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Noteworthy Bird Records for Micronesia, with a Summary of Raptor Sightings in the Mariana Islands, 1988-1999

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Abstract—Sixty noteworthy bird records for the Mariana and Caroline Islands, 1988–1999, include new island records, a first breeding of Common Moorhens (*Gallinula chloropus*) on Yap, and an unprecedented number of raptor sightings.

This paper documents noteworthy records of 60 bird species for the Mariana and Caroline Islands from 1988–1999. Many are first records for the region or the individual islands noted. They include seven new records for Micronesia, eight new records for the Marianas, and four new records for the Carolines. We also

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report the first breeding record and apparent establishment of a small population of Common Moorhens (*Gallinula chloropus*) on Yap.

Additionally, we describe an unprecedented number of raptor sightings involving a variety of species in the southern Marianas from 1993–1999. Many of the observations represent new island records, however, we also document sightings of some unidentified birds because of the paucity of previous raptor records for the island chain.

The importance of artificial freshwater ponds in attracting migrant birds in Micronesia is evidenced by the large number of bird records obtained at these sites. For example, nine of our new records described for Yap occurred at the municipal water reservoir between Colonia and the airport in Ruul district. This site is several hectares in size and has been present for more than 20 years. Four new records for Rota were obtained at several small artificial ponds built in 1993 during construction of the Rota Resort. One group of ponds functions as a sewage treatment facility, while a second set serves as water hazards for a golf course. They represent the only open freshwater habitat on the island and have attracted a variety of water-associated birds since their construction (Wiles & Worthington 1996, Worthington 1998).

The following observers participated in sighting, recording, or evaluating the records: C.F. Aguon (CA), F. Amidon (FA), R.E. Beck, Jr. (BB), G.M. Beauprez (GB), H. Brokaw (HB), P. Blas (PB), R. Batie (RB), R. Cruz (RC), R.E. David (RD), J. Engbring (JE), D. Grout (DG), J.P. Guerrero (JG), M. Gilston (MG), L. Henderson (LH), D. Hopper (DH), N. Johnson (NJ), C. Kessler (CK), M. Linnell (MLi), M.R. Lusk (ML), A.P. Marshall (AM), C. Naugle (CN), S. Nichols (SN), K.D. Orcutt (KO), H.D. Pratt (DP), R.L. Pyle (RP), S. Pruett (SP), J. Quitugua (JQ), B. Reyes (BR), M.W. Ritter (MR), D.W. Stinson (DS), J. Sanchez (JS), M. Severson (MS), P. Snetsinger (PS), T. Sutterfield (TS), L. Tanino (LT), D. Vice (DV), F.-J. de Vries (FV), D.J. Worthington (DW), G.J. Wiles (GW), G. Witteman (GWt), and K. Walcott (KW). Observations by DP, RP, and PS were made during three organized birdwatching tours involving 10-12 different participants per tour. These observers corroborated identifications and are designated as "others" in the accounts given below. Abbreviations of institutions used in the text are: Guam Division of Aquatic & Wildlife Resources (DAWR), B.P. Bishop Museum, Honolulu, Hawaii (BPBM), and National Museum of Natural History, Washington, D.C. (USNM).

Streaked Shearwater (*Calonectris leucomelas*). This species breeds abundantly in Japan and China and winters southward to New Guinea and Australia (Harrison 1985, Brazil 1991, del Hoyo et al. 1992), however, only a handful of published reports exist for Micronesia (Dixon & Starrett 1952, Bruyns 1964, Wiles et al. 1987). Here, we provide three additional records for Guam. The remains of two birds identified as *C. leucomelas* (USNM 611654, 611655; R.B. Clapp, pers. comm.) washed ashore at Ylig Bay on 22 April 1988 (DH) and Pago Bay on 12 May 1988 (GW). On 11 May 1992, a Streaked Shearwater was viewed at close range as it foraged among a flock of Black Noddies (*Anous minutus*) and

White Terns (*Gygis alba*) about 1 km south of Cocos Island (GW, CA, KO). The bird was larger than a Wedge-tailed Shearwater (*Puffinus pacificus*) and showed white underparts and underwings; a brown back with paler brown markings on the mantle; a pale mottled brown crown, nape, and sides of face; pink feet; and a pinkish bill with a dark tip.

Short-tailed Shearwater (*Puffinus tenuirostris*). On 8 and 10 May 1996, large numbers of shearwaters were seen passing westward along the southwestern corner of the Chuuk lagoon south of Polle and Tol islands (MG). All of the birds were outside the lagoon's barrier reef, where they were viewed from a fishing boat. On one morning from 0630–0730 hrs, about 300 birds were seen in groups of 1–10 individuals. The birds were identified as Short-tailed Shearwaters by their mostly dark gray plumage, paler gray underwing linings and greater coverts, and dark bills. The birds had relatively small tails unlike those of dark-phased Wedge-tailed Shearwaters.

We believe the birds were on their northward migration from Australia to the north Pacific. This observation coincides closely with similar flights of large numbers of Short-tailed Shearwaters sighted on Guam annually from 10–22 May (G.J. Wiles, unpubl. data). Migrations of this magnitude presumably occur at this time of year at other central and eastern Micronesian island groups (Marchant & Higgins 1990, Skira 1991), but have not yet been documented. This is the first record of *P. tenuirostris* from Chuuk.

Audubon's Shearwater (*Puffinus lherminieri*). Although breeding populations of this species occur in Palau and the Ogasawara and Iwo Islands (Engbring 1988, Brazil 1991), only two substantiated records of single birds are known for the Marianas, from Rota and Guam (Reichel & Glass 1991, Wiles et al. 1993). We report two additional records from Guam, based on grounded individuals captured by island residents at an unknown site on 6 August 1997 and at Tumon Bay on 2 December 1997. Both birds were examined at the DAWR (BB, CA, GW). They were distinguished from other small shearwaters by their measurements, the presence of dark undertail coverts, dark facial feathering extending below the eye, and underwing coloration, which showed broader darkened wing margins than in the Little Shearwater (*P. assimilis*).

Matsudaira's Storm-Petrel (*Oceanodroma matsudairae*). This species breeds exclusively in the Iwo Islands from January to June, then disperses to the western Indian Ocean after migrating through Indonesia and New Guinea (Harrison 1985, Brazil 1991, del Hoyo et al. 1992). Here, we summarize the seasonal occurrence of *O. matsudairae* in the Mariana Islands, based on a compilation of published accounts (12 records; King 1976, Meyerfield 1978, Maben & Wiles 1981, Aguon & Beck 1983, Glass et al. 1990, Stinson et al. 1991a, Kessler 1999), additional reliable sightings from Guam (9 records; KO, DV, GW), and grounded birds from Guam (3 records). All reports occurred between 16 February and 6 September and were distributed as follows: February (1 record), March (3), April (5), May (3), June (4), July (4), August (3), and early September (1). Tanaka (in Glass et al. 1990) observed birds at distances greater than 50 km from the

Marianas from January to May. The only definite observation from the Caroline Islands was made in July (Engbring & Owen 1981). These data correspond well with Harrison (1985), who reported *O. matsudairae* to be present in the tropical western Pacific from January to August. Most sightings in the Marianas involve one or two birds, but occasionally include up to 10–25 individuals. Kessler's (1999, pers. comm.) record of about 100 Matsudaira's Storm-Petrels from Sarigan and Anatahan involved mostly single birds and some pairs.

Masked Booby (*Sula dactylatra*). On 16 January 1996, MG saw a mixed flock of about five Masked Boobies and 20 Brown Boobies (*S. leucogaster*) from a small fishing boat along the southwestern corner of Murito Atoll, Hall Islands, Chuuk. The birds were seen at close range as they stood on and foraged near a small sandy islet. Two adult and several immature Masked Boobies were present. The adults possessed white and black plumage, black facial masks, and gray feet. Tail and bill coloration were not specifically noted. The birds appeared larger and heavier bodied than the Brown Boobies while standing and in flight. These characteristics safely distinguish *S. dactylatra* from adult Red-footed Boobies (*S. sula*), which have reddish feet, pinkish to pale bluish facial skin, and are similar in size to Brown Boobies (Harrison 1985). Although Masked Boobies occur through much of Micronesia, they have not been previously reported from Chuuk or the other eastern Caroline Islands (Pyle & Engbring 1985, Pratt et al. 1987).

Gray Heron (*Ardea cinerea*). A probable Gray Heron was observed flying past the Palau Pacific Resort on Ngerekebesang, Palau on 10 February 1988 (DP). The bird was quite distant, but its large size, deep slow wingbeats, and gray coloration were evident. These characteristics eliminate all other herons except the Western Hemisphere counterpart of *A. cinerea*, the Great Blue Heron (*A. herodias*), which has occurred in the Hawaiian Islands (Pratt et al. 1987). The observer is familiar with both species and saw nothing that would indicate that the Palau bird was *A. herodias*, but species differences (thigh color, subtle color differences elsewhere) are difficult to discern on distant flying birds. Thus, the Gray Heron remains a hypothetical species for Palau, as reported by Owen (1977).

Much better seen was a Gray Heron at the reservoir between Colonia and the airport in Ruul district, Yap on 25 February 1991 (DP, RP, others). First observed standing at the water's edge, its uniformly gray coloration, without the mauve tones and chestnut thighs of a Great Blue Heron, could be easily seen. This is the first time this species has been reported from Yap. The only other sightings of *A. cinerea* in Micronesia come from the southern Marianas, where a handful of records have occurred since 1982 (Glass et al. 1990, Wiles et al. 1993, Stinson et al. 1997a).

Great Egret (*Ardea alba*). A Great Egret was photographed as it stood along the bank of the Colonia reservoir in Ruul, Yap on 27 February 1991 (DP, RP, others). The bird was accompanied by a Little Egret (*Egretta garzetta*) and an Intermediate Egret (*E. intermedia*), allowing comparison of the three species (Figure 1a). The Great Egret was easily recognized by its large size and crook-necked stance. This is the first record of *A. alba* for the Caroline Islands. The only

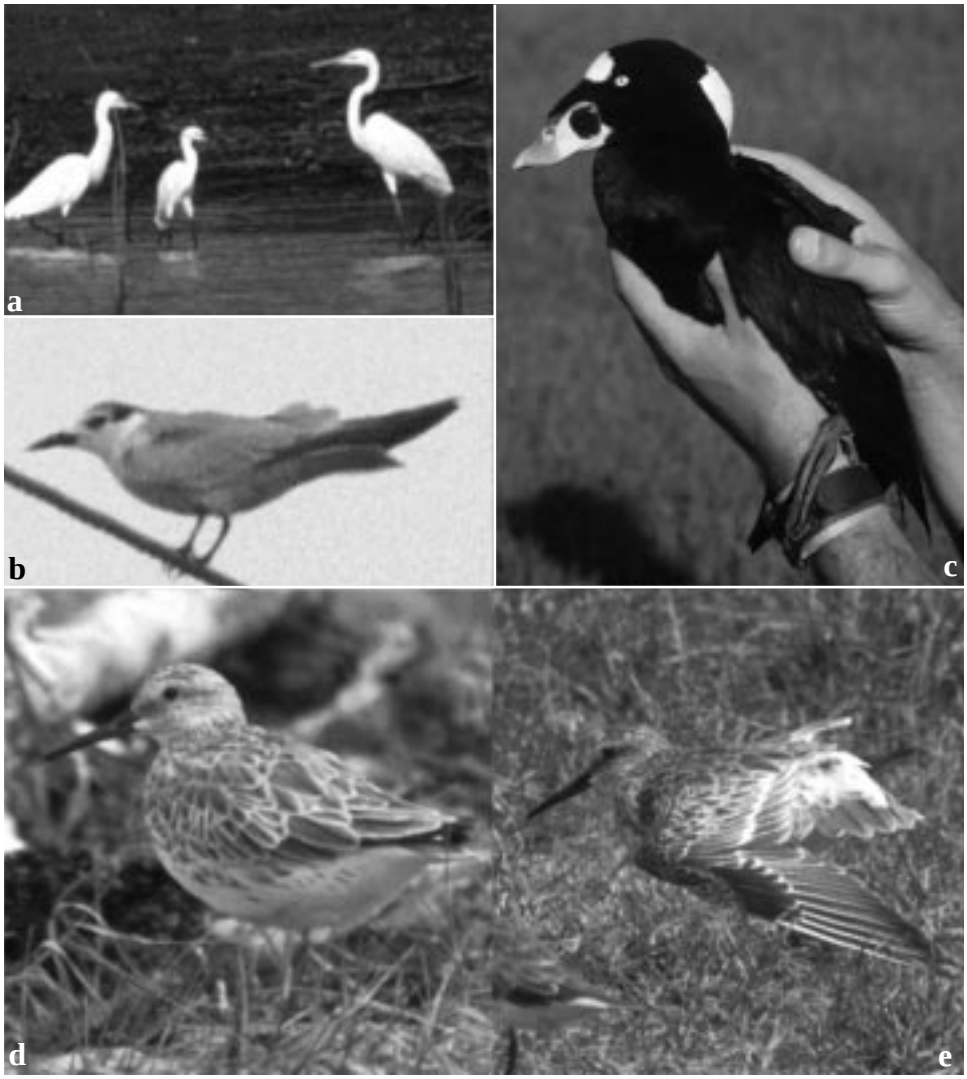

Figure 1. (a) Intermediate, Little, and Great Egrets at the Colonia reservoir in Ruul, Yap. Photo by H. Douglas Pratt. (b) Whiskered Tern in Airai State, Babeldaob, Palau. Photo by H. Douglas Pratt. (c) Male Surf Scoter captured at Two Lover's Point, Tamuning, Guam. Photo by Gary J. Wiles. (d, e) Great Knot at Togcha Beach, Yona, Guam. Photos by Reggie E. David.

other Micronesian records are from the southern Marianas, where the species was seen almost annually from 1992–1998, often on multiple islands per year (Stinson et al. 1995, 1997a; G.J. Wiles, unpubl. data).

Little Egret (*Egretta garzetta*). A Little Egret with a broken leg was found along the main coastal highway 6 km east of Songsong village, Rota on 15 November 1994 (DW). The bird was collected and identified by its white plumage, black bill and legs, and yellow feet. Unfortunately, the disposition of the

specimen is not known. These characters were used to recognize other single Little Egrets in a runway field at the Rota airport in October 1995 (DW), at a golf course pond at the Rota Resort on 23 October and 2 November 1995 (GW, DW), and at the resort's sewage ponds on 20 December 1995 (DW, MG). Three additional birds were seen at the sewage ponds on 2 and 6 January 1999 (SP, GB). These are the first records for Rota.

Pratt et al. (1987) listed this egret for Yap, based on an August 1978 observation of a single bird at the Colonia reservoir (DP), but descriptive details of the sighting were never published. Two subsequent records verify this species' occurrence. On 27 February 1991, a bird was photographed with a Great Egret (see previous account) and Intermediate Egret at the Colonia reservoir in Ruul (DP, RP, others) (Figure 1a). Another Little Egret was seen at the reservoir on 4 March 1993 (DP, PS, others). All of the sightings, including the 1978 record, were of birds with gray lores and yellow feet, which are characters of the East Asian subspecies *E. g. garzetta* rather than *E. g. immaculata* from Australia, which has yellow lores, or *E. g. nigripes* from Indonesia and the southwest Pacific, which has dark tops of the toes. This species is an uncommon visitor to Palau (Engbring 1988). It has become a rare, but annual, migrant to the Marianas since 1987, with other records from Guam, Saipan, and Pagan (Wiles et al. 1993, Stinson et al. 1997a).

Pond-heron (*Ardeola* sp.). On 19-20 November 1997, a pond-heron in winter plumage was observed at the Piti mitigation wetland in Piti, Guam (PB, BB). The bird was noticeably larger than a Yellow Bittern (*Ixobrychus sinensis*) and brownish in appearance when perched. In flight, its white wings and tail were readily apparent. These plumage characters do not allow a species identification to be made. The only previous record of *Ardeola* from Micronesia is of a Chinese Pond-Heron (*A. bacchus*) sighted on Guam in 1987 (Wiles et al. 1993).

Striated Heron (*Butorides striatus*). One individual in adult plumage was seen well at the Colonia reservoir in Ruul, Yap on 25 February 1991 (DP, RP, others). Its plain gray neck feathers eliminated the Green Heron (*B. virescens*), a rare visitor to the Hawaiian Islands, as a possibility. Also eliminated were South Pacific subspecies of Striated Heron (or "Mangrove Heron") that have rusty tinges to the gray neck. The bird was first observed perched at the south end of the nearly dry reservoir, and it subsequently took flight and disappeared over the trees to the west. This represents the first record of *B. striatus* for Yap. The species has been previously recorded in Palau, the Marianas, and Chuuk (Pyle & Engbring 1987, Engbring 1988, Stinson et al. 1997a).

Cinnamon Bittern (*Ixobrychus cinnamomeus*). GW and KO sighted a single bird at the Colonia reservoir in Ruul, Yap on 5–6 July 1994. Although it was viewed only briefly in flight on both days, the observers were able to note that the wings and body showed a uniform rufous brown color, with no hint of contrasting darker primaries as in Yellow Bitterns. Cinnamon Bitterns range from India to much of eastern Asia, including the Philippines and Indonesia (Meyer de Schauensee 1984, del Hoyo et al. 1992). Northern populations in China, south-

eastern Siberia, and the Ryukyus are migratory, while some other populations may undertake dispersive movements in response to seasonal weather patterns (Hancock & Kushlan 1984). This is the first Micronesian record for the species.

Black-crowned Night-Heron (*Nycticorax nycticorax*). DP and HB observed an individual in flight over the coastal road between Colonia and Balabat village in Ruul, Yap on 27 February 1991. The bird was in adult plumage, with a black crown and back and grayish underparts and wings. Black-crowned Night-Herons are rare migrants to western and central Micronesia (Pratt et al. 1987, Engbring 1988, Stinson et al. 1997a). The only other published records for Yap and Ulithi apparently date back to the 19th century or early 1900s (Kuroda 1922, Baker 1951).

Northern Pintail (*Anas acuta*). Several pintails were seen at the Colonia reservoir in Ruul, Yap on 11 February 1988 (DP, RP, others). Identifying traits included their overall long-necked, long-tailed shape with which the observers were quite familiar. The small flock was sighted both on the water and in flight. None of the drakes were in full breeding plumage, but rather retained much of their eclipse feathering, so that the exact number of males and females was unclear. The absence of previous reports of Northern Pintails from Yap is surprising. It is one of the most common migratory ducks in the Marianas and Palau (Engbring 1988, Stinson et al. 1997a) and has also been recorded in Chuuk and the Marshall Islands (Baker 1951, Pyle & Engbring 1987).

Northern Shoveler (*Anas clypeata*). Several shovelers were observed at the Colonia reservoir in Ruul, Yap on 11 February 1988 (DP, RP, others). A flock of four birds was seen at this location and in flight elsewhere on Yap Island from 24–26 February 1991 (DP, RP, others). All birds were readily identified by their spatulate bills. A local observer said the birds were present all winter in 1991 and that he had seen similar ducks in other years on Yap (T. Alfonso, pers. comm.). Because this species is seen in most years in the southern Marianas (Stinson et al. 1997a), with a few additional records from Pohnpei, Kosrae, and the Marshalls (Pyle & Engbring 1985), its occurrence on Yap is not unexpected.

Eurasian Wigeon (*Anas penelope*). On 2 November 1995, three Eurasian Wigeons were noted at one of the lower golf course ponds at the Rota Resort on Rota (GW, DW). The birds were viewed from distances of 30–50 m, with a number of key features clearly seen. These included brown heads, breasts, backs, and flanks; white bellies clearly demarcated from the breasts and sides; a rounded head shape with an abrupt forehead; and gray bills. A pair of wigeons and 20 Northern Pintails were seen in the mowed fields of the Rota airport on 20 December 1995 (DW, MG). Further sightings of three wigeons occurred at the resort's sewage ponds on 19 December 1998 and on a tidal reef flat at Mochong on 2 January 1999 (SP, GB). One of these birds was an adult male in breeding plumage with a bright rusty head and neck and a creamy forehead and crown stripe.

The Eurasian Wigeon has not been previously reported for Rota. The species is a rare but regular visitor to the Marianas (Stinson et al. 1997a) and has been previously noted on Guam, Tinian, Saipan, and Pagan (Reichel & Glass

1991). Records also exist for Palau, Yap, Chuuk, and the Marshalls (Pyle & Engbring 1985).

Surf Scoter (*Melanitta perspicillata*). An adult male Surf Scoter was captured by H. Cherry and his family while fishing 75–100 m offshore of Two Lover's Point, Tamuning, Guam on 2 January 1997. The bird was emaciated and weakened, and was turned over to the DAWR. Its plumage was entirely black except for separate white patches on the nape and forehead (Figure 1c). The scoter's heavy bill was bright orangish-red on the distal portion, white in the center, and had a black circular spot in front of the cheek. Other traits were white irises and reddish legs and feet with dark webbing. Surf Scoters breed in Canada and Alaska and winter along the Pacific and Atlantic coasts of North America (Madge & Burn 1988, del Hoyo et al. 1992). The species occasionally reaches northeastern Siberia (Madge & Burn 1988), but is a rare vagrant to northern Japan (Brazil 1991). Our record is the first for Micronesia.

Osprey (*Pandion haliaetus*). An Osprey was sighted at the Colonia reservoir in Ruul, Yap on 24 February 1991 (RP, others). The bird was seen well in flight and exhibited the distinctive plumage that is diagnostic of the species, including a broad dark eye stripe, white crown, brown upperparts, and white underparts. Dark patches were visible at the bends of the wings. T. Alfonso (pers. comm.) stated that the bird was present for several months prior to our observation. Ospreys have been previously sighted in Palau, where they possibly once bred, and the Marianas (Baker 1951, Wiles et al. 1987, Wiles & Conry 1990), however, this is the first report from Yap.

Black Kite (*Milvus migrans*). Numerous observations of this species were made on several southern Mariana Islands from late 1994 to mid-1997, with first records obtained for Guam, Rota, and Saipan. Simultaneous reports from different islands indicate that more than one bird was present in the archipelago in two of the years. Black Kites are migratory in much of their Asian range (del Hoyo et al. 1994) and are the most common bird of prey in Japan (Brazil 1991). Single sightings from Pagan (Glass et al. 1990) and Tinian (Stinson et al. 1991a) are the only previous records for Micronesia.

On Guam, a single kite was seen repeatedly from mid-December 1994 to 23 June 1995. Many of the reports came from Nimitz Hill and the nearby villages of Piti and Sinajana, but other positive sightings were made elsewhere in central Guam and at Northwest Field on Andersen Air Force Base. The bird was identified as *M. migrans* on 6–7 January (GW, BB, CA) by its large body size and slightly forked tail. Plumage was mostly dark brown, except for pale patches on the undersides of the bases of the primaries and light brown upperwing coverts. Scattered sightings of another kite resumed on 16 October 1995 and continued until early August 1996. These were also concentrated in the Nimitz Hill area.

Regular observations of solitary Black Kites were made on eastern Rota in 1995 and 1996. One bird was seen in the Duge region and the vicinity of the airport on 7 February, 21 April, and 5 May 1995 (DW), while another kite was sighted on numerous occasions near the airport and Sinapalu village from 25 October

to 7 November 1995 (GW, AM). A kite was regularly reported at the airport by an airline pilot in July 1996. An additional bird was seen at Sinapalu in late December 1996 (GB).

On 23 May 1995, a Black Kite soaring above Suicide Cliff in northern Saipan was videotaped by SN. Upon review of the tape (BB, GW), the bird was identified by the presence of a slightly forked tail, dark undersides, and strongly angled primaries. Single additional kites were seen on Saipan in April and May of both 1996 and 1997 (Kessler 1999).

Additional records of this species for Tinian include a sighting of one bird on 24 February 1996 at the old Japanese shrine at Mt. Lasu (DW, AM). The bird soared over the observers, giving them an excellent view of its forked tail, brown undersides, and large body size. These same features were noted on another kite that was observed numerous times throughout the island between 14 August and 1 September 1997 (DW, ML, AM). This individual was seen closely on several occasions while perched or in flight.

The first record of a Black Kite for Palau was made on southwestern Angaur on 28 December 1994 (FV). The bird was viewed flying high over the lagoon at a long distance, but its large size, dark plumage, indented tail, and long slightly bent wings were noticeable.

Gray-faced Buzzard (*Butastor indicus*). A pair of Gray-faced Buzzards roosted in the vicinity of the football field at Nimitz Hill, Asan, Guam from 1-8 March 1995 (BB, GW, CA). A probable earlier sighting of one of the birds was made at the same location on 16 February (CA, RB). In the early mornings, the buzzards perched in various large trees, preened, and occasionally flew to other trees or landed on the football field. On several mornings, the birds took flight at about 0915 hr and began soaring high overhead on thermal air currents before eventually moving out of sight.

When viewed through a spotting scope, many features were visible on each buzzard, including plain brown upperparts, cap, and nape; a paler brown breast band and brown striping across the belly; a white eyebrow, vent, and thighs; a white spot on both sides of the nape; a white throat with a dark mesial stripe; grayish cheeks delineated on the lower edge by a black moustache stripe; and a brown upper tail surface with four dark bands. Other features were a yellow cere and black bill tip, yellow eyes, yellow legs and feet, and wings equal in length to the tail when perched. The birds were medium sized and had relatively chunky bodies and small heads. In flight, they showed pale underwings tipped in black and a rounded tail.

This is the first record of *B. indicus* in Micronesia. The species is a common migrant in eastern Asia, traveling from its breeding grounds in Japan, northeastern China, and Siberia to wintering areas in southeastern Asia and the Philippines (Wild Bird Society of Japan 1982, Meyer de Schauensee 1984, Dickinson et al. 1991, del Hoyo et al. 1994).

Eastern Marsh-Harrier (*Circus spilonotus*). A dead Eastern Marsh-Harrier was found by C. Atalig near Tewksberry Beach on Taipingot Peninsula southwest

of Songsong village, Rota and was brought to the CNMI Division of Fish & Wildlife office on 2 October 1994. The bird was emaciated, but showed no other signs of obvious injury.

The specimen (BPBM 179973) was positively identified by W.S. Clark (pers. comm.), who determined it to be a juvenile. Several characters separated the bird from a juvenile Western Marsh-Harrier (*C. aeruginosus*), including the presence of grayish tail bands, whitish undersides of the primaries, and the absence of a wide dark eye-stripe. These marks, plus the presence of a pale breast band, are traits of juvenile *C. spilonotus*.

Eastern Marsh-Harriers breed in southeastern Siberia, Mongolia, and China and winter in Southeast Asia and the Philippines (Dickinson et al. 1991, del Hoyo et al. 1994). A sedentary population also occurs in New Guinea (Beehler et al. 1986). Our specimen is the first record for Micronesia.

Chinese Goshawk (*Accipiter soloensis*). On 21 and 23 March 1995, GW and DW saw a single goshawk on Aguiguan, the first time this species has been recorded for the island. The bird was seen in flight on both occasions. During one observation, it was harassed by six to eight White Terns while soaring above the western end of the island. The terns swooped at the goshawk, which eventually sought cover along the clifftop. It was similar in size to the terns and was separable from other species of *Accipiter* by its buffy unmarked wing linings. Other traits were rounded wings tipped in black, some faint lines on the trailing under edge of the wings, and a rounded tail with horizontal banding.

We also report the first specimen record (USNM 600555) of *A. soloensis* for Guam. The bird, an emaciated immature, was obtained in Northwest Field on 19 September 1994 after being injured by a cat. The species was previously documented for the island by sight and photographic records only (Wiles et al. 1993).

Additional sightings of Chinese Goshawks were made on several islands between 1993 and 1998. On Guam, these included several birds seen regularly in Northwest Field and the Conventional Weapons Storage Area of Andersen Air Force Base from October-March in 1994-1995 and 1995-1996 (CA). A single goshawk was observed three times in the Talofofo River Valley from 3-16 October 1996 (GW, FA). Small unidentified accipiters were seen at Nimitz Hill on 4 and 8 March 1995 (4 birds; GW, BB) and 23 December 1995 (3 birds, CA).

On Rota, *A. soloensis* was regularly seen islandwide during the autumn of 1994 (DW), with one bird collected on 27 September (BPBM 179972). Individuals were viewed at the Rota Resort golf course on 28 January 1993 (ML) and the tagastone quarry historic site 0.5 km east of the airport on 9 February 1995 (DW). Two goshawks were seen at the Palii cliffline on 6 November 1997 and another was seen nearby at the Agatasi cliffs on 2 February 1998 (LT).

We also report several additional sightings of this species from Yap and Palau, where previous records already exist (Baker 1951, Engbring & Owen 1981). Single individuals were seen in flight at Guliig Hill about 500 m northwest of the new airport in Ruul, Yap on 10 February 1988 (DP, RP) and again on 25 February 1991 (DP, RP). Both birds were accipiter-like in shape and exhibited

diagnostic unbarred underparts and wing linings. On 2 March 1993, another goshawk with intermediate plumage (i.e., adult body feathering and barred flight feathers typical of immatures) was seen on an unidentified island in the Rock Islands of Palau (DP, PS).

These records further illustrate that small numbers of Chinese Goshawks are regular winter visitors to western Micronesia (Stinson et al. 1997a). In rare years, such as 1992, abundance is noticeably higher (Wiles et al. 1993, Stinson et al. 1995). *A. soloensis* is migratory throughout most of its range, with large numbers passing through southern Japan and the Ryukyus enroute to the Philippines, Indonesia, and Southeast Asia (Brazil 1991, del Hoyo et al. 1994).

Eurasian Kestrel (*Falco tinnunculus*). A female Eurasian Kestrel was identified at the headquarters of the Guam National Wildlife Refuge at Ritidian Point, Guam on 27 September 1994 (GW, KW, JS). It was viewed at close range with a spotting scope as it perched on a tree limb overlooking an open grassy field, where it foraged for small prey. The bird had a bright brown back with black cross barring, a brown tail with thin horizontal striping and a broad terminal band, a brown crown and nape with fine streaking, whitish cheeks, and a narrow moustache-like line below the eye. The underparts were pale brown with broad vertical barring. Observers also noted yellow legs and feet with black claws. The bird remained at the site for about a week before identification was made and for several days afterwards. This species is a common migrant in eastern Asia (del Hoyo et al. 1994). Two records for Saipan (Glass et al. 1990, Stinson et al. 1997a) are the only previous reports from Micronesia.

Peregrine Falcon (*Falco peregrinus*). A large falcon, identified as a Peregrine Falcon, was observed at the Saguagahga seabird colony on the southeastern coast of Rota on 20 December 1995 (DW, MG). The bird was viewed from a distance of 30 m as it flew south along a cliffline at the site. The species' distinctive facial pattern was quite evident, with a blackish crown, nape, and broad moustache, and white cheek observed. Another Peregrine Falcon was seen in flight at the same location on 3 January 1999 (SP) and in pursuit of a White Tern at Palii on 27 January 1999 (NJ). Presumably this same individual was struck by an airplane at the Rota airport on 31 January 1999 (USNM 601127). The bird was an immature male of the Eurasian subspecies *F. p. calidus* and is the first Peregrine collected from the Marianas. A few other Micronesian records of this species exist for Guam, Saipan, Yap, and Palau (Baker 1951, Wiles et al. 1993), but these are the first for Rota.

Unidentified Raptor Records. The following records of unidentified raptors are presented in chronological order to further document the unusually high abundance of birds of prey in the southern Mariana Islands during 1995-1998. None of the records noted here are believed to involve individual birds described in the accounts already presented in this paper.

1) DW and GW found a regurgitated raptor pellet with rat bones in an open field on Aguiguan on 21 March 1995. It was 6 cm long by 2.5 cm in diameter and most likely came from an owl or moderate to large-sized hawk.

2) A hawk was recorded at the Tinian municipal airport on 27 March 1995 (DG).

3) A flock of eight or nine large hawks was sighted over Northwest Field, Guam on 28 March 1995 (JG, RC) as they flew up from the forest and began soaring on the morning thermals. The birds had yellowish legs, barring on the tails and wings, dark wings with darker tips, and white throats and breasts with darker bellies. Additional searches over the next 24 hours failed to locate the hawks, indicating they had left the island.

4) A large hawk or small eagle was seen several times on western Rota from 20 May to 9 June 1996. When seen on 9 June (GW), some of its features (squarish tail, probable pale patches at bases of primaries) were consistent with a Black Kite, but poor viewing conditions prevented identification.

5) A hawk with a long rounded tail, possibly pale underwings, and ragged plumage was seen in the Applatatgua area of central Rota on 5 September 1996 (CA, GW).

6) On Guam, two hawk reports were made by the public at Nimitz Hill in late October and early November 1996.

7) A possible harrier was briefly seen in flight near Tagua Point on Andersen Air Force Base, Guam on 9 February and 6 March 1995 (BB, CA). The bird featured a long tail and white rump, but other identifying characters were not viewed.

8) Two sightings of single medium-sized hawks, possibly representing the same bird, occurred in heavy forest along the Tarague basin cliffline at Andersen Air Force Base, Guam on 6-7 November 1997 (RC, GW, DV) and 11 February 1998 (JQ). In the first observation, the bird appeared *Buteo*-like, with a pale undertail and underwings and a rounded tail, but was too far away to discern other details. During the second sighting, the hawk showed a yellow bill and legs, a white eyebrow, a brownish breast, and brown streaking on the belly when perched. In flight, banding on the tail and considerable barring on the underwings were visible. These features were suggestive of a Gray-faced Buzzard.

Common Moorhen (*Gallinula chloropus*). We report the recent establishment of a breeding population of *G. chloropus* in Yap, based on the following observations. These constitute the first records of this species for the island group. Two adult moorhens were observed at the smaller of two borrow-pit ponds near the new airport runway in Ruul district on 25 February 1991 (DP, RP, others). An adult with a juvenile barely capable of flight was seen about 1-2 km further south at the pond adjacent the old airstrip on 4 March 1993 (DP, PS, others), confirming that breeding had occurred. Another adult was seen at the Colonia reservoir on 5-6 July 1994 (GW, KO). Each adult had a bright red bill and frontal shield, mostly black plumage, and a white vent. The presence of a white stripe along the flank distinguished the birds from the Dusky Moorhen (*G. tenebrosa*), a similar species occurring in New Guinea and eastern Indonesia.

Engbring et al. (1990) did not observe moorhens during a survey of Yap's avifauna in 1984. However, in 1991, M. Falanruw (pers. comm.) stated that the birds had already been present for several years, thus the population probably

became established sometime in the mid- to late 1980s. The source of the founding birds is most likely from one of the neighboring breeding populations in Palau (450 km from Yap), the Marianas (850 km away), or the Philippines (1,300 km away). Moorhens are rare in Palau (Engbring 1988), which possibly makes that island group an unlikely origin. The species is also endangered in the Marianas (Stinson et al. 1991b), but birds there are known to be highly mobile when seeking out new wetlands (Ritter & Sweet 1993). Interisland movement there was demonstrated by the recent colonization of Rota, where birds appeared soon after the construction of the golf course's artificial ponds (Worthington 1998). Dispersal to Rota would have required flights of 60 km over the ocean from Guam or 87 km from Tinian. We highly recommend that additional observations of the Yap moorhen population be conducted to determine its current size and distribution. This would be particularly interesting because the reservoir and presumably many of Yap's other wetlands dried out during a severe drought in 1998.

Greater Sand-Plover (*Charadrius leschenaulti*). A single individual was seen on a rock jetty near Nan Madol in eastern Pohnpei on 19 February 1988 (DP, RP, others). The bird was observed closely, allowing observers to note its large bill. Other characteristics were gray-brown upperparts and breast band, white underparts, and a white eyebrow. This is the first report of a Greater Sand-Plover for Pohnpei. The species has been previously recorded from the other major island groups in the Carolines, as well as the Marianas (Pyle & Engbring 1985, Reichel & Glass 1991, Stinson et al. 1997b).

Snowy Plover (*Charadrius alexandrinus*). One individual was seen on a large tidal flat at the south end of Gilman district, Yap on 23 February 1991 (DP, RP, others). It was viewed at close range and was in basic plumage, with a white collar, forehead, and eyebrow; an incomplete brown breast band; and a brown crown, back, and wings. The bill and legs were dark. This is the second record of a Snowy Plover for Yap (Wiles et al. 1987). The species is a rare visitor to Palau and the Marianas (Baker 1951, Stinson et al. 1997b).

Little Ringed Plover (*Charadrius dubius*). Several birds were observed on the mudflats of the Colonia reservoir in Ruul, Yap on 12 February 1988 (DP, RP). They were recognized by their small size, white collar, pale yellowish legs, and lack of wing bars in flight. This species was recorded in Yap prior to 1932 (Hachisuka 1932), but there have been no subsequent published reports. *C. dubius* is an uncommon migrant in Palau (Engbring 1988) and a rare migrant in the southern Marianas (Stinson et al. 1997b).

Black-winged Stilt (*Himantopus himantopus*). The first specimen record (USNM 600748) of a Black-winged Stilt for Guam was collected on 8 September 1998 at Pago Bay, Chalan Pago. The bird was found along the side of a highway, but was uninjured. It was immature and was identified as belonging to the Eurasian race *H. h. himantopus.* This species has become an annual migrant to Guam and other islands in the southern Marianas over the past decade (Glass et al. 1990, Wiles et al. 1993, Stinson et al. 1997b). Stilt counts have become

increasingly larger during the past several years. In 1997, flocks of seven birds were seen at the Guam International Airport on 18 September (DV) and the sewage treatment ponds at the Rota Resort on 1 November (LT), with four birds noted at the Price-Costco Wetland on Saipan in mid-October (TS). On 13 September 1998, a total of 13 different individuals was seen at several locations on Guam (GW, DV), with five additional stilts found at the Rota Resort on 16 September (GB).

Common Greenshank (*Tringa nebularia*). We report seven sightings of Common Greenshanks from Rota between 1994 and 1997, which represent the first records of this species for the island. Sightings of single birds were made at the Rota airport on 2 August 1994 (DW), at the sewage treatment ponds at the Rota Resort on 26 September 1994 and 4 November 1996 (DW), and at the resort's lower golf course ponds on 2 November 1995 (GW). Groups of three birds occurred at the airport on 19 August 1994 (DW) and at the sewage ponds on 5 December 1996 (DW). One to two birds were present at the sewage ponds from 2-17 November 1997 (LT). All individuals were identified by their slightly upturned bills, robust body shape, greenish legs, white underparts and rumps, and grayish upperparts. The individual seen on 26 September 1994 associated with two Marsh Sandpipers (*T. stagnatilis*) and a Black-winged Stilt, which facilitated comparisons between species. In the Mariana Islands, Common Greenshanks are rare migrants seen in most years, with previous records from Guam, Saipan, and Pagan (Reichel & Glass 1991, Stinson et al. 1997b).

Marsh Sandpiper (*Tringa stagnatilis*). A pair of Marsh Sandpipers was observed with a Common Greenshank and Black-winged Stilt at the sewage treatment ponds at the Rota Resort, Rota on 26 September 1994 (DW). The Marsh Sandpipers were smaller and more lightly built than the greenshank, and featured thin straight black bills, dull greenish legs, white underparts, and pale gray upperparts. White triangular rumps extending to the back were observed in flight. Other Mariana Islands records of this sandpiper exist for Guam, Tinian, and Saipan (Reichel & Glass 1991), but this is a new record for Rota. The species is a rare migrant to the archipelago in most years (Stinson et al. 1997b).

Wood Sandpiper (*Tringa glareola*). This species is an uncommon to common annual migrant to western Micronesia (Engbring 1988, Stinson et al. 1997b). In the southern Marianas, groups of these sandpipers typically number one to eight birds, with larger flocks of 12-20 individuals rarely seen (G.J. Wiles & D.W. Stinson, unpubl. data). Here, we document the largest aggregation of *T. glareola* reported for Micronesia. Thirty-two birds were seen feeding in a flooded vacant construction site next to the Agana Swamp in Agana, Guam on 12 November 1997 (GW, BB, PB). Smaller numbers of birds used the site from October to December.

Wandering Tattler (*Heteroscelus incanus*). GW recorded a single Wandering Tattler along a rough stretch of limestone shoreline near the boat landing at the western end of Aguiguan on 23 March 1995. The bird was seen poorly before it flushed, but was tattler-like in shape and posture with unmarked gray

upperparts. It gave a rapid *ti-ti-ti-ti-ti* call, which is diagnostic for the species. *H. incanus* is an uncommon migrant to the Marianas (Reichel & Glass 1991, Stinson et al. 1997b). This is the first record for Aguiguan.

Far Eastern Curlew (*Numenius madagascariensis*). An emaciated curlew of this species was captured at the commercial shipping port in Apra Harbor, Guam on 4 August 1989 and examined by GW and BB. The bird was identified by its long (about 150 mm) decurved bill, brown streaking on the rump and tail, an unmarked head, and wing linings that were heavily striped with brown. Photographs are on file at the DAWR. Another Far Eastern Curlew occurred at Togcha Beach, Yona, Guam from 4-7 October 1998 (BB, GW, CA, GWt). This species was once apparently a regular migrant to western Micronesia (Hartert 1898, Safford 1902, Baker 1951), but has become much rarer throughout its range in recent decades and is now considered near-threatened (del Hoyo et al. 1996). Only a handful of reports have been published for the region since 1945 (Pyle & Engbring 1987, Stinson et al. 1991a). Records of this species from the 1960s in the DAWR files are insufficiently documented to separate birds from the much more common Whimbrel (*N. phaeopus*).

Eurasian Curlew (*Numenius arquata*). Several sightings of this species from Saipan and Guam (Engbring & Owen 1981, Stinson et al. 1991a, Wiles et al. 1993) represent the only other records of this species in Micronesia. On 21 December 1996, a single Eurasian Curlew was observed in a mowed field at Camp Covington in Santa Rita, Guam (GW, BB, DV). The bird was identified by its large size, long decurved bill, and white belly, lower back, and rump. This is only the second record of this species for Guam.

Long-billed Dowitcher (*Limnodromus scolopaceus*). Three Long-billed Dowitchers were sighted at Flores Wetland in southern Saipan on 16 December 1995 (GW, AM, MG). They were viewed closely for about 40 minutes and showed many characters typical of non-breeding *Limnodromus*. Each of the birds possessed a long straight bill, plain gray upperparts, white eyebrow, yellowish legs, white on the trailing edge of the secondaries, and white belly with gray chevrons lining the flanks. They also had unmarked and moderately gray throats and breasts. This latter feature distinguished them from Short-billed Dowitchers (*L. griseus*) in winter plumage, which typically exhibit pale gray breasts with faint spotting (National Geographic Society 1987, Paulson 1993). Calls were not heard.

A pair of juvenile Long-billed Dowitchers was recorded at a temporary pool at a vacant construction lot in Barrigada, Guam on 4 and 6 November 1998 (DV, GW, CA, BB, GWt). Both individuals showed dark feathering narrowly edged in chestnut brown on the scapulars and mantle. The coloring did not extend into the wing coverts or cap. This plumage pattern separated the birds from immature Short-billed Dowitchers (Hayman et al. 1986, Paulson 1993). Other characters were long straight bills that were basally pale and black on the outer portion, yellowish legs, gray heads with white eyebrows, and unmarked brownish gray upper breasts. Observers also noted white backs and heavily barred tails and lower rumps. The birds were not viewed in flight, nor did they vocalize.

L. scolopaceus is a rare migrant to eastern Asia (Brazil 1991, Hayman et al. 1986). These are the first confirmed records of the species from Micronesia, although unidentified dowitchers have been seen on three other occasions in the region, all on Saipan. The first was in December 1991 (Wiles et al. 1993). The second was in late December 1994, when three individuals were observed at an unspecified site (AM), with one seen again about a week later on 31 December at the large freshwater catchment at the island's airport (GW, AM). Another bird was recorded at Flores Wetland on 3-4 January 1998 (LT, GW).

Black-tailed Godwit (*Limosa limosa*). An injured adult female was found at Dungcas Beach, Tamuning, Guam on 13 May 1997. The bird was euthanized because of the extent of its injuries (USNM 600606). It was in non-breeding plumage, with plain gray upperparts, breast, neck, and crown, a white belly, and no chestnut coloration typical of breeding individuals. It had heavy fat deposits, indicating that it was in good physical condition. The bird was one of two Black-tailed Godwits and a Bar-tailed Godwit (*L. lapponica*) that over-wintered in the area of East Agana Bay and the Guam International Airport, with the birds first seen on 24 November 1996. This is the first specimen record for the Marianas, where it is considered a rare visitor (Stinson et al. 1997b). The specimen was identified as *L. l. melanuroides* (R. Clapp, pers. comm.), which is the subspecies found in eastern Asia (Hayman et al. 1986, del Hoyo et al. 1996).

Bar-tailed Godwit (*Limosa lapponica*). A godwit was seen near the airport on Kosrae on 21 February 1988 (DP, RP). It was in winter plumage, had a long slightly upturned bill, and showed thin barring across the tail and rump. Bar-tailed Godwits are regular migrants across much of Micronesia (Pyle & Engbring 1985, Pratt et al. 1987, Stinson et al. 1997b), but our record appears to be only the second for Kosrae (Hayes 1985).

Ruddy Turnstone (*Arenaria interpres*). One individual was sighted along the rugged limestone shoreline near the boat landing on the western end of Aguiguan on 23 March 1995 (GW). The species' distinctive dark and white wing pattern was visible as the bird flew off. Ruddy Turnstones are a common migrant throughout the Mariana Islands (Reichel & Glass 1991, Stinson et al. 1997b), but have not been previously reported from this island.

Great Knot (*Calidris tenuirostris*). RD photographed a Great Knot at Togcha Beach, Yona, Guam on 1 March 1991 (Figure 1d, e). This provides further documentation of several previous sight records for the island in 1990-1991 (Wiles et al. 1993) and 12-15 November 1997, when a pair of birds was seen at Dungcas Beach, Tamuning and four others were recorded at Togcha Beach (GW, DV, BB, RD).

Red Knot (*Calidris canutus*). A Red Knot was closely viewed on several occasions at Dungcas Beach, Tamuning, Guam from 1-6 October 1997 (CA, DV, BB, PB). The bird was in non-breeding plumage, with a gray head and whitish eye-line, a gray back and wings showing a minor amount of scaling, gray speckling on the breast, and a mostly white belly marked by a series of

dark chevrons along the flanks. Other distinguishing features included a relatively short straight black bill, a robust body shape, and greenish-yellow legs. In flight, the knot displayed horizontal barring on the tail and narrow wingbars. This species is a high latitude Holarctic breeder, with populations in northeastern Siberia migrating to Australia and New Zealand (Hayman et al. 1986, del Hoyo et al. 1996). The only previous record from Micronesia is a single bird reported from Palau (Owen 1977).

Temminck's Stint (*Calidris temminckii*). GW and BB observed a single Temminck's Stint foraging with four Long-toed Stints (*C. subminuta*) in a short mowed grass field at the Guam International Airport on 2 January 1997. Two Temminck's Stints were in the flock on 4 January (PB). During the initial viewing, the birds were examined with a spotting scope at distances of 10-40 m. The Temminck's Stint was easily separable from the others by its solid gray upperparts and breast. Its breast was sharply demarcated from the white belly, and it had dull yellow legs and a short black bill. In contrast, the Long-toed Stints had brownish feathering edged in buff on the back and wings. All of the stints were small and equal in size. The characters noted here also distinguish *C. temminckii* from wintering Red-necked Stints (*C. ruficollis*), which typically have paler gray backs, white breasts, black legs, and almost always occur along coastal shorelines in the Marianas.

C. temminckii breeds widely across northern Asia and Europe and winters in southern Asia and Africa. The species is an rare migrant to the Philippines (Dickinson et al. 1991). Two previous records from Saipan in 1983 and 1988 (Glass et al. 1990) plus another on 30 December 1990 (DS, GW) are the only other Micronesian sightings.

Common Snipe (*Gallinago gallinago*). A Common Snipe was viewed in a mowed field at the Rota airport on 2 January 1999 (SP, GB). Observers saw the noticeable white trailing edge on the bird's wings as it flew away. This species has been recorded only a few times previously in the Marianas (Stinson et al. 1991a, 1997b, Wiles et al. 1993). Aside from a hypothetical report from Wake Island (Johnston and McFarlane 1967), there are no other records of *G. gallinago* from Micronesia.

Swinhoe's Snipe (*Gallinago megala*). Three *G. megala* were flushed from the small pond beside the old airport in Ruul, Yap on 4 March 1993 (DP, PS, others). The birds were recognized by their direct escape flight and by the pale trailing edge of their secondaries, which was not sharply demarcated from the rest of the wing as in Common Snipe. Pyle & Engbring (1987) provided the only other report of Swinhoe's Snipe from Yap. It is considered a common migrant in Palau (Engbring 1988) and a rare but annual visitor to the Marianas, where it is the most common snipe present (Stinson et al. 1997b). *G. megala* is probably a regular migrant to Yap, although field identification problems make this difficult to confirm. Snipe are occasionally found in moderate numbers on Yap, as demonstrated by 11 unidentified birds scared from a wet antenna field near the old airport on 9 March 1986 (GW, JE).

Red-necked Phalarope (*Phalaropus lobatus*). TS observed a Red-necked Phalarope at Lake Hagoi, Tinian on 29 May 1999. The bird, which was small and sandpiper shaped, was viewed for 10 minutes at distances as close as 10 m. It alternately flew about and landed on the lake's surface, and frequently dipped its bill in the water. Distinctive plumage marks included a black face and crown, a small white mark above the eye, and a rufous brown band wrapping downward from the sides of the neck to the upper breast. The lower breast and flanks were white with gray markings, while the undertail coverts were entirely white. A slender and straight black bill was also noted. *P. lobatus* breeds across the northern Holarctic region (Hayman et al. 1986). Populations from eastern Siberian winter primarily in the seas around eastern Indonesia and northern New Guinea (Beehler et al. 1986, del Hoyo et al. 1996). This is the first record of a phalarope for Micronesia.

Oriental Pratincole (*Glareola maldivarum*). Five birds were seen in association with a small number of Pacific Golden Plovers (*Pluvialis dominica*) and Ruddy Turnstones in a mowed grass field on Andersen Air Force Base, Guam on 24-25 May 1995 (BR, GW, CA, BB). Four individuals were entering breeding plumage, while the fifth remained in adult non-breeding plumage. The birds possessed whitish throats outlined by a narrow black line; unmarked dark brown wings; paler brown heads, breasts, and necks; and white bellies. Other traits were dark legs, an eye-ring on the lower half of the eye, a bright red mark at the base of the bill, and wings extending beyond the tail. The birds were similar in size to the plovers. In flight, the pratincoles were tern-like in shape with swept back wings and shallow forked tails. All had white rumps, blackish tails, and chestnut underwings.

A single adult Oriental Pratincole in non-breeding plumage resided at a set of concrete pads overgrown with grass at the Guam International Airport from 9 November to 8 December 1997 (FA, GW, KO, BB, DV). Seen clearly on numerous occasions, it had a dull brownish bib fringed by a narrow indistinct black line, a complete white eye-ring, a lack of any red on the bill, and many of the other characters noted above.

This species is found in much of southern Asia, with populations in China and Japan migrating to southeastern Asia and Australia (Hayman et al. 1986, Brazil 1991, del Hoyo et al. 1996). Previous regional records of *G. maldivarum* exist for Rota, Saipan, Palau, Yap, Chuuk, and the Marshall Islands (Pyle & Engbring 1985, 1987, Glass et al. 1990). Recent sightings in Yap, which include 10 birds mixed with other shorebirds on 25 February 1991 (DP, RP, others) and three or four birds on 4 March 1993 (DP, RP, others), both at the old airport in Ruul, give further evidence that the species is a regular winter migrant to this island group.

Black-headed Gull (*Larus ridibundus*). A bird in winter plumage was sighted as it flew along the coast opposite O'Keefe's Island in Weeloey district, Yap on 4 March 1993 (DP, PS, others). It displayed white plumage with pale gray wings and back, and a dark spot behind the eye. The outer primaries showed a white

wedge on the upper surface and a black trailing edge. This gull is viewed annually in small numbers during the winter in Palau (Engbring 1988), but increased sightings in the Marianas over the past decade (Stinson et al. 1997a) support the hypothesis that the species is expanding its winter range in the Australasian region (Argeloo 1993).

Great Crested Tern (*Thalasseus bergii*). Great Crested Terns breed widely across the Caroline and Marshall Islands (Pyle & Engbring 1985, Engbring 1988). However, with the exception of Saipan, where a few birds may appear regularly (Glass et al. 1990), the species has rarely been recorded in the Marianas (Dixon & Starrett 1952, Maben 1981). Here, we document multiple additional sightings for Guam, which give evidence that *T. bergii* is a regular visitor in small numbers to the southern Marianas.

From March 1995 to October 1998, G. Davis (unpubl. data) recorded seabird numbers during 99 fishing trips made off southern Guam. Great Crested Terns were recognized by their large size, long swept-back wings, yellow bills, and distinctive behavior, including strong and often high circling flight and plunge diving. The species was observed on eight of 39 trips ranging 3-8 km south of the island, with an average of 0.3 birds recorded per trip. Sightings became increasingly common with greater distance from Guam. Davis recorded *T. bergii* on 18 of 30 trips to Galvez Banks (26 km southwest of the island), with a mean of 2.1 birds per trip; on each of 14 trips to Santa Rosa Reef (50 km southwest), with a mean of 6.4 birds per trip; and on each of nine trips to White Tuna Bank (67 km southwest), with a mean of 10.7 birds per trip. Birds were seen in all months except April, but were most common from May to September, with peak numbers in July. However, this seasonal pattern is likely biased because nearly all trips to the more distant banks were made from June to August. The terns usually occurred in groups of two or four birds, with flocks of 10-15 sometimes recorded. They were usually seen with other seabirds near schools of yellowfin tuna (*Thunnus albacares*). Individuals rarely approach close to Guam, although GW observed a single tern from a boat about 2 km offshore of Agat on 7 June 1992 and another flying along the reef margin at Togcha Beach, Yona on 24 May 1996. Presumably, birds visiting the southern Marianas have dispersed from breeding colonies in the Carolines.

Gull-billed Tern (*Sterna nilotica*). The only previous reports of this species from Micronesia are a sighting from Guam (Wiles et al. 1993) and a hypothetical record of two birds from Saipan (Pratt 1984, Reichel & Glass 1991). Here, we note a second record for Guam. A single Gull-billed Tern was observed daily along the sandy beach at Ritidian Point from 4-7 November 1997 (CN, MR, GW). A variety of diagnostic features were seen well, including winter head markings, pale gray mantle, light black wingtips, a bulky black bill, and the bird's relatively large size.

Little Tern (*Sterna albifrons*). Hayes (1985) previously reported birds of either this species or Least Tern (*S. antillarum*) from Kosrae. Here, we document the first positive record of the Little Tern for this island, based on observations of

five scattered individuals seen perched and in flight at the island's airport on 24 February 1988 (DP, RP). Two of the birds showed pale gray mantles contrasting with white rumps and tails, which when present is a diagnostic field mark separating the two species (Olsen & Larsson 1995). Their small size distinguished them from other tern species. Calls were not given. Presumably, all of the birds in the flock were Little Terns. This species was also seen at Kolonia Harbor, Pohnpei on 20 February 1988 (DP, RP, others), when one of several individuals was positively identified, and near the airport on Weno, Chuuk on 20 February 1993 (DP, PS, others). *S. albifrons* is considered a rare to uncommon visitor throughout much of Micronesia (Pratt et al. 1987, Stinson et al. 1997a).

Black-naped Tern (*Sterna sumatrana*). The U.S. Fish & Wildlife Service (1996) erroneously listed this species for Tinian, based on five sightings of one to five birds at Lake Hagoi from 27 October 1994 to 14 March 1995. This tern has not been previously noted on the island. The agency's report did not provide descriptions of the birds, but did include a photograph of a perched bird, which reveals that identification was incorrect. The photo shows a generally whitish tern, with a white crown and nape, a blackish eyespot, dark marginal coverts at the bend of the wing, a possibly grayish chest, and a relatively stout black bill. These characters are not diagnostic, but agree more closely with several other types of terns known from the Marianas, including the White-winged Tern (*Chlidonias leucopterus*), Whiskered Tern (*C. hybridus*), and Gull-billed Tern (Harrison 1985). Mixed flocks of White-winged Terns and Whiskered Terns were relatively common on Guam, Rota, and Saipan during this same period (Wiles & Worthington 1996). The bird in the photo has characters best matching a White-winged Tern, which has been previously recorded on Tinian (Glass et al. 1990).

Gray-backed Tern (*Sterna lunata*). Small numbers of Gray-backed Terns were observed on several days from 19-26 July 1995 on the island of Anatahan in the central Marianas (GW, DW, AM, CK). Sightings included groups of 12 birds roosting on a small offshore rock on the south-central coast of the island and four birds flying along the north coast, and single birds seen at various other locations. The terns were viewed at close range several times, with the following features observed: medium gray colored backs and upper wing surfaces, black wing tips, long deeply forked tails, black caps with white foreheads, white underparts, and black bills. Tail coloration was not noted. The birds were similar in size to Brown Noddies (*Anous stolidus*). Gray-backed Terns have not been previously recorded for Anatahan. They have been reported from several other Mariana Islands (Reichel & Glass 1991, Kessler 1999), with nesting known for Guguan and suspected for Farallon de Pajaros (Clapp & Hatch 1986, Reichel 1991). Other verified records in Micronesia come from the Marshalls and Wake, although breeding is not known from either location (Pyle & Engbring 1985, Pratt et al. 1987).

Whiskered Tern (*Chlidonias hybridus*). A Whiskered Tern was observed and photographed (Figure 1b) near a bomb crater pond in Airai State in southern Babeldaob, Palau on 27 February 1993 (DP, PS, others). The bird was in non-

breeding plumage and exhibited the auricular patches characteristic of this species, which differ from the pattern shown by White-winged and Black Terns (*C. nigra*) (Harrison 1985). It also had white underparts, gray wings, a white forehead, a dark crown and nape, and a black bill. The tail showed slight forking.

This is the first record of this species for Palau. Sightings of Whiskered Terns have become increasingly common in the southern Marianas during the past decade (Wiles & Worthington 1996, Stinson et al. 1997a). Additional sightings on Yap at the old airport in Ruul on 11-12 February 1988 (DP, RP) and along the coast north of Colonia on 4 March 1993 (DP, PS) support the belief that the species is becoming a regular visitor to western Micronesia.

Long-tailed Cuckoo (*Eudynamis taitensis*). Two sightings made six days apart in 1999 on Guam and Sarigan represent the first reports of this species from the Mariana Islands. The first cuckoo was seen on 30 June in limestone forest in the Munitions Storage Area, Andersen Air Force Base in northern Guam (LH). It landed in a tree 5 m from the observer and was viewed for 5 minutes. Identifying features included a long tail with numerous bands on the underside; beige underparts with dark vertical streaking, indicating the bird was an immature (Falla et al. 1981); a dark brownish facial patch located below and behind the eye; and a relatively straight heavy bill. The bird was large, about the size of a Mariana Crow (*Corvus kubaryi*), and often held its tail cocked downward at a 45˚ angle. Coloration of the upperparts was not noted.

A second cuckoo was seen on 6 July on the edge of a small opening in native forest on Sarigan (MS). The bird flew in and perched in a tree, then flew to another tree, scrambled upward along the trunk, and warily disappeared into the foliage. It was large and appeared accipiter-like in flight with rapid wingbeats and broad rounded wings. When perched, dark barring was evident on the upper surface of its long tail and rusty brown back; some noticeable white spotting was present on the wings. Two white facial stripes were also observed. The bill was not seen well, but was longish and not raptor shaped.

Long-tailed Cuckoos breed in New Zealand and migrate to wintering grounds in southern and western Oceania, including the Caroline and Marshall Islands (Falla et al. 1981, Pratt et al. 1987, del Hoyo et al. 1997). The dates of our records correspond with the species' wintering period, which typically lasts from May to September.

Fork-tailed Swift (*Apus pacificus*). We report the first spring sighting of a Fork-tailed Swift in Micronesia, based on three to four individuals observed soaring above the cliffline at Ritidian Point, Guam on 30 April 1999 (BB). The birds were identified by their white rumps, forked tails, and large size. This species is a rare migrant in the southern Mariana and Marshall Islands, with all previous records occurring in October and November (Clapp 1989; Stinson et al. 1997a; G. Wiles, unpubl. data).

White-throated Needletail (*Chaetura caudacuta*). GW, DV, and CA observed a White-throated Needletail foraging along the upper cliffline at Pati Point, Andersen Air Force Base, Guam on 4 November 1997. The bird exhibited

fast and strong flight as it soared and swooped repeatedly in the high winds coming over the clifftop. It was never observed to flap its wings. Identifying field marks included a large body with long swept back wings, bright white undertail coverts, a duller white patch on the throat that was sharply demarcated from the lower portion of the neck, a light grayish back that was clearly evident at times, and a blue-gray sheen on the upper surface of the wings. The tail was short and slightly rounded with dark undersides, and not forked. Several of these characters separated the bird from a Fork-tailed Swift, the only other large swift known to occur in Micronesia. On 7 November, another needletail (presumably the same bird) was sighted over the Tarague basin cliffline, 4 km west of the initial sighting location (GW). The occurrence of the bird was perhaps related to Supertyphoon Keith, a massive storm that passed through the southern Marianas on 2-3 November.

This is the first Micronesian record of *C. caudacuta*. The species breeds in northern China, southeastern Siberia, and Japan, and is thought to migrate primarily through Indochina and Wallacea to reach its wintering grounds in Australia and New Guinea (Chantler & Driessens 1995).

Oriental Reed-Warbler (*Acrocephalus orientalis*). Pyle & Engbring (1987) reported a large unidentified reed-warbler from Palau, speculating that it was most likely a Great Reed-Warbler (*A. arundinaceus*). Here, we report a second Micronesian sighting of a similar but also unidentified reed-warbler, this one from Yap. The bird was seen in a tangantangan (*Leucaena leucocephala*) thicket near Machbaab Pond between the old and new airports in Ruul on 25 February 1991 (DP, RP, others). The bird gave a typical *Acrocephalus* chatter and chased a Micronesian Honeyeater (*Myzomela rubrata*), but did not otherwise vocalize. It was a large and very brown reed-warbler that did not respond to playback of the song of the Nightingale Reed-Warbler (*A. luscinia*), which is endemic to the Marianas. The bird resembled a Caroline Islands Reed-Warbler (*A. syrinx*), but that species is sedentary and extends westward only to Woleai Atoll (Baker 1951), some 650 km east of Yap.

We speculate that both the Yap and Palau birds represent vagrant Oriental Reed-Warblers, a species that was recently separated from *A. arundinaceus* (Shirihai et al. 1995). *A. orientalis* is distributed through much of eastern Asia and migrates to the Philippines, Indonesia, and rarely New Guinea (Beehler et al. 1986, Dickinson et al. 1991, MacKinnon & Phillipps 1993). Two similar but less likely candidates for wandering to the western Carolines are the Clamorous Reed-Warbler (*A. stentoreus*) and Thick-billed Reed-Warbler (*A. aedon*) (Pyle & Engbring 1987). *A. stentoreus* is a fairly common but non-migratory resident of the Philippines, while *A. aedon* is a migrant of eastern mainland Asia that does not visit the Philippines (R.S. Kennedy, pers. comm.).

Gray-streaked Flycatcher (*Muscicapa griseisticta*). Single birds of this species were sighted at the municipal dump on Koror on 8 February 1988 and on "NECO" Island in the Rock Islands, Palau on 9 February 1988 (DP, RP, others). A variety of field marks were seen on both individuals, including white underparts

with heavy brown streaking on the breast and flanks, a pale wing bar, white eyering, and whitish lores. This flycatcher breeds in northeastern Asia and migrates to the Philippines, eastern Indonesia, and western New Guinea (King et al. 1975, Beehler et al. 1986, Dickinson et al. 1991). Engbring (1988) considered *M. griseisticta* an uncommon migrant to Palau. In addition to our sightings, the only other known records for the island group are several birds collected in 1931 and 1945 (Coultas 1931, Marshall 1949), single individuals seen on Ulong on 18 October 1978 and on Malakal on 3 February 1979 (J. Engbring, pers. comm.), and single birds on Helen and Tobi in the late 1970s (Engbring 1983).

Blue Rock-Thrush (*Monticola solitarius*). DP observed an adult male Blue Rock-Thrush perched high in *Casuarina* trees at the Palau Pacific Resort on Ngerekebesang, Palau on 9 February 1988. The bird had blue upperparts and breast and a chestnut belly. This species ranges across Eurasia and Africa (King et al. 1975). The only other published Micronesian record was made in Palau prior to 1932 (Hachisuka et al. 1932), however, an additional sighting of a male bird on Koror is known from 25 February to 13 March 1979 (J. Engbring, pers. comm.).

Yellow Wagtail (*Motacilla flava*). Four records of this species were obtained on Guam between 1993 and 1996. Sightings were made on three occasions in mowed grassy fields near Pati Point on Andersen Air Force Base, as follows: three birds on 28-29 September 1993 (RC, GW, BB), a pair of birds on 29 September 1994 (GW), and two to four birds from 20-28 September 1996 (BB, PB, MLi). Additionally, BB examined a weakened individual captured alive at NSD Beach on Orote Peninsula on 13 October 1993.

Each of the birds featured female or immature plumage (King et al. 1975, Lekagul & Round 1991), including a brownish back tinged with olive, dirty white underparts and eyebrows, a pair of faint wingbars on each wing, and white edging on the tertials. Leg color was black. The birds had an undulating flight pattern and gave single high-pitched *jeet* calls in flight. The calls and the birds' relatively short tails distinguished them from Gray Wagtails (*M. cinerea*).

Yellow Wagtails are widely distributed through the Old World and are a common migrant in eastern Asian. In Micronesia, the species is a regular visitor to Palau (Owen 1977, Engbring 1983, 1988) and Yap (Owen 1977; H.D. Pratt, unpubl. data). For example, about 25-30 birds were seen as scattered individuals or in small loose groupings of 3-12 birds along roads and in fields on Babeldaob and Angaur, Palau between 23 April and 19 May 1991 (GW, JE). In contrast, the only previous record for the Marianas is from Rota (Glass et al. 1990).

Chestnut Mannikin (*Lonchura malacca*). Guam and Palau hold the only populations of Chestnut Mannikins in Micronesia (Pyle & Engbring 1985, Pratt et al. 1987). Both were established in the late 1940s or 1950s, presumably through the escape of caged birds (Ripley 1951, Drahos 1977). On Guam, *L. malacca* became common in savanna and disturbed habitats in the 1960s, but began declining in the 1970s (Drahos 1977). Data collected from 1985-1994 on the DAWR's annual spring bird counts show a continued decreasing trend in this species' abundance (C. Aguon, unpubl. data). The last mannikins recorded on counts in north-

ern and southern Guam were in 1991 and 1994, respectively. These survey observations also represent the last documented records for both halves of the island, suggesting that the population is now probably extirpated, presumably because of predation by Brown Tree Snakes (*Boiga irregularis*).

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References

Aguon, C.F. & R.E. Beck, Jr. 1983. A Matsudaira's Storm-Petrel (*Oceanodroma matsudairae*) on Guam. 'Elepaio 44: 66.

Argeloo, M. 1993. Black-headed Gulls wintering in Sulawesi (and notes on their occurrence elsewhere in the Indo-Australian region). Kukila 6: 110–114.

Baker, R.H. 1951. The avifauna of Micronesia, its origin, evolution, and distribution. University of Kansas Publications, Museum of Natural History 3: 1–359.

Beehler, B.M., T.K. Pratt & D.A. Zimmerman. 1986. Birds of New Guinea. Princeton University Press, Princeton, New Jersey. 293 pp.

Brazil, M.A. 1991. The Birds of Japan. Smithsonian Institution Press, Washington, D.C. 466 pp.

Bruyns, W.F.J.M. 1964. Birds seen during west to east trans-Pacific crossing along equatorial counter-current around latitude 7˚N. in the autumn of 1960. Sea Swallow 17: 57–66.

Chantler, P. & G. Driessens. 1995. Swifts: a Guide to the Swifts and Treeswifts of the World. Pica Press, Sussex, United Kingdom. 237 pp.

Clapp, R.B. 1989. A specimen record of the Fork-tailed Swift from the Marshall Islands. 'Elepaio 49: 1–2.

Clapp, R.B. & J.J. Hatch. 1986. Range extension for the Gray-backed Tern in the western Pacific Ocean. Colonial Waterbirds 9: 110–112.

Coultas, W.F. 1931. Whitney South Sea Expedition journals, Vol. W. Journal and letters, Vol. II, of William F. Coultas, November 1930 to December 1931. American Museum of Natural History, New York.

del Hoyo, J., A. Elliott & J. Sargatal (eds). 1992. Handbook of the Birds of the World. Vol. 1: Ostrich to Ducks. Lynx Edicions, Barcelona. 696 pp.

del Hoyo, J., A. Elliott & J. Sargatal (eds). 1994. Handbook of the Birds of the World. Vol. 2: New World Vultures to Guineafowl. Lynx Edicions, Barcelona. 638 pp.

del Hoyo, J., A. Elliott & J. Sargatal (eds). 1996. Handbook of the Birds of the World. Vol. 3: Hoatzin to Auks. Lynx Edicions, Barcelona. 821 pp.

del Hoyo, J., A. Elliott & J. Sargatal (eds). 1997. Handbook of the Birds of the World. Vol. 4: Sandgrouse to Cuckoos. Lynx Edicions, Barcelona. 679 pp.

Dickinson, E.C., R.S. Kennedy & K.C. Parkes. 1991. The Birds of the Philippines: an Annotated Check-list. Check-list No. 12, British Ornithologists' Union, Tring, United Kingdom. 507 pp.

Dixon, K.L. & W.C. Starrett. 1952. Offshore observations of tropical sea birds in the western Pacific. Auk 69: 266–272.

Drahos, N. 1977. Population dynamics of Guam birds. Division of Aquatic & Wildlife Resources, Mangilao, Guam. Unpublished.

Engbring, J. 1983. Avifauna of the Southwest Islands of Palau. Atoll Research Bulletin 267: 1–22.

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.

Engbring, J., F.L. Ramsey & V.J. Wildman. 1990. Micronesian forest bird surveys, the Federated States: Pohnpei, Kosrae, Chuuk, and Yap. U.S. Fish & Wildlife Service, Honolulu, Hawaii. 312 pp.

Falla, R.A., R.B. Sibson, & E.G. Turbott. 1981. The New Guide to the Birds of New Zealand and Outlying Islands. Collins, Auckland. 247 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.

Hachisuka, M.U., N. Kuroda, N. Takatsukasa, S. Uchida & Y. Yamashina. 1932. A hand-list of Japanese birds. Revised edition. Ornithological Society of Japan, Tokyo.

Hancock, J. & J. Kushlan. 1984. The Herons Handbook. Croom Helm, London. 288 pp.

Harrison, P. 1985. Seabirds: an Identification Guide. Houghton Mifflin Company, Boston. 448 pp.

Hartert, E. 1898. On the birds of the Marianne Islands. Novitates Zooligicae 5: 51–69.

Hayes, F.E. 1985. New bird records for the eastern Caroline Islands. 'Elepaio 45: 123–125.

Hayman, P., J. Marchant & T. Prater. 1986. Shorebirds: an Identification Guide to the Waders of the World. Houghton Mifflin Company, Boston. 412 pp.

Johnston, D.W. & R.W. McFarlane. 1967. Migration and bioenergetics of flight in the Pacific Golden Plover. Condor 69: 156–168.

Kessler, C.C. 1999. New cuckoo record and vagrant bird sightings for the Mariana Islands (1995-1998). Micronesica 31: 283–287.

King, B. 1976. Matsudaira's Storm-Petrel, *Oceanodroma matsudairae* Kuroda, a new bird species for Micronesia. Micronesica 12: 333.

King, B.F., M.W. Woodcock & E.C. Dickinson. 1975. A Field Guide to the Birds of South-East Asia. Houghton Mifflin Company, Boston. 480 pp.

Kuroda, N. 1922. A list of the birds of the Micronesia Group, exclusive of Magalhaes, Gilbert and Ellice Islands. *In* T. Momiyama (ed), Birds of Micronesia. Ornithological Society of Japan 1: 31–78.

Lekagul, B. & P.D. Round. 1991. A Guide to the Birds of Thailand. Saha Karn Bhaet Company, Ltd., Bangkok. 458 pp.

Maben, A.F. 1981. Survey and inventory of seabirds on Guam. *In* Division of Aquatic & Wildlife Resources Annual Report, FY 1981, pp. 131–135, Guam Department of Agriculture, Mangilao, Guam.

Maben, A.F. & G.J. Wiles. 1981. Nine new bird records for Guam and Rota. Micronesica 17: 192–195.

MacKinnon, J. & K. Phillipps. 1993. A Field Guide to the Birds of Borneo, Sumatra, Java and Bali. Oxford University Press, Oxford, United Kingdom. 491 pp.

Madge, S. & H. Burn. 1988. Waterfowl: an Identification Guide to the Ducks, Geese and Swans of the World. Houghton Mifflin Company, Boston. 298 pp.

Marchant, S. & P.J. Higgins. 1990. Handbook of Australian, New Zealand and Antarctic Birds. Vol. 1, Ratites to Petrels. Oxford University Press, Melbourne, Australia.

Marshall, J.T., Jr. 1949. The endemic avifauna of Saipan, Tinian, Guam, and Palau. Condor 51: 200–221.

Meyer de Schauensee, R. 1984. The Birds of China. Smithsonian Institution Press, Washington, D.C. 602 pp.

Meyerfield, A.B. 1978. Second record of Matsudaira's Storm-Petrel (*Oceanodroma matsudairae*) from Guam, Mariana Islands. Micronesica 14: 123.

National Geographic Society. 1987. Field Guide to the Birds of North America. 2nd ed. National Geographic Society, Washington, D.C. 464 pp.

Olsen, K.M. & H. Larsson. 1995. Terns of Europe and North America. Princeton University Press, Princeton, New Jersey. 175 pp.

Owen, R.P. 1977. New bird records for Micronesia and major island groups in Micronesia. Micronesica 13: 57–63.

Paulson, D. 1993. Shorebirds of the Pacific Northwest. University of Washington Press, Seattle, Washington. 406 pp.

Pratt, H.D., P.L. Bruner, & D.G. Berrett. 1987. A Field Guide to the Birds of Hawaii and the Tropical Pacific. Princeton University Press, Princeton, New Jersey. 409 pp.

Pratt, T.K. 1984. Shorebird surveys and inventories. *In* Division of Fish & Wildlife Annual Report, FY 1984, pp. 60–68, Saipan, Commonwealth of the Northern Mariana Islands.

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 Technical Publication No. 11, Cambridge, United Kingdom.

Reichel, J.D. & P.O. Glass. 1991. Checklist of the birds of the Mariana Islands. ‘Elepaio 51: 3–11.

Ripley, S.D. 1951. Migrants and introduced species in the Palau Archipelago. Condor 53: 299–300.

Ritter, M.W. & T.M. Sweet. 1993. Rapid colonization of a human-made wetland by Mariana Common Moorhen on Guam. Wilson Bulletin 105:685-687.

Safford, W.E. 1902. The birds of the Marianne Islands and their vernacular names - 1. Osprey 6: 39–42, 65–70.

Shirihai, H., C.S. Roselaar, A.J. Helbig, P.H. Barthel & A.J. van Loon. 1995. Identification and taxonomy of large *Acrocephalus* warblers. Dutch Birding 17: 229–239.

Skira, I. 1991. The Short-tailed Shearwater: a review of its biology. Corella 15(2): 45–52.

Stinson, D.W., J.D. Reichel, R.J. Craig & D.T. Aldan. 1991a. New and unusual bird records from the Northern Mariana Islands, 1988-1990. Micronesica 24: 261–271.

Stinson, D.W., M.W. Ritter & J.D. Reichel. 1991b. The Mariana Common Moorhen: decline of an island endemic. Condor 93: 38–43.

Stinson, D.W., R.E. Johnson, M.R. Lusk, C.G. Rice & D.T. Aldan. 1995. New bird records in the Mariana Islands. Micronesica 28: 109–117.

Stinson, D.W., G.J. Wiles & J.D. Reichel. 1997a. Migrant land birds and waterbirds in the Mariana Islands. Pacific Science 51: 314–327.

Stinson, D.W., G.J. Wiles & J.D. Reichel. 1997b. Occurrence of migrant shorebirds in the Mariana Islands. Journal of Field Ornithology 68: 42–55.

U.S. Fish & Wildlife Service. 1996. Characteristics of Mariana Common Moorhens and wetland habitats within the U. S. Department of the Navy’s military lease area and exclusive military use area on the island of Tinian, Commonwealth of the Northern Mariana Islands, July 1994–August 1995. U.S. Fish & Wildlife Service, Honolulu, Hawaii.

Wild Bird Society of Japan. 1982. A Field Guide to the Birds of Japan. Wild Bird Society of 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.

Wiles, G.J., R.E. Beck, Jr., C.F Aguon & K.D. Orcutt. 1993. Recent bird records for the southern Mariana Islands, with notes on a colony of Black Noddies on Cocos Island, Guam. Micronesica 26: 199–215.

Wiles, G.J. & P.J. Conry. 1990. Terrestrial vertebrates of the Ngerukewid Islands Wildlife Preserve, Palau Islands. Micronesica 23: 41–66.

Wiles, G.J. & D.J. Worthington. 1996. Mixed flocks of White-winged Terns and Whiskered Terns in the southern Mariana Islands. Micronesica 28: 203–206.

Worthington, D.J. 1998. Inter-island dispersal of the Mariana Common Moorhen: a recolonization by an endangered species. Wilson Bulletin 110: 414–417.

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