



# NSW Ornithological Records Appraisal Committee Unusual Record Report Form

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<b>Species Name:</b> <b>Red-footed Booby</b>	<b>Scientific Name:</b> <i>Sula sula</i>
Date(s) and time(s) of observation:	11 February 2012, 12:24pm
How long did you watch the bird(s)?	1 minute
First and last date of occurrence:	11 February 2012
Distance to bird:	30 metres

<b>Site Location</b> Continental shelf break, off Sydney, NSW (regular Sydney pelagic trip run by Hal Epstein)
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<b>Habitat</b> (describe habitat in which the bird was seen, together with any neighbouring habitats): Pelagic. Continental shelf break.
<b>Sighting conditions</b> (weather, visibility, light conditions etc.): Clear visibility, calm sunny weather. See attached pictures.
<b>Optical aids used:</b> Leica 12x50 BA and others; Photos: Canon 7D, Canon 400mm, 5.6

<b>To your knowledge, is the species seen frequently at this site?</b> Rarely. There are nine accepted records for NSW (R. McGovern pers. comm.).
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<b>Did you use a field guide?</b> The bird was identified in the field without using a field guide. References used subsequently to prepare this report were: ARMADA, R. (2010): The Red-footed Booby in Spain. <i>Birding World</i> 23: 524-529. • BAIÃO, P.C., SCHREIBER, E.A. & P.G. PARKER (2007): The genetic basis of the plumage polymorphism in Red-footed Boobies ( <i>Sula sula</i> ): a Melanocortin-I receptor (MC1R) analysis. <i>Journal of Heredity</i> 98: 287-292. • ENTICOTT, J. & D. TIPLING (1997): Seabirds of the World. London. • HARRISON, P. (1983): Seabirds, an identification guide. Beckenham • HARRISON, P. (1987): Seabirds of the World. A Photographic Guide. London. • HENNICKE, J. (2009): First record of a white-tailed brown morph Red-footed Booby <i>Sula sula</i> on Christmas Island, Indian Ocean. <i>Marine Ornithology</i> 37: 179-180. • DEL HOYO, J., A. ELLIOTT & J. SARGATAL (1992): Handbook of the Birds of the World. Vol. 1. - Barcelona. • JAMES, D.J. (2001): Sexual dimorphism in the colouration of facial bare parts in Red-footed Boobies <i>Sula sula rubripes</i> in the Coral Sea. Pp. 99-104 in COMBEN, L. (ed.) <i>Herald Cays Scientific Study Report</i> . Geography Monograph Series 6, Royal Geographical Society of Queensland, Brisbane. • LE CORRE, M. (1999): Plumage polymorphism of red-footed-boobies ( <i>Sula sula</i> ) in the western islands in the western Indian Ocean: an indicator of biogeographic isolation. <i>J Zool Lond.</i> 249:411-415. • MARCHANT, S. & P.J. HIGGINS (eds) (1990). Handbook of Australian, New Zealand and Antarctic Birds. Volume 1: Ratites to Ducks. Melbourne. • PIZZEY, G. & F. KNIGHT (2007, 8 <sup>th</sup> ed.): The Field Guide to the Birds of Australia. Sydney. • SIMPSON, K. & N. DAY (2004, 7 <sup>th</sup> ed.): Birds of Australia. Princeton.
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<b>Were other observers present Do any of the other observers disagree with your identification, if so, who?</b> (please give names, addresses and phone numbers)? Other observers: There were 25 participants on the pelagic trip. Most of the participants saw the bird, including experienced observers: Hal Epstein, Roger McGovern, Steve Anyon-Smith, Nevil Lazarus, Kevin Bartram and more participants of the pelagic. Nobody disagreed with the identification.
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<b>How confident are you of your identification?</b> , e.g. 70%, 100%. If not 100%, why not? 100%
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**Other details:** e.g. Do you have historical and or anecdotal information/comments relating to the prior occurrence/status of the species within or near this location?

This species is a rare visitor to the area.

The bird approached from the rear, travelling eastwards and parallel with the vessel. It flew past the boat, fairly low but not right on the water, and about 30 m to port. It did not stop or deviate. It was presumably attracted by the seabirds feeding on berley, but not to the boat or the berley.

### Physical Description.

(1) Number: One individual was observed.

(2) Age: immature (second cycle). Sex: unknown.

MARCHANT & HIGGINS (1990; HANZAB Vol. I, p. 773; chapter "*Sula sula* Red-footed Booby"): "*Juveniles and immatures distinguishable.*" ... "*Juvenile... bill black or dark brown. Legs and feet grey to geyish pink. Iris grey or grey-green. Facial skin dark grey, blue or purplish. Immature...Bill paler; base often pinkish with dark purplish-brown distal portin, eventually changing to pale blue with pink base. Facial (and gular) skin changes to pale blue, later pink.*" ... "[plumage] changes to adult colouring take at least three years."

This bird looked somewhat "uncombed". The secondaries and the coverts appeared to show different length, likely due to the first post-juvenile moult (from juvenile plumage to 2<sup>nd</sup> cycle plumage). The middle secondaries have been replaced and were a rich brown colour, contrasting slightly with the older juvenile flight feathers that were a faded milk-coffee colour. Adult secondaries would be near black. The bird also had a milk-coffee coloured head. First year heads are darker brown like the juvenile body plumage in all morphs. The milk-coffee colour indicates that there has been a moult from juvenile to 2<sup>nd</sup> year plumage on the head. Since it takes at least three years to change to adult colouring (MARCHANT & HIGGINS 1990), and third year plumages are not distinguishable from adults (DJJ, unpubl. data) this bird would be in its second cycle/year.

This was also underlined by the colour of the bill and face: A pink base and black tip of the bill were evident in the field and can be seen in the photographs below. This indicates that it was not a juvenile (bill all black) nor an adult (bill generally blue).

(3) Size and shape (Figs. 1 & 2): Small sulid (conspicuously smaller than Australasian Gannet, which was seen later during the same pelagic trip). Typical sulid silhouette. Long narrow wings held forward at carpal joint. Rather long neck, tapered head and long conical bill. Long tapered tail.

(4) Plumage colour and pattern (including any details of moult): An entirely brown bird. However, it was not all the same colour brown. The middle secondaries and secondary coverts were richer brown than the rest of the upperwing (Fig. 2). The head, neck and underbody were a paler milk-coffee colour (Fig. 1). This milk-coffee colour of head and belly (which are part of the 2<sup>nd</sup> cycle plumage) indicates that the bird was neither a white morph nor a full brown morph bird, but an intermediate morph bird. The post-juvenile moult always introduces head, body and wing covert feathers that are indicative of the adult plumage (DJJ, unpubl. data), so a white morph would show scattered white feathers on the wing coverts and a mostly white head and underbody while a brown morph bird would be uniformly brown across these feather tracts. The underwing was entirely brown (Fig. 1). The tail was mostly dark brown but showed a conspicuous but poorly demarcated pale tip against both the sky (Fig. 1) and the water (Fig. 2). It appears to be a worn juvenile tail, so it is not possible to determine whether this bird will become a white-tailed intermediate morph or a dark tailed intermediate morph.

(5) Colour of bill/face (see Figs. 1 & 2C): conspicuously blue periorbital (orbital, pre-orbital & sub-orbital) skin, pink mandibular skin (base of the lower mandible) and pink bill (latericorn) with dark tip (maxillary and mandibular unguis), colour of eyes: brown iris (Fig. 1A), colour of legs/feet: not seen

(6) Calls: none heard

(7) Behaviour, movements, flight pattern, and anything else that might help to identify the bird e.g. feeding, interactions with other birds, describe where the bird was – on ground, in canopy, flying etc. Were comparisons made with other species? More buoyant and faster flight than other boobies. Low flight close to water.

Other birds seen: 20 Grey-faced Petrels, one White-necked Petrel, 2 **Streaked Shearwaters**, 18 Short-tailed, 400 Wedge-tailed, 60 Flesh-footed, 1 Fluttering type, 1 Fluttering and 3 Hutton's Shearwaters, 2 Australasian Gannets, 1 Arctic and 12 Pomarine Jaegers, 20 Silver Gulls, 3 Crested Terns, 3 **Sooty Terns**.



A



B

Fig. 1: Immature intermediate morph Red-footed Booby off Sydney, 11 February 2012. Note typical sulid silhouette, milk-coffee colour of head, neck and underbody, entirely dark brown underwing, conspicuous but poorly demarcated pale tip to dark brown tail from below, blue periorbital skin, pink mandibular skin, pink bill with dark tip and brown iris (Photographs: Raja Stephenson)





Fig. 2: Immature intermediate morph Red-footed Booby off Sydney, 11 February 2012. Note typical sulid silhouette, milk-coffee colour of head and nape, the middle secondaries and secondary coverts were richer brown than the rest of the upperwing, conspicuous but poorly demarcated pale tip to dark brown tail from above, and again (in C) blue periorbital skin, pink mandibular skin and pink bill with dark tip (Photographs: Raja Stephenson)

**Other species with which you think it might be confused and how these were eliminated?**

Juvenile Gannets *Morus spec.*: Rather dark grayish to blackish brown upperparts; usually white mottling and white uppertail coverts; usually not as clean underpart colouration; different bare part colouration.

Brown Booby *Sula leucogaster*: Darker brown; white underwing coverts; always shows some evidence of a brown breast demarcated from a paler brown (juvenile) or white belly; never shows a pink base to the bill.

Juvenile/immature Masked/Nazca Booby *S. dactylatra* and *S. granti*: Brown only down to throat with mostly white underparts, black and white underwing coverts and a white collar; different bare part colouration.

Blue-footed Booby *S. nebouxii*: Always has a white underbody contrasting with a streaked (adult) or brown head (juvenile), and usually white on the neck and white rump; different bare part colouration.

Peruvian Booby *S. variegata*: Always shows a white head or mostly white head and black and white underwing coverts; different bare part colouration.

Abbott's Booby *Papasula abbotti*: Head, neck, underparts, mantle, back and rump white in all plumages; different bare part colouration.

**Was the description written from notes and/or sketches made (tick box):**

during the observation or;  shortly after the observation or;  from memory;  with the aid of the photographs

**Please indicate supportive evidence available.**

Was the bird:  photographed,  taped or  video taped? If yes to any of these, by whom?

All photographs by Raja Stephenson; see also: <http://www.adarman.com/Pelagics/2012-February-11-Sydney>

**What experience have you had with the species in question? (Did you know it was a Rare bird when you first saw it?)**

**NKH** has extensive experience with seabirds having been pelagic trip leader on many trips off of California, New Jersey/New York and Delaware/Maryland and having participated on many pelagic trips off of North Carolina, Galapagos, Queensland, New South Wales, Tasmania and New Zealand. NKH has been an active member in the Rare Birds Committees of Hessen, Germany, Schleswig-Holstein, Germany, and New Jersey, USA. NKH has seen 8 sulid species around the world, 4 in Australia and 3 in NSW. Specifically, NKH is familiar with Red-footed Booby from many observations at Oahu, HI, USA (together with Brown Booby *S. leucogaster*); Trinidad & Tobago, WI (together with Brown Booby); at Michaelmas Cay, Great Barrier Reef, QLD (together with Brown Booby) and off Wollongong, NSW (see NSW ORAC submission).

**RWS** has extensive experience with seabirds having participated on many pelagic trips off of North Carolina, New Jersey/New York, Delaware/Maryland, Queensland, New South Wales, Tasmania and New Zealand. RWS has seen 5 sulid species around the world, 4 in Australia and 4 in NSW. Specifically, RWS is familiar with Red-footed Booby from observations at Michaelmas Cay, Great Barrier Reef, QLD (together with Brown Booby) and off Wollongong, NSW (see NSW ORAC submission).

**DJJ** has studied Red-footed Booby in the Coral Sea and on Christmas Island, and seen it on the Great Barrier Reef, the Bismarck and Solomon Seas, the Timor Sea, at the Cocos (Keeling) Islands and in Hawaii. He has investigated morphs and sexual dimorphism in the Coral Sea. He has undertaken nest surveys of Red-footed, Brown and Masked Boobies in the Coral Sea. On Christmas Island he has undertaken nest surveys, tracking surveys, banding studies and rearing of orphaned young of Red-footed, Brown and Abbott's Boobies. He has extensive field experience over 25 years with all sulids, at sea and at breeding locations, except for Peruvian and Nazca Boobies. Red-footed Booby was a daily 'yard bird' for DJJ during 3½ years living on Christmas Island.

**Signature:**



**Date: 11 February 2012**