark red. White underwings with black-tipped primaries and pale rufous shading on the underwing coverts were also noted.

Chinese Goshawks breed in China and Korea and winter southward to Indonesia and New Guinea (Wild Bird Society of Japan 1982). A major migrational flyway passes from Korea through southwestern Japan into the Ryukyu Islands and Taiwan during September and early October (Brazil 1991). This is the most likely source of the birds seen in the Marianas.

Buteo sp. RB, RA, and PC saw six large hawks soaring above the tall ridge of hills in the vicinity of Mt. Lamlam and Mt. Almagosa on the U.S. Naval

Magazine, Guam on 29 October 1987. The birds had broad wings with rounded tips, but because they were far off, few other details were discerned. It seems most likely that the hawks were a species of *Buteo*. Common Buzzards (*B. buteo*) have been previously recorded in the Marianas (Glass et al. 1990), although new evidence suggests these birds were part of a small breeding population resident to Anatahan (Reichel et al., in press). There are also two hypothetical *Buteo* records from Palau (Marshall 1949, Pratt & Bruner 1981, Pyle & Engbring 1985). The migration pattern of Common Buzzards through eastern Asia makes it the most likely species of *Buteo* to visit Micronesia (Pratt et al. 1987).

Peregrine Falcon (*Falco peregrinus*). On 18 February 1990, a large falcon was observed for several minutes at close range while it soared along a cliffline on Kagman Peninsula, Saipan (RB, GWt, EB). Its size, dark grayish black upperparts and crown, and conspicuous large black moustaches distinguished the bird from other falcons. The bird's undersides were much paler and lightly barred. Baker (1951) reported this species to be a casual winter visitor in western Micronesia and summarized previous records for Guam, Yap, and Palau.

Little Ringed Plover (*Charadrius dubius*). A hypothetical record of this plover has been previously published for Guam (Perez 1971). We report five sightings that involve positive records for the island. Single birds were seen on the following occasions: on 2 and 27 May 1980 (AM) and 6 February 1981 (GW, AM) on the sandy tidal flat at Duncas Beach in Tamuning; on 19 and 26 September 1987 in a muddy, mostly drained aquaculture pond along the Agfayan River in Inarajan (GW, RB); on 10 October 1989 at the garbage dump on U.S. Naval Station in Santa Rita (GW); and on 11 March 1990 in a partially drained manmade wetland at the Shell Oil fuel farm in Piti (GW). Each bird had a white collar around the neck, a complete breast band, and yellowish legs. When viewed in flight, none of the birds possessed white wingbars, a feature that characterizes several other species of small plovers with white neck collars, including the similar Common Ringed Plover (*C. hiaticula*). The bird seen in 1980 was in breeding plumage and was noticeably smaller than a Mongolian Plover (*C. mongolus*) standing nearby. The Little Ringed Plover occurs widely through Eurasia and Africa (Hayman et al. 1986), and in Micronesia, has been previously reported from Palau and Yap (Pyle & Engbring 1985).

Black-winged Stilt (*Himantopus himantopus*). A single bird was seen regularly between 29 August and 10 November 1991 at a drained aquaculture pond on the south side of the Agfayan River, Inarajan, Guam (GW, CA, RB, KO, DH). Recent rains had covered half of the pond's mud bottom with shallow water. The site attracted at least 15 other species of waders during this period, including five Ruffs (*Philomachus pugnax*), six Marsh Sandpipers (*Tringa stagnatilis*), two Common Greenshanks (*T. nebularia*), and two Pectoral Sandpipers (*Calidris melanotos*).

The stilt was immediately recognizable by its tall gangly appearance and long pale reddish legs and feet (Figure 1d). The bird had immature plumage (see Hayman et al. 1986), with dark brownish wings; white underparts and forehead; and pale grayish shoulders, hindneck, crown, and upper halves of the face. It also

had a thin black bill of medium length and was noticeably taller than the green-shanks. Prominent features in flight were the long legs trailing behind the body, a white tail, and a white wedge-shaped rump.

During the autumn of 1992, stilts with similar juvenile plumage were seen at a variety of freshwater sites on Guam. One to three birds were present in a large temporarily flooded pool on an abandoned parking lot at Polaris Point in Piti from 27 September to 4 October (TSu, RB, GW). A flock of five stilts resided at several recently constructed wetlands in the Manengon Hills resort complex from 28 September to at least 6 October (TSw, TC, GW). Two more birds were observed in a flooded field near the Department of Agriculture in Mangilao from 23–26 October (GD, GW, MR).

Black-winged Stilts range widely through both the Old and New Worlds. In Micronesia, previous records exist for Saipan (Glass et al. 1990, Stinson et al. 1991), Yap (Wiles et al. 1987), and Palau (Engbring & Owen 1981).

Common Redshank (*Tringa totanus*). RM photographed a Common Redshank at a flooded pool in an abandoned parking lot at Polaris Point in Piti, Guam on 21 October 1992 (Figure 1e). This gives further documentation of previous sight records for the island from 21 September 1986 (Wiles et al. 1987) and 13 September 1992 (RB, GW).

Eurasian Curlew (*Numenius arquata*). On 14 December 1989, a single Eurasian Curlew was seen loafing in a patch of exposed limestone rocks next to a large expanse of mangroves near the mouth of the Laguas River in Piti, Guam (GW, MR). The bird possessed an extremely long decurved bill that was pale in color on the proximal lower third, and was about 10–15 cm taller than a Whimbrel (*N. phaeopus*) standing on an adjacent rock. The head, neck, and upperparts of the curlew were pale brownish and flecked heavily in white. Its crown lacked a central longitudinal stripe. Other features were a white belly and vent, and white underwings marked with multiple brown flecking. A large white rump extending far up the back was observed in flight. The bird was seen at the same location on 22 and 27 December 1989 and 7 January 1990 (GW, JR, MR). This species is a widely distributed migrant in the Old World (Hayman et al. 1986). In Micronesia, several previous records are known from Saipan (Engbring & Owen 1981), including an individual seen on 4–6 December 1989 (Stinson et al. 1991).

Dowitcher sp. (*Limnodromus* sp.). A probable Long-billed Dowitcher (*L. scolopaceus*) was seen at the large freshwater catchment at the Saipan airport on 28 and 29 December 1991 (GW, CR, KO, EW). The bird was 6–8 cm shorter than two Black-tailed Godwits (*Limosa limosa*) with which it was closely associated. The dowitcher had yellowish legs and a long straight bicolored bill that was dull yellowish on the inner half and dark on the outer half. It also had a grayish brown head and upperparts, a white eyebrow, and an unmarked gray breast that was abruptly demarcated from a white belly. In flight, the dowitcher displayed a white wedge up the back and a narrow white band on the trailing edge of the secondaries.

Most references report that Long-billed and Short-billed Dowitchers (*L. gri-seus*) cannot be reliably differentiated when in winter plumage. Both species are

largely North American in range, but the Long-billed Dowitcher also breeds in northeastern Siberia. Small numbers of *L. scolopaceus* migrate through the western Pacific (Brazil 1991). The species is considered a rare but increasingly reported visitor to Japan (Brazil 1991), and there are rare records from Thailand, Bali, and Brunei (Hayman et al. 1986). Only two records of *L. griseus* exist for eastern Asia (Brazil 1991). This information suggests that the bird seen on Saipan was more likely *L. scolopaceus*.

Great Knot (*Calidris tenuirostris*). One to three Great Knots were regularly observed resting among flocks of Lesser Golden-Plovers (*Pluvialis dominica*) and Ruddy Turnstones (*Arenaria interpres*) along a reef flat at Togcha Beach, Yona, Guam between 30 August and 5 September 1990 (RB, GW, KO, HR). The knots were slightly larger and heavier-bodied than the plovers, and had large black spotting on their breasts and flanks. The birds had gray and white streaking on the crown and eye stripes were absent. Their backs had areas of dark feathers mixed with pale gray feathers having dark shafts. The bills of the knots were black, about 1.5 times longer than the head, and noticeably thickened at the base. Leg color was dark gray. Whitish rumps were noted in flight and further distinguished the birds from Red Knots (*C. canutus*).

On 24 February and 2 March 1991, another Great Knot was seen in the same area (GW, RD, KO, HR). It exhibited some of the same features noted above but had much grayer plumage. Its breast had fine gray streaking and a gray wash, which contrasted with a white belly. The back and cap were also grayish. The bird foraged by walking boldly back and forth and searched a large area of beach in a short period of time.

This species is a rare visitor to the western Caroline Islands (Pratt et al. 1987). A first record for Saipan was made in early September 1990 (Stinson et al. 1991), just a few days after the initial sightings on Guam occurred. Great Knots may be one of several shorebird species that commonly overfly Micronesia during migrations between Siberia and Australia (Williams & Williams 1988).

Long-toed Stint (*Calidris subminuta*). Two previous reports of this species on Guam (King 1962, Jenkins 1981) provide no details, thus Reichel and Glass (1991) consider both to be hypothetical records. In correspondence to J. D. Reichel, King wrote that he did not distinguish his bird from a Least Sandpiper (*C. minutilla*) (Reichel & Glass 1991). We report three sightings that confirm the occurrence of Long-toed Stints on the island.

GW saw a Long-toed Stint feeding with four Rufous-necked Stints (*C. ruficollis*) along the shore at Togcha Beach, Yona, on 2 September 1990. The Long-toed Stint had a rufous cap with dark streaking, a white supercillium, a rufous back with two whitish streaks running lengthwise, and yellowish legs. A close-up view of the bird in flight showed that its toes projected beyond the tail, a characteristic that can be used to separate *C. subminuta* from *C. minutilla* (Hayman et al. 1986).

On 18 December 1990, two Long-toed Stints were observed foraging near a flock of 12 Rufous-necked Stints on a tidal beach flat at Duncas Beach, Tamuning (GW). The birds were viewed with a spotting scope at a distance of 15 m. The

feet of the Long-toed Stints were easily seen and were noticeably larger than those of the Rufous-necked Stints. Other field marks included brownish caps and backs, pale yellowish legs, and a narrow white V-shaped line down their backs. Both species were equal in size.

Another sighting of a Long-toed Stint occurred under good lighting conditions on the edge of a muddy freshwater pond at the Shell Oil fuel farm in Piti on 2 March 1991 (GW, RD, KO, HR). The bird had streaked brownish upperparts with a white V mark on the back, a distinct brown cap, a white eyebrow and belly, a brownish breast, yellow legs, and a short black bill. It was considerably smaller than a nearby Wood Sandpiper (*Tringa glareola*) and occasionally stood with the upright posture diagnostic of the species (Hayman et al. 1986, Wild Bird Society of Japan 1982). Two other probable Long-toed Stints fed nearby but were not viewed long enough to verify their identity. All of the birds foraged in a sluggish manner, walking and probing more slowly than is typical for Rufous-necked Stints.

An Asian migrant, the Long-toed Stint is a rare to uncommon visitor in western Micronesia (Pratt et al. 1987). This species was recorded for the first time on Saipan in November 1988 (Stinson et al. 1991).

Common Snipe (*Gallinago gallinago*). On 23 December 1989, a Common Snipe was flushed from a wet grassy field at the Shell Oil fuel farm in Piti, Guam. All observers (DS, PC, GW, JR) noted a prominent white trailing edge on the secondaries, a feature that separates this species from other snipe (Swinhoe's Snipe, *G. megala*; Pintail Snipe, *G. stenura*; and Japanese Snipe, *G. hardwickii*) reported from Micronesia (Pyle & Engbring 1985). The bird also had at least four buffy stripes running down its back, a long straight bill, and had a bright rufous bar across the tail. Common Snipe occur throughout most of the Northern Hemisphere. Their presence in Micronesia is based on single specimens collected on Saipan before World War II (Takatsukasa & Yamashina 1931) and on Rota in mid-December 1989 (Stinson et al. 1991).

Slaty-backed Gull (*Larus schistisagus*). Three fishermen captured a live Slaty-backed Gull on the shore of Fouha Bay, Umatac, Guam on 23 January 1992. The bird was given to Government of Guam conservation officers later in the day, but it was emaciated and died the next day (USNM 597590). The gull was an adult female in non-breeding plumage (see Harrison 1985). Its underparts, tail, rump, head, and neck were white, with the crown, nape, and sides of the neck marked with faint brown streaks. The upperwings were dark gray grading to black at the tips, and had a broad white band along the trailing edge and a narrower white band on the leading edge. Each of the five outer primaries had two white spots, with one at the tip of the feather and the second being several centimeters inward. A white mark on the inner web of the ninth primary was diagnostic (R. C. Banks, pers. comm.). The underwings were white with contrasting pale gray primaries. Other characters were the bird's large size (total length = 585 mm), dark gray back, pink feet, and dull yellow bill with a red spot on the lower mandible.

Slaty-backed Gulls are an abundant coastal resident of northeastern Asia, ranging from Japan and Korea northward to the Kamchatka Peninsula (Harrison 1985, Brazil 1991). Our record is the first for Micronesia, however the species has been previously reported from the Iwo and Ryukyu Islands (Brazil 1991).

Whiskered Tern (*Chlidonias hybridus*). Two Whiskered Terns were seen at the aquaculture ponds on the south side of the Agfayan River in Inarajan, Guam on 10 and 12 September 1989 (RB, KO, GW, MR). The birds were observed in flight and while perched on a power line. One tern was an adult in the midst of losing its nuptial plumage. Field marks were a broad white lower cheek patch, a black forehead and cap marked with a few tiny white flecks, a mixed gray and white breast, a white throat, and a gently rounded head profile. The bill and legs were reddish black, and the bill was relatively long. In flight, a uniformly gray back, rump, and upper wings were noted along with grayish white underwings, dark wing tips, and a slightly forked tail. The second tern featured characteristics indicative of a bird changing from its juvenile to first winter plumage (see Harrison 1985). It had a mottled brown back, white breast, a white forehead grading into a dark nape, a dark bill, and lacked the dark ear patches that characterize the non-breeding plumages of other *Chlidonias*. Widespread in the Old World, the only other records of Whiskered Terns in Micronesia are from Yap (Clapp & Laybourne 1983) and Saipan (Glass et al. 1990). This species prefers inland freshwater over marine environments (Harrison 1985).

Gull-billed Tern (*Sterna nilotica*). GW and KO observed a single Gull-billed Tern standing in a partially drained fish pond on the south side of the Agfayan River in Inarajan, Guam on 3 November 1991. The bird exhibited white underparts, pale gray wings, a blackish patch over the ear coverts, a white forehead and fore-crown, pale gray streaking on the nape, and black legs. The black bill was noticeably thickened and heavier than in other species of terns seen on Guam, with the distal third being chisel-shaped. The bird appeared rather large and was noticeably taller than a nearby Lesser Golden-Plover. It was seen poorly in flight but a shallow forked tail was noted. Gull-billed Terns are a widespread Old and New World species, with non-breeding populations migrating to New Guinea and the Philippines (Harrison 1985). There are no previous confirmed records for Micronesia, although one insufficiently documented sighting of two birds was made on Saipan in November 1984 (Pratt 1984, Reichel & Glass 1991).

Black Noddy (*Anous minutus*). This species was reported as being common on Guam at the turn of the century (Safford 1905), but for unstated reasons, Baker (1951) questioned its occurrence on the island. Several subsequent check-lists of Guam birds excluded Black Noddies (Jenkins 1983, Pyle & Engbring 1985, Pratt et al. 1987), although this error was recently rectified by Reichel & Glass (1991).

We document two recent records of *A. minutus* for Guam, which appear to be the first since before World War II. On 20 October 1987, an injured Black Noddy was found in a housing complex on U.S. Naval Station, Santa Rita, one day after Typhoon Lynn passed near Guam with winds of 50–65 kph. The bird died soon after being given to RA of the GDAWR (USNM 596318).

More notable is the discovery of a colony of Black Noddies on Cocos Island, a small 33-ha atoll-like islet 2.4 km southwest of Guam. The colony was first identified on 27 December 1990 during a visit to assess damage to the island six days after the passage of Supertyphoon Russ (GW, CA, RB). The carcass of one of 20 similar storm-killed birds collected under roost trees was later verified by R. B. Clapp (pers. comm.) as that of a Black Noddy.

In January 1991, the colony contained an estimated 1,500 birds. During an evening census, 1,329 noddies arrived at the island, with another 150–200 birds already roosting prior to the count. This census was much higher than three similar morning counts, when only 500–835 birds were recorded. In addition, an estimated 100 noddies from the colony were killed by the typhoon (G. J. Wiles and C. F. Aguon, unpubl. data).

The colony was located in strand forest on the western half of the island. Birds roosted in the mid to upper branches of tall *Casuarina equisetifolia*. They did not use other species of trees, such as *Cocos nucifera*, *Hernandia sonora*, *Guettarda speciosa*, and *Tournefortia argentea*, which were also common but damaged by the storm. Within the colony, noddies roosted singly or in small aggregations of 2–25 birds (mean group size = 6.7 birds). The various size classes of groupings comprised the following percentages of the colony: 1 bird, 3%; 2–5 birds, 17%; 6–10 birds, 29%; 11–15 birds, 24%; 16–20 birds, 12%; and 21–25 birds, 15%. The birds avoided roosting on the grounds of the resort on the eastern half of the island, which has a large number of *Casuarina* trees but has considerably more human activity.

The colony was present during visits made in June, August, September, November, and December 1991, suggesting that it remained on the island for the entire year. Two other censuses were conducted during the year. On the evening of 29 August, we counted 1,569 noddies, more than half of which flew in less than 30 minutes before darkness. Arrivals may have continued after darkness, thus colony size was estimated at 1,600–2,000 birds. On 12 December, 15 days after the passage of Supertyphoon Yuri, 3,976 noddies were tallied, although some duplication in birds recorded by the observers may have occurred. The colony was estimated at 3,000–3,500 birds, making it one of the largest aggregations of Black Noddies in the Marianas (see Reichel 1991).

The colony was not closely monitored in 1992 and it departed the island sometime in April or May. During a count on 28 May 1992, fewer than 25 birds were observed. The cause of the colony's departure was not determined, however, the colony was reportedly disturbed in the middle of the night by a large noisy truck from the resort one month prior to our count. Repeated disturbances of this type may have resulted in the abandonment of the island. Within several months, larger number of birds were again present. A Black Noddy injured during Typhoon Omar was collected on 2 September (USNM 597644). On 9 December, several hundred birds arrived to roost on the island immediately after nightfall.

The overall length of the colony's residence on Cocos Island is unknown, but groups of roosting noddies were commonly seen during irregular visits to Cocos for several years before its discovery in 1990. However, because of the

presumed rareness of Black Noddies around Guam, the birds may have been misidentified and casually assumed to be Brown Noddies (*A. stolidus*). Only three Brown Noddies were observed on one of our seven visits to the island in 1991. No evidence of nesting by either species of noddy has ever been found on Cocos Island.

Black Noddies range throughout Micronesia (Baker 1951). The closest breeding populations to Guam occur on Aguijan and Tinian in the Marianas, but each has fewer than 50 pairs of birds (Reichel 1991, Reichel & Glass 1991).

Fork-tailed Swift (*Apus pacificus*). A loose flock of four Fork-tailed Swifts was seen foraging above the coastal cliffs at Ritidian Point and Uruno Point in northern Guam on 11 October 1990 (MSB, GW, CA). A second flock of six or seven swifts and four Barn Swallows (*Hirundo hirustica*) was observed feeding along the cliffs at Pati Point on 10 October 1991 (GW, RB, CA). Several characters distinguished the swifts from Island Swiftlets (*Aerodramus vanikorensis*), which are a similar but smaller resident of Guam. The swifts were large and heavy-bodied, and had long pointed wings that arced backwards (Figure 1f). Their tails were long and tapered, with a distinctive fork occasionally visible. The birds were usually strongly backlit, and thus appeared entirely blackish except for bright white rumps. However, the observers noted pale grayish throats several times when the birds flew close in. Body length of the swifts was estimated to be several centimeters longer than for the swallows. The birds spent most of their time soaring on updrafts 30–200 m above the cliffs. Wing fluttering was noted occasionally. Fork-tailed Swifts are migratory, ranging from eastern Asia to New Guinea and Australia. Other Micronesian records exist for Saipan (Glass et al. 1990) and the Marshall Islands (Schipper 1985, Clapp 1989).

Common Kingfisher (*Alcedo atthis*). A Common Kingfisher was observed three times between 23 September and 10 October 1987 (GW, RB, BB) at a set of freshwater aquaculture ponds along the Agfayan River in Inarajan, Guam. During the final sighting, the bird was observed closely for about 10 min as it perched in a banana tree and on a mechanized fish feeding device, both of which were located at the edges of a pond. Distinctive field marks included blue-green wings with pale green spotting, a blue-green cap with pale green cross striping, rufous underparts, a white throat, rufous ear patches with white behind them, a short tail, a bright blue back and tail, and an all black bill. The bird gave high pitched calls, which were made singly or in short sequences.

The Common Kingfisher is widely distributed from Eurasia to Papua New Guinea, but has not been previously recorded from Micronesia. However, two prior sightings of unidentified kingfishers with cinnamon underparts have been reported for Ulithi Atoll, Yap (Baker 1951), and Helen Island, Palau (R. P. Owen in Pyle & Engbring 1985). Pyle & Engbring (1985) and Pratt et al. (1987) suggested that these birds were probably Sacred Kingfishers (*Halcyon sancta*), but we believe that *A. atthis*, which is partially migratory in eastern Asia (duPont 1971, Fry et al. 1992, Wild Bird Society of Japan 1982), is a more likely candidate to appear in western Micronesia.

Acknowledgments

Portions of this study were supported by the Guam Federal Aid in Wildlife Restoration Project FW-2R-29. We are especially grateful to R. C. Banks, R. B. Clapp, and R. Browning for their identifications of bird specimens. J. D. Reichel, D. W. Stinson, and J.-F. Voisin provided useful information on bird records from Saipan, Rota, and Guam. D. W. Stinson, R. L. Pyle, and J. D. Reichel reviewed the manuscript.

References

- Baker, R. H. 1951. The avifauna of Micronesia, its origin, evolution, and distribution. *Univ. Kansas Pubs., Mus. Nat. Hist.* 3: 1-359.
- Brazil, M. A. 1991. *The Birds of Japan*. Smithsonian Inst. Press, Washington, D.C. 466 pp.
- Clapp, R. B. 1989. A specimen record of the Fork-tailed Swift from the Marshall Islands. *'Elepaio* 49: 41-46.
- Clapp, R. B. & R. C. Laybourne. 1983. First record of the Whiskered Tern from the tropical Pacific. *'Elepaio* 43: 69-70.
- duPont, J. E. 1971. *Philippine Birds*. Delaware Mus. Nat. Hist., Monogr. Ser. 2. 480 pp.
- Engbring, J. 1988. *Field Guide to the Birds of Palau*. Conservation Office, Koror, Palau. 92 pp.
- Engbring, J. & R. P. Owen. 1981. New bird records for Micronesia. *Micronesica* 17: 186-192.
- Fry, C. H., K. Fry & A. Harris. 1992. *Kingfishers, Bee-eaters and Rollers*. Princeton Univ. Press, Princeton, NJ. 324 pp.
- Glass, P. O., J. D. Reichel, T. O. Lemke, R. B. Clapp, G. J. Wiles, D. T. Aldan & T. K. Pratt. 1990. New migrant and vagrant bird records for the Mariana Islands, 1978-1988. *Micronesica* 23: 67-89.
- Hancock, J. & H. Elliott. 1978. *The Herons of the World*. Harper and Row Publ., New York. 304 pp.
- Harrison, P. 1985. *Seabirds: an Identification Guide*. Houghton Mifflin Co., Boston. 448 pp.
- Hayman, P., J. Marchant & T. Prater. 1986. *Shorebirds: an Identification Guide to the Waders of the World*. Houghton Mifflin Co., Boston. 412 pp.
- 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. 1962. Guam field notes. *'Elepaio* 23: 29-31.
- King, B. F. & E. C. Dickinson. 1975. *A Field Guide to the Birds of South-East Asia*. Houghton Mifflin Co., Boston. 480 pp.
- King, W. B. 1967. *Seabirds of the Tropical Pacific Ocean*. Smithsonian Inst., Washington, D.C. 126 pp.
- Kuroda, N. 1991. Distributional patterns and seasonal movements of *Procellariiformes* in the north Pacific. *J. Yamashina Inst. Ornithol.* 23: 23-84.

- Marshall, J. T., Jr. 1949. The endemic avifauna of Saipan, Tinian, Guam and Palau. *Condor* 51: 200-221.
- Owen, R. P. 1977a. A checklist of the birds of Micronesia. *Micronesica* 13: 65-81.
- Owen, R. P. 1977b. New bird records for Micronesia and major island groups in Micronesia. *Micronesica* 13: 57-63.
- Perez, G. S. A. 1971. Ring neck plover on Guam. *Micronesica* 7: 236-237.
- Pratt, H. D. & P. L. Bruner. 1981. Noteworthy records of non-breeding birds in Micronesia. *Micronesica* 17: 195-198.
- Pratt, H. D., P. L. Bruner & D. G. Berrett. 1987. *A Field Guide to the Birds of Hawaii and the Tropical Pacific*. Princeton Univ. Press, Princeton, NJ. 409 pp.
- Pratt, T. K. 1984. Shorebird surveys and inventories. CNMI Div. Fish Wildl. Ann. Rep., FY 84: 60-68, Saipan. Unpubl.
- Pyle, P. & J. Engbring. 1985. Checklist of the birds of Micronesia. 'Elepaio 46: 57-68.
- Pyle, P. & J. Engbring. 1987. New bird records and migrant observations from Micronesia, 1978-1984. 'Elepaio 47: 11-15.
- Reichel, J. D. 1991. Status and conservation of seabirds in the Mariana Islands. In J. P. Croxall (ed), *Seabird Status and Conservation: a Supplement*, pp. 248-262. International Council for Bird Preservation Tech. Bull. No. 11, Cambridge, U.K.
- Reichel, J. D. & P. O. Glass. 1991. Checklist of the birds of the Mariana Islands. 'Elepaio 51: 3-11.
- Reichel, J. D., P. O. Glass & D. W. Stinson. in press. Status of the Common Buzzard (*Buteo buteo*) in the northern Mariana Islands, Pacific Ocean. *Emu*.
- Safford, W. E. 1904. Extracts from the note-book of a naturalist on the island of Guam. *The Plant World* 7: 1-298.
- Safford, W. E. 1905. The useful plants of the island of Guam. *Contr. U.S. Nat. Herb.* 9: 1-416.
- Schipper, W. L. 1985. Observations of birds in Kwajalein Atoll, Marshall Islands, 1978-1983. 'Elepaio 46: 27-32.
- Seale, A. 1901. Report of a mission to Guam. *Occas. Pap. B. P. Bishop Mus.* 1: 17-128.
- Slater, P., P. Slater & R. Slater. 1989. *The Slater Field Guide to Australian Birds*. Revised ed. Weldon Publ., Sydney. 343 pp.
- Spear, L. B., S. N. G. Howell & D. G. Ainley. 1992. Notes on the at-sea identification of some Pacific gadfly petrels (genus: *Pterodroma*). *Colonial Waterbirds* 15: 202-218.
- Stinson, D. W., J. D. Reichel, R. J. Craig & D. T. Aldan. 1991. New and unusual bird records from the northern Mariana Islands, 1988-1990. *Micronesica* 24: 261-271.
- Takatsukasa, S. & Y. Yamashina. 1931. Some new birds from the Palao and Mariana Islands. *Dobutsu. Zasshi* 43: 484-487.

- Tanaka, Y. & F. Inaba. 1981. The distribution and migration of the White-necked Petrel, *Pterodroma externa cervicalis*, in the west area of North Pacific Ocean and the Japanese waters. *J. Yamashina Inst. Ornithol.* 13: 207-214.
- Wild Bird Society of Japan. 1982. *A Field Guide to the Birds of Japan*. Wild Bird Soc. Japan, Tokyo. 336 pp.
- Wiles, G. J., R. E. Beck, Jr., C. M. Avenengo, P. J. Conry & J. A. Savidge. 1987. New bird records for Guam, Yap, Saipan, and Tinian. *'Elepaio* 47: 37-41.
- Williams, T. C. & J. M. Williams. 1988. Radar and visual observations of autumnal (southward) shorebird migration on Guam. *Auk* 105: 460-466.

Received 26 March 1993, revised 15 July.