

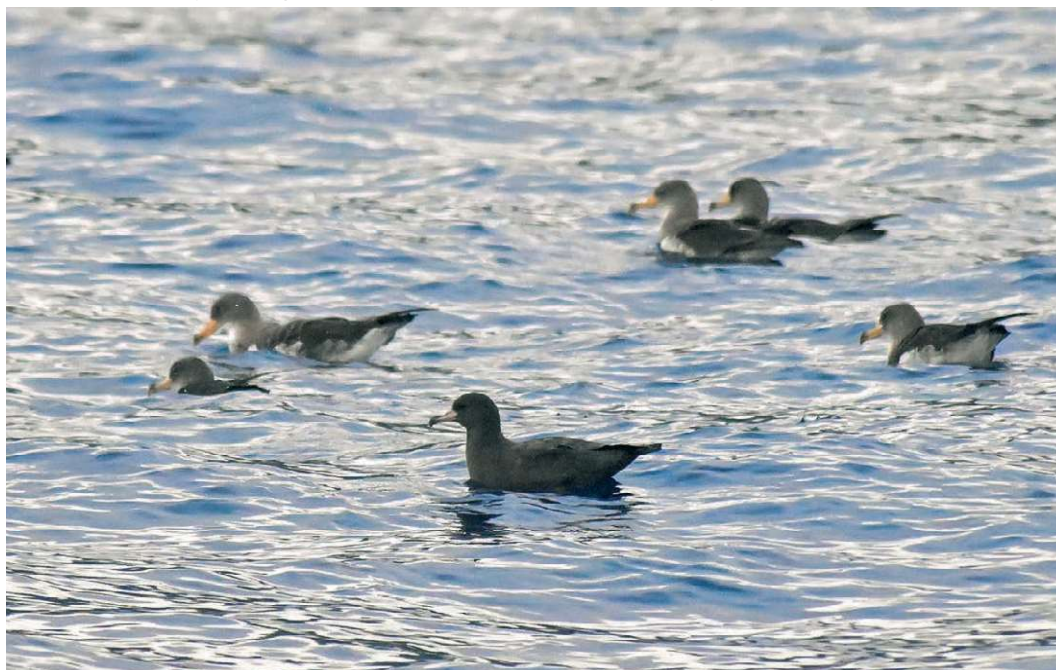
Flesh-footed Shearwater off Pico, Azores, in August 2020

Robert L Flood & Susana Simião

During the evening of 7 August 2020, Susana Simião was working as a guide on a whale watching trip for the company Espaço Talassa based on Pico, Azores. At 7:48, the boat was positioned just offshore of Santa Bárbara das Ribeiras, at 38°22.870N, 28°11.220W. A group of Atlantic Spotted Dolphins *Stenella frontalis* was swimming near the boat, with a raft of Cory's Shearwaters *Calonectris borealis* close by. A crew member, Lynn Kulike, noticed that one of the shearwaters had an unusual, overall dark colouration (plate 106). The boat was manoeuvred toward the raft of shearwaters for a closer look. The Cory's flew off but the dark shearwater permitted a close approach; it was relatively tame compared with the Cory's. At one point, it took off and landed shortly afterwards. SS took a series of photographs (plates 106-112). At first, the crew thought that the dark shearwater might be a melanistic Cory's, which

they were aware of, although they did not know if the bill and leg colour might also be affected by the aberration. However, the dark shearwater was smaller than the Cory's and it was too early in the breeding season for one of the smaller juveniles of the year. The crew ruled out both Bulwer's Petrel *Bulweria bulwerii*, as the shearwater was far too large, and Sooty Shearwater *Ardenna grisea*, as the bill was pinkish with dark unguis, not all blackish. Another colleague, Adrien Laydevant, not on the boat that day, was shown the photographs and suggested that the dark shearwater was a Flesh-footed Shearwater *A. carneipes*, which he had previously seen off New Zealand. Since the Azores is far outside of the range of Flesh-footed, SS posted her photographs on social media to request and indeed receive confirmation of the identification as Flesh-footed from experienced seabirders.

106 Flesh-footed Shearwater / Australische Grote Pijlstormvogel *Ardenna carneipes* (front), with Cory's Shearwaters / Kuhls Pijlstormvogels *Calonectris borealis*, off Pico, Azores, 7 August 2020 (Susana Simião)



Flesh-footed Shearwater off Pico, Azores, in August 2020



107-108 Flesh-footed Shearwater / Australische Grote Pijlstormvogel *Ardenna carneipes* (back), with Cory's Shearwater / Kuhls Pijlstormvogel *Calonectris borealis*, off Pico, Azores, 7 August 2020 (*Susana Simião*) **109-112** Flesh-footed Shearwater / Australische Grote Pijlstormvogel *Ardenna carneipes*, off Pico, Azores, 7 August 2020 (*Susana Simião*)

Flesh-footed Shearwater off Pico, Azores, in August 2020



113-114 Flesh-footed Shearwater / Australische Grote Pijlstormvogel *Ardenna carneipes*, North Cape, New Zealand, 10 December 2018 (Kirk Zufelt)



Flesh-footed Shearwater off Pico, Azores, in August 2020



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118



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115 Wedge-tailed Shearwater / Wigstaartpijlstormvogel *Ardenna pacifica*, dark morph, Réunion, Indian Ocean, 10 December 2018 (Kirk Zufelt) **116** Wedge-tailed Shearwater / Wigstaartpijlstormvogel *Ardenna pacifica*, dark morph, Puerto Angel, Oaxaca, Mexico, 18 December 2008 (Steve N G Howell) **117** White-chinned Petrel / Witkinstormvogel *Procellaria aequinoctialis*, at sea, central South Atlantic, 30 March 2018 (Kirk Zufelt) **118** White-chinned Petrel / Witkinstormvogel *Procellaria aequinoctialis*, Chatham Islands, 23 January 2016 (Kirk Zufelt) **119** Melanistic Cory's Shearwater / melanistische Kuhls Pijlstormvogel *Calonectris borealis*, Banco de la Concepción, Canary Islands, 27 March 2010 (Beneharo Rodríguez)

Description

The description is based on photographs by SS (plate 106-112) and is consistent with a typical Flesh-footed Shearwater (plate 113-114).

STRUCTURE When sitting on sea surface, longish mid-depth bill, mid-sized roundish head, mid-sized roundish eyes, longish thick-based neck, long thickish body. When relaxed, primaries extending to beyond tail-end.

OVERALL APPEARANCE 'All-dark' blackish-brown plumage, contrasting only with dark-tipped pinkish bill.

PLUMAGE Head and neck fairly uniform blackish-brown. Scapulars and mantle to uppertail-coverts with buff fringes, giving subtle scaly appearance. Upperside of remiges and rectrices slightly darker brownish-black. On underwing, remiges and large coverts dark brownish-grey, reflective, and pale grey when catching light (characteristic of numerous 'all-dark' petrels and shearwaters).

BARE PARTS Eye blackish. Bill with pinkish nasal tubes, sulcus, latericorn and ramicorn. Nostrils darkish and culmicorn dusky/pinkish. Maxillary and mandibular unguis dark, giving dark-tipped appearance. Leg, foot and webs pinkish, apparently dusky on outer side of tarsus and toes; claws black.

MOULT Feathers appearing fresh, although little detail in photographs to scrutinise condition. Photographs in flight showing short p9 and shorter p10, indicating last stage of primary moult (plate 110-112).

Ageing, identification and confusion species

The following section draws extensively upon relevant parts of Flood & Fisher (2020).

Ageing

Primary moult of breeders mainly takes place in April-August; it is earlier in non-breeders and older immatures, and juveniles probably mainly moult the primaries in January-June. Based on these moult timings, the bird off Pico may have been an older immature or adult, and certainly was not a juvenile of 2020.

Identification and confusion species

The combination of size (slightly smaller than Cory's Shearwater), all-dark plumage and pinkish colouration of bill (with darker tip) and feet only fits Flesh-footed Shearwater. That said, confusion species are melanistic Cory's Shearwater, dark-morph Wedge-tailed Shearwater *A pacifica* and White-chinned Petrel *Procellaria aequinoctialis*.

Melanistic Cory's Shearwaters that we know about are quite different from Flesh-footed Shearwater, by having the characteristic dark-tipped yellow bill, a ghosting of the normally white upper breast to undertail-coverts, and greyish/whitish in the under greater primary coverts and median and longest lesser secondary coverts (cf plate 119).

Also, Cory's is the largest of all shearwaters, with a wing span of 113-124 cm and a total length of 48-56 cm, compared with a wing span of 109-116 cm and a total length of 45-48 cm in Flesh-footed.

Wedge-tailed Shearwater is a widespread breeder in the tropical and subtropical Indian Ocean and Pacific Ocean. In our experience, dark-morph Wedge-tailed and Flesh-footed Shearwater have caused sufficient confusion at sea to warrant cross-comparison. The key differences are structural: Wedge-tailed has a slender bill, very small squarish head, long slimmish neck, long slim body and long rear-end, and when sat on the sea the primaries fall well short of the tail-end (cf plate 115-116). To date, only light-morph Wedge-tailed has been recorded in the North Atlantic, with one off Hatteras, North Carolina, USA, on 22 May 2021 (<https://ebird.org/checklist/S88778853>), and perhaps the same bird off Pinellas, Florida, USA, on 31 August 2021 (<https://ebird.org/checklist/S93987646>). A dark morph was photographed off Cape Town, on the margins of the South Atlantic, on 24 February 2007 (Trevor Hardaker in litt).

White-chinned Petrel is common in the South Atlantic where it breeds in the Falkland Islands and South Georgia. It also breeds in the South Indian Ocean and on New Zealand's sub-Antarctic Islands. It is an extremely rare vagrant to the North Atlantic. In the western Atlantic, it has been recorded twice in the mouth of the Amazon and at least once off the eastern seaboard of the USA. In the north-eastern Atlantic, it was recently recorded at Scapa Flow, Orkney, Scotland, on 25 May 2020, the first record for the Western Palearctic (WP; Holt et al 2021). This was followed by a sighting over Porcupine Bank, c 200 miles west of Ireland on 15 September 2021 (García-Barcelona et al 2022). White-chinned is an 'all-dark' *Procellaria* petrel, with a contrasting paler bill, and at distance can bear a surprising resemblance to Flesh-footed Shearwater. It differs by its larger size, being even larger than Cory's Shearwater, with a wing span of 132-145 cm and a total length of 50-57 cm. The bill is essentially pale yellow, rather than pinkish, and it is deep with nasal tubes raised high above the culmen, unlike shearwaters that have shallower bills with shallow nasal tubes. It has a chunky body. In flight, the wings are typically held angled at the carpal joint, unlike shearwaters that typically hold their wings more outstretched. The legs are black rather than pinkish. The white chin is rather restricted and hard to observe at sea in South Atlantic Ocean populations, although typically larger and readily visible in the field in South Indian Ocean populations (cf plate 117-118).

Range and movements

The vast majority of the estimated world population of 220 000 pairs of Flesh-footed Shearwater breeds in south-western and southern Australia, Lord Howe Island off eastern Australia, islands in the Cook Strait, and off North Island, New Zealand (plate 113-114). A small population of c 500 pairs breeds on St Paul in the South Indian Ocean. Egg-laying occurs from late November to mid-December, with fledging from late April to early May. The western Australian population migrates northward toward Indonesia, where some may remain. The rest undertakes transequatorial migration across the Indian Ocean to Sri Lanka and India (May-September) and to the Arabian Sea (see below). Some passage is noted in the Mascarene Islands and it is an uncommon to locally common year-round visitor to southern Africa, mainly off the eastern coast, less commonly in the south-eastern extremities of the Atlantic Ocean off South Africa. These South African visitors could by accident head northward in the Benguela Current, and stray deep into the Atlantic Ocean. The Lord Howe population moves mainly to eastern Korea and the New Zealand population mainly to the north-western Pacific Ocean (Flood & Fisher 2020).

Status in WP

In the WP 'sensu BWP', one previous Flesh-footed Shearwater was seen in the Red Sea off North Beach, Eilat, Israel, and Aqaba, Jordan, on 15 August 1980 (Andrews et al 1999, Shirihai 1999). In the 'greater' WP, Flesh-footed arrives in the Arabian Sea as early as April and is most frequent in June-October. It is most numerous in southern Oman, sometimes in large numbers, eg, 20 000 were off Ras Janjari, Dhofar, on 17 July 2009 (Eriksen & Victor 2019). It is a regular summer visitor (April-October) in small numbers to the United Arab Emirates, most common in June-August and mainly well offshore beyond 40 km. The maximum day count was 35 in June (Campbell et al 2017, Pedersen et al 2020).

Acknowledgements

Many thanks go to the whale watching company Espaço

Talassa, whose activities led to the discovery of the Flesh-footed Shearwater.

Samenvatting

AUSTRALISCHE GROTE PIJLSTORMVOGEL BIJ PICO, AZOREN, IN AUGUSTUS 2020. Op 7 augustus 2020 werd een Australische Grote Pijlstormvogel *Ardenna carneipes* ontdekt in een groep Kuhls Pijlstormvogels *Calonectris borealis* voor de kust van Pico, Azoren. In dit artikel wordt de vogel beschreven en op leeftijd gebracht als adulte of oudere onvolwassen vogel. Verder worden de determinatie en onderscheid met gelijkende soorten besproken. De combinatie van formaat (iets kleiner dan Kuhls), geheel donker verenkleed en lichte roze-achtige snavel en poten past alleen op deze soort. Verwarring is vooral mogelijk met melanistische Kuhls, donkere vorm Wigstaartpijlstormvogel *A pacifica* en Witkinstormvogel *Procellaria aequinoctialis*. Verder worden de kansen op het voorkomen als dwaalgast in de noordelijke Atlantische Oceaan aangegeven. Dit is het eerste geval in de noordelijke Atlantische Oceaan en Europa en het tweede in het West-Palearctische gebied sensu 'BWP'. In de 'grote' WP komt de soort regelmatig voor in de Arabische Zee, vooral voor de kust van Oman.

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