

An Abbott's Booby *Papasula abbotti* on Rota, Mariana Islands: first historical record for the Pacific Ocean

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SUMMARY.—We describe the first documented record of Abbott's Booby *Papasula abbotti* in the North Pacific, a female observed and photographed at Rota, the southernmost island in the Commonwealth of the Northern Mariana Islands (USA), in northern Micronesia, on 17 April 2007. Furthermore, on the same island, we also observed and photographed a subadult Red-footed Booby *Sula sula* with a black-tipped pink bill very similar to that of Abbott's. The available evidence suggests that pink is a normal but poorly documented bill colour variation for some older immature Red-footed Boobies and not a diagnostic feature of Abbott's or an indication of hybridisation between the two species.

Abbott's Booby *Papasula abbotti* is a rare and endangered member of the Sulidae with a relict distribution (BirdLife International 2000, Commonwealth of Australia 2001). Originally placed in the genus *Sula*, it is quite distinct from the more typical boobies (Olson & Warheit 1988). The species is currently known to nest only on the Australian territory of Christmas Island in the Indian Ocean (Yorkston & Green 1997; Fig. 1a), and is observed

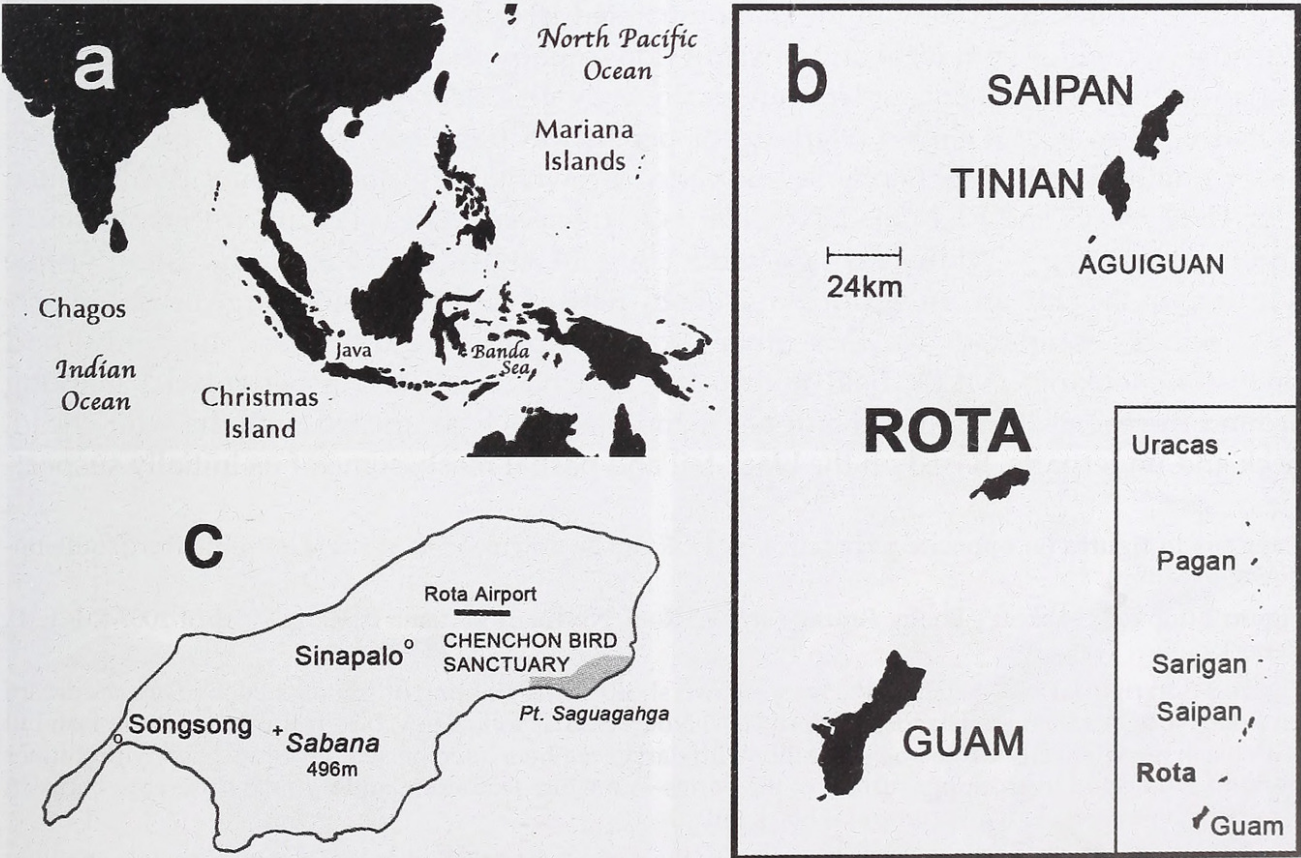


Figure 1. a) Map of the Indo-Pacific showing important localities mentioned in the text; b) The Mariana Islands, North Pacific Ocean; c) Island of Rota, showing sighting location of Abbott's Booby, geographic features mentioned in the text, main towns, and highest elevation.

infrequently at sea in the nearby ocean north to Java (Becking 1976, Dunlop *et al.* 2001). However, the type specimen was collected 6,300 km west of Christmas on Assumption Island, in the Aldabra Group north of Madagascar (Ridgway 1893, Skerrett *et al.* 2001), where the species is apparently extirpated (Nelson 1974, Prÿs-Jones *et al.* 1981). A few sightings from the Chagos Archipelago, between Assumption and Christmas islands (Bourne 1971, Hirons *et al.* 1976; Fig. 1a), including a 1996 observation of an immature visiting a large mixed-species seabird roost with Red-footed Boobies *Sula sula* (Symens 1999), suggest the possibility of a small remnant or incipient colony. Pre-cultural remains in the Mascarenes (Nelson 1974, Bourne 1976), as well as 6,000 km to the east on Tikopia (Steadman *et al.* 1990) and Efate (Steadman 2006) in eastern Melanesia, indicate that *P. abbotti* formerly had a much wider distribution, extending into the western South Pacific. A different subspecies (or species) *P. a. costelloi* is known from bones found in the Marquesas in eastern Polynesia (Steadman *et al.* 1988, Steadman 2006). Today, Abbott's Booby is almost never seen far from Christmas Island, although the 1990s Chagos sightings may have involved birds from there, and individuals disappear from the colony for long periods supposedly on distant foraging journeys (Commonwealth of Australia 2001). Balen (1996) summarised recent sightings in the Banda Sea in eastern Indonesia, and there are three recent 'continental' Australia records (Hassel & Boyle 1999, Palliser 2005, 2007). We report here the observation of a single female Abbott's Booby at Rota, the southernmost island in the Commonwealth of the Northern Mariana Islands (USA), in northern Micronesia (Fig. 1b). It is the first historical record from the Pacific, and the first ever for the North Pacific.

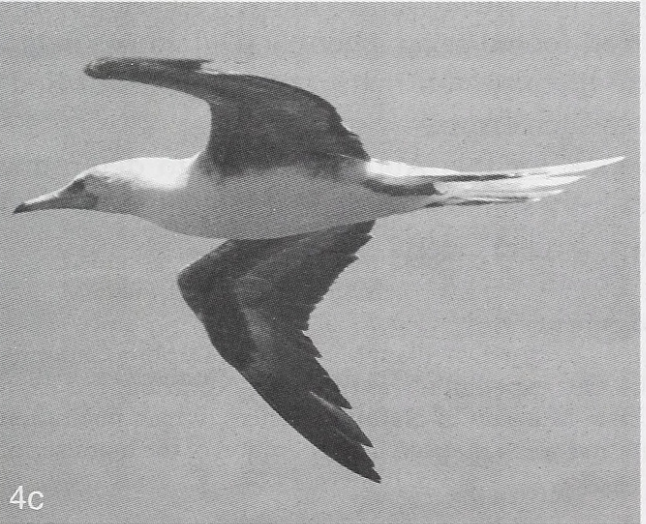
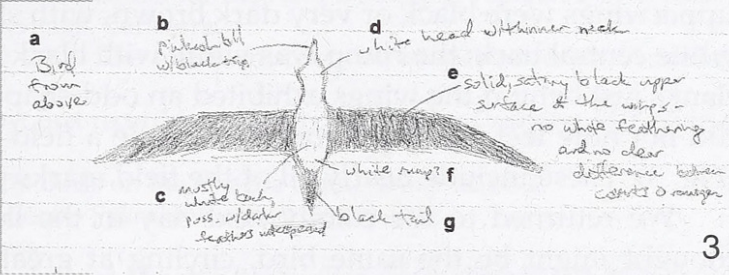
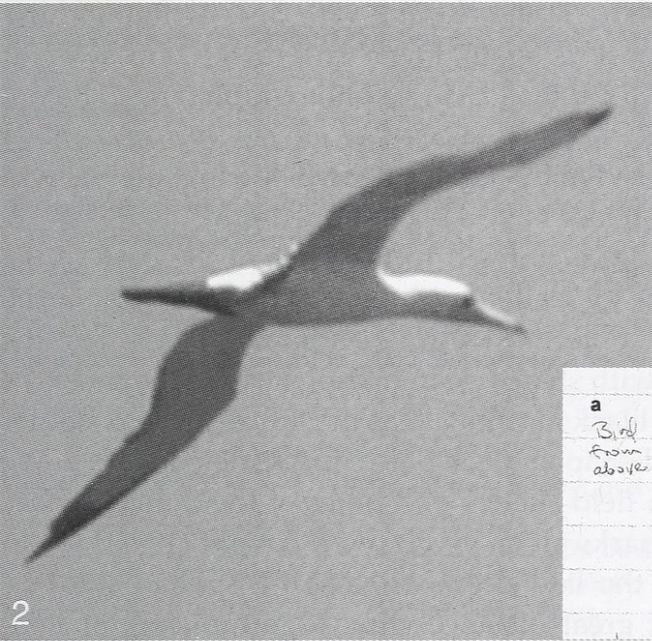
On 17 April 2007, as participants in a research expedition under the auspices of the North Carolina State Museum of Natural Sciences, we were observing birds from the clifftop platform above the seabird colony in Chenchon Bird Sanctuary on the south-east coast of Rota (Fig. 1c), encompassing Puntan Saguagahga (= Funiya Point). It is the only large seabird nesting colony in the main inhabited islands of the commonwealth, and the sanctuary provides both legal and physical (low-canopy trees between sheer cliffs and the sea) protection. Weather was characteristically hot with a clear blue sky as hundreds of Red-footed Boobies *S. sula* circled overhead or perched in their nest trees. Also present were lesser numbers of Brown Booby *S. leucogaster*, Brown Noddy *Anous stolidus*, White-tailed *Phaethon lepturus* and Red-tailed Tropicbirds *P. rubricauda*, Great Frigatebird *Fregata minor* and Common Fairy (White) Tern *Gygis alba*. At c.14.30 hrs, from the north-eastern visible terminus of the cliff, an unusual-looking booby flew toward us. It had a large head and narrow wings compared to the other boobies present, and was 'ungainly and prehistoric-looking' (MLPR field notes). It had a black tail and a black facial marking around the eye at the base of the upper mandible, which contrasted with the white head, neck and underparts. Based on the black tail and partial mask, some of us initially suspect-

Captions to figures on opposite page (a colour PDF can be downloaded at www.boc-online.org/bulletin-downloads.htm).

Figure 2 (top left). Abbott's Booby *Papasula abbotti*, Rota, Northern Mariana Islands, 17 April 2007 (M. L. P. Retter)

Figure 3 (top right). Field sketch by P. Pisano drawn shortly after sighting of Abbott's Booby *Papasula abbotti* on Rota, Northern Mariana Islands, 17 April 2007. Notes read as follows: A) bird from above; B) pinkish bill with black tip; C) mostly white body possibly with darker feathers interspersed; D) white head with thinner neck; E) solid, satin black upper surface of the wings—no white feathering and no clear difference between coverts and remiges; F) white rump? G) black tail.

Figure 4 (bottom). (a–c) Three views of probably the same subadult Red-footed Booby *Sula sula* showing black-tipped pink bill similar to that of Abbott's Booby *Papasula abbotti*, Rota, Northern Mariana Islands, 17 April 2007. (d) Subadult Red-footed Booby showing Abbott's-like black-tipped pink bill, Ulupau Head, Oahu, Hawaii, August 1974. (Photograph a by D. Gemmill, photographs b–d by H. D. Pratt.)



ed the bird might be a juvenile Masked Booby *S. dactylatra*, a rare bird at this locality (Reichel 1991). As the bird circled and flew past us again, lower and c.60–100 m away, it afforded a good view of both wing surfaces. MLPR took a single photograph (Fig. 2) before the bird disappeared.

We identified it as an adult female Abbott's Booby based on the following: the bill was rose-pink with a dark tip (juveniles and adult males have a black-tipped grey bill; Pizzey & Knight 1997); the black marking on the face was confined to the lores at the base of the upper mandible and did not extend below the gape; the head, neck, nape and most of the underparts and underwings were white, the outermost primaries having black tips; the upperwings were black or very dark brown, with sharp, clean margins where they met the white central back; the rump was white with black mottling near the tail; and the posterior flanks just behind the wings exhibited an odd-shaped black patch, just visible in Fig. 2. We did not note feet and leg colours. PP made a field sketch with notes of the dorsal surface (Fig. 3). These include nearly all of the field marks given by Pizzey & Knight (1997).

We returned to the colony next day in the late afternoon, and PP spotted what he thought might be the same bird, circling at great distance with large numbers of Red-footed Boobies offshore, apparently preparing to return to the colony to roost. The bird never came sufficiently close for a positive identification. We subsequently learned that the colony extends quite far to the east, with only about one-third visible from the lookout. Perhaps the Abbott's Booby was roosting in the inaccessible portion. Abbott's is the only booby other than Red-footed (Schreiber *et al.* 1996) that nests and roosts in trees (Nelson & Powell 1986, Yorkston & Green 1997), which may explain why the bird was attracted to this site. Interestingly, another seabird endemic to Christmas Island, the golden subspecies of White-tailed Tropicbird *P.l. fulva*, is also a rare visitor to the Marianas, with records for Saipan (Pratt & Bruner 1981), Guam (Pratt *et al.* in prep.) and perhaps Rota (Pratt *et al.* 1987; based on hearsay, with source lost, HDP).

Another intriguing observation on the second day was of a subadult Red-footed Booby with a black-tipped pink bill very similar to that of Abbott's (Fig. 4a–c). We were unaware that some Red-footed can have this bill colour, and have found no description or illustration of it in any field guide. Schreiber *et al.* (1996) stated that the dark bill of the juvenile becomes pale grey with a black tip in immatures, before reaching the pink-based blue bill of adults. At no stage during such a transition would one expect the bill to be largely pink. We considered the possibility that the pink-billed bird might be a Red-footed × Abbott's hybrid, but later, among old photographs, found an example of a similar pink-billed bird from Hawaii (Fig. 4d), indicating that pink is a normal, albeit atypical and poorly documented, bill colour variation for some older immature Red-footed Boobies and not a diagnostic feature of Abbott's or an indication of hybridisation. Recently, observers at the Great Barrier Reef misidentified a pink-billed Red-footed as an Abbott's (D. J. James *in litt.* 2008). We offer our photographs to bolster the literature on maturational stages of Red-footed Booby and to help future observers avoid such errors.

We encourage future visitors to Rota to look for this Abbott's Booby to determine whether it was simply a long-distance vagrant or is a solitary resident. If the latter, the bird might indicate a (re)colonisation attempt or even a relict colony.

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References:

- van Balen, S. 1996. Note on observations of Abbott's Booby in the Banda Sea. *Kukila* 8: 145.
- Becking, J.-H. 1976. Feeding range of Abbott's Booby *Sula abbotti* at the coast of Java. *Ibis* 118: 589–590.
- BirdLife International. 2000. *Threatened birds of the world*. Lynx Edicions, Barcelona & BirdLife International, Cambridge, UK.
- Bourne, W. R. P. 1971. The birds of the Chagos Group, Indian Ocean. *Atoll Res. Bull.* 149: 175–207.
- Bourne, W. R. P. 1976. On subfossil bones of Abbott's Booby *Sula abbotti* from the Mascarene Islands, with a note on the proportions and distribution of the Sulidae. *Ibis* 118: 119–123.
- Commonwealth of Australia. 2001. Background information for the Abbott's Booby, *Papasula abbotti* recovery plan. Dept. of the Environment and Heritage, Canberra.
- Dunlop, J. N., Surman, C. A. & Wooller, R. D. 2001. The marine distribution of seabirds from Christmas Island, Indian Ocean. *Emu* 101: 19–24.
- Hassel, C. J. & Boyle, A. N. 2000. Abbott's Booby: first record for mainland Australia. *Australian Bird Watcher* 18: 255–258.
- Hirons, M. J., Bellamy, D. J. & Sheppard, C. 1976. Birds on the Chagos Bank. *Nature* 260: 387.
- Nelson, J. B. 1974. The distribution of Abbott's Booby *Sula abbotti*. *Ibis* 116: 368–369.
- Nelson, J. B. 1978. *The Sulidae*. Oxford Univ. Press.
- Nelson, J. B. & Powell, D. 1986. The breeding ecology of Abbott's Booby *Sula abbotti*. *Emu* 86: 33–46.
- Olson, S. L. & Warheit, K. I. 1988. A new genus for *Sula abbotti*. *Bull. Brit. Orn. Cl.* 108: 9–12.
- Palliser, T. 2005. Submission No. 432: Abbott's booby *Papasula abbotti*. Birds Australia Records Committee (BARC). <http://users.bigpond.net.au/palliser/barc/SUMM432.htm> (accessed 27 April 2008).
- Palliser, T. 2007. Submission No. 541: Abbott's booby *Papasula abbotti*. Birds Australia Records Committee (BARC). <http://users.bigpond.net.au/palliser/barc/summ541.htm> (accessed 17 September 2008).
- Pizzey, G. & Knight, F. 1997. *Field guide to the birds of Australia*. Angus & Robertson, Sydney.
- Pratt, H. D. & Bruner, P. L. 1981. Noteworthy records of nonbreeding birds in Micronesia. *Micronesica* 17: 195–198.
- Pratt, H. D., Bruner, P. L. & Berrett, D. G. 1987. *A field guide to the birds of Hawaii and the tropical Pacific*. Princeton Univ. Press.
- Pratt, H. D., Etpison, M. T., Falanruw, M., Klauber, D., Buden, D. W., Clement, P., Gupta, A., Herter, D. R., Ketebeang, H., Olsen, A., Pisano, P. & Yalap, Y. P. In prep. Noteworthy bird observations in Micronesia, with indications of trends among seasonal visitors.
- Prŷs-Jones, R. P., Prŷs-Jones, M. S. & Lawley, J. C. 1981. The birds of Assumption Island, Indian Ocean: past and future. *Atoll Res. Bull.* 248.
- Reichel, J. D. 1991. Status and conservation of seabirds in the Mariana Islands. Pp. 248–262 in Croxall, J. P. (ed.) *Seabird status and conservation: a supplement*. International Council for Bird Preservation, Cambridge, UK.
- Ridgway, R. 1893. Descriptions of some new birds collected on the islands of Aldabra and Assumption, northwest of Madagascar, by Dr. W. L. Abbott. *Proc. US Natl. Mus.* 16: 597–600.
- Schreiber, E. A., Schreiber, R. W. & Schenk, G. A. 1996. Red-footed Booby (*Sula sula*). In Poole, A. & Gill, F. (eds.) *The birds of North America*, 241. Acad. Nat. Sci., Philadelphia, PA & American Ornithologists' Union, Washington DC.
- Skerrett, A., Bullock, I. & Disley, T. 2001. *Birds of the Seychelles*. Princeton Univ. Press.
- Steadman, D. W. 2006. *Extinction and biogeography of tropical Pacific birds*. Univ. of Chicago Press.
- Steadman, D. W., Schubel, S. E. & Pahlavan, D. 1988. A new subspecies and new records of *Papasula abbotti* (Aves: Sulidae) from archaeological sites in the tropical Pacific. *Proc. Biol. Soc. Wash.* 101: 487–495.
- Symens, P. 1999. Breeding seabirds of the Chagos Archipelago. Pp. 257–272 in Sheppard, C. R. C. & Seaward, M. R. D. (eds.) *Ecology of the Chagos Archipelago*. Linnean Soc. Occas. Publ. 2. Westbury Publishing, Otley.
- Yorkston, H. D. & Green, P. T. 1997. The breeding distribution and status of Abbott's Booby (Sulidae: *Papasula abbotti*) on Christmas Island, Indian Ocean. *Biol. Conserv.* 79: 293–301.

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