

Cory's Shearwater *Calonectris borealis*, Persian Shearwater *Puffinus persicus*, Jouanin's Petrel *Bulweria fallax* and Red-necked Phalarope *Phalaropus lobatus*, Muscat to Djibouti and into the Red sea, March/April 2015

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This note documents sightings and identification criteria for Cory's Shearwater *Calonectris borealis*, Persian Shearwater *Puffinus persicus* and Jouanin's Petrel *Bulweria fallax*, the three Procellariiformes sighted during a 'cultural cruise' aboard MV Minerva, March/April 2015. Identification criteria for Jouanin's Petrel are extended to include new insights. Sightings of Red-necked Phalarope *Phalaropus lobatus* are also given. The cruise travelled from Muscat, Oman, to Djibouti, northeast Africa, by way of the gulfs of Oman and Aden (Figure 1, Table 1). It then continued to Aqaba, Jordan, through the Red sea and gulf of Aqaba, though the four featured species were not recorded on this leg of the journey. The route passed c8 kilometres south of the Al-Hallaniyat (Al-Hallaniyah) islands, which are



Figure 1. Route of MV Minerva, Muscat–Djibouti, March/April 2015.

Table 1. Dates and timings of the sector Muscat–Djibouti, MV Minerva, 30 March–4 April 2015.

30 March	Morning 'dolphin cruise' out of Muscat; evening departure MV Minerva for Salalah
31 March	Continue toward Salalah
1 April	Arrival Salalah c16.00 h
2 April	Departure Salalah c15.00 h for Djibouti
3 April	Continue toward Djibouti
4 April	Continue toward Djibouti; arrival at Djibouti about midnight

c40 kilometres off the southeastern coast of Oman, and c320 kilometres north of the Socotra archipelago. These two groups of islands are thought to be the main breeding sites for Jouanin's Petrel and Persian Shearwater *Puffinus p. persicus*. The passage kept fairly close to land Muscat–Salalah but, due to the threat of piracy, joined the navy-patrolled shipping lane in the central gulf of Aden, Salalah–Djibouti.

The route is currently unpopular with passenger and research vessels because of the threat of Somali pirates. Precautions included armed guards and the vessel was dressed in rolls of razor wire, numerous water cannons, long trails of wire off the stern, *etc* (Plate 1). However, there were few restrictions to viewing. Daylight hours were spent on deck except for meals. The results provide an uncommon transect study for these waters and are broadly consistent with the earlier studies of Bailey (1966) and van den Berg *et al* (1991).

RESULTS

Cory's Shearwater

One was observed in the Red sea 6 April 2015 at 15° 4' N and 4° 42' E between Eritrea and Yemen (outside of both countries' 12-mile territorial waters). The bird was among a feeding frenzy of Brown Boobies *Sula leucogaster* and terns. This adds to a growing number of sightings of Cory's Shearwater off the Arabian peninsula, in the Red sea, and the gulf of Aqaba (*eg* Shochat *et al* 2004, Campbell *et al* 2013, Eriksen & Victor 2015, Y Perlman *in litt*).

This individual was recognised as one of the four *Calonectris* species; being a large shearwater, broad winged, with scruffy brown and white plumage. Streaked *C. leucomelas*, Cory's and Scopoli's *C. diomedea* Shearwaters have been recorded in waters around the Arabian peninsula, while Cape Verde Shearwater *C. edwardsii* has not. It was identified as Cory's Shearwater by its brownish head and neck, whitish chin and throat, distinct border



Plate 1. MV Minerva dressed in rolls of razor wire and numerous water cannons as part of the defence against the threat of Somali pirates, April 2015. © Robert L Flood

between whitish underwing-coverts and dark underwing primaries, and yellowish bill. Streaked Shearwater has a dark-streaked white head and greyish bill. Scopoli's Shearwater has a slim build and, in the underwings, typically whitish 'fingers' extending up the inner webbing of p8, p9 and p10. Cape Verde Shearwater is notably smaller with a greyish bill. Further details on identification are given in Gutiérrez (1998), Howell & Patteson (2008) and Fisher & Flood (2010).

Persian Shearwater

Only six *Puffinus* shearwaters were observed. Sightings of four birds on 31 March 2015 were evenly spread across the day. Singles were seen early morning on 1 April and late morning on 3 April.

Persian Shearwater *P. p. persicus* is a common summer breeding visitor to Oman (Eriksen & Victor 2015). The Al-Hallaniyat islands and the Socotra archipelago are the main known breeding sites. The breeding season is given as May–September (Onley & Scofield 2007), though birds are present at breeding cliffs on Socotra March/April–December/January (Jennings 2010). The full extent of post-breeding dispersal is poorly known. The few sightings on the present cruise indicate that adult populations had not yet returned to their colonies. Other similar-sized and structured *Puffinus* shearwaters nearest to the region are the closely related Mohéli Shearwater *P. persicus temptator* that breeds in the Comoros; and two subspecies of Tropical Shearwater *Puffinus bailloni* from the southwest Indian ocean, *Puffinus b. bailloni* that breeds on Réunion island, and *Puffinus b. nicolae/colstoni* that breeds in the Seychelles archipelago (following the taxonomy of Austin *et al* 2004).

The six shearwaters observed appeared fairly small, with relatively broadish wings and longish tail, and brownish-black on the upperside, browner in some light conditions. These features are consistent with Persian and Tropical Shearwaters. Underside plumage seen well on four birds indicated Persian (*eg* Plates 2–5). The underwing-coverts, axillaries



Plate 2 (left). Persian Shearwater *Puffinus p. persicus* off Oman, 9 September 2011. © Mike Barth

Plate 3 (right). Persian Shearwater *Puffinus p. persicus* off Oman, 22 April 2011. © Mike Barth

Plates 2 & 3: note the variable and extensive amount of dark in the underwing-coverts, axillaries, and flanks, giving a dirty look to the plumage.



Plate 4 (left). Tropical Shearwater *Puffinus b. bailloni* off Réunion island, southwest Indian ocean, 10 December 2014. © Kirk Zufelt

Plate 5 (right). Tropical Shearwater *Puffinus b. bailloni* off Réunion island, southwest Indian ocean, 10 December 2014. © Mike Danzenbaker

Plates 4 & 5: note the extensive amount of white in the underwing-coverts and axillaries, and the largely white flanks, giving a clean look to the plumage.

and flanks were extensively dark marked, typical of Persian Shearwater. Tropical Shearwaters have a more extensive amount of white in the underwing-coverts and largely white flanks, giving a much cleaner look to the plumage. Based on geographic range, it is assumed that the birds were nominate Persian Shearwater rather than *temptator* (similar plumage, Shirihai & Bretagnolle 2015a), movements of which are poorly known.

Jouanin's Petrel

In summary, scarce during the first morning's sailing toward Salalah, but more were seen in the afternoon. Peaked in numbers on the second day as we passed the Al-Hallaniyat islands. Fewer but steady Salalah–Djibouti, except the last day when just two birds were seen. In total, 217+ Jouanin's petrels were logged during the cruise (Table 2). A few Jouanin's Petrels occur in Omani waters mid-February, where it is common by mid-April

Table 2. Sightings of Jouanin's Petrel *Bulweria fallax* Muscat–Djibouti, 30 March–4 April 2015.

30 March	Five in morning a few miles offshore (from the 3-hour 'dolphin cruise'); two during evening departure of MV Minerva
31 March	Scarce and irregular in morning with six birds, more frequent and regular in the afternoon and evening with at least 24 birds
1 April	Over 130 birds, with a concentration of c100 birds while passing Al-Hallaniyat islands; small rafts of up to 10 birds flushed off sea mainly within 10 miles of the islands
2 April	Steady with 19 birds
3 April	Steady with 34 birds
4 April	One 08.00 h and one 17.15 h

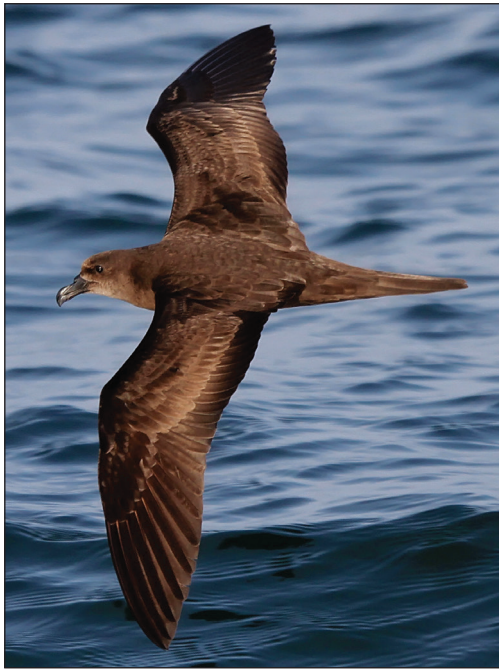


Plate 6 (left). Jouanin's Petrel *Bulweria fallax* off Oman, 8 November 2011. © Dave Andrews. Fresh-looking presumed juvenile. Note the indistinct pale upperwing ulnar bars.

Plate 7 (right). Jouanin's Petrel *Bulweria fallax* off Oman, 10 October 2012. © Jens Eriksen. Worn adult with first signs of head and body moult.

and then regular to the end of November (Eriksen & Victor 2015). The breeding season is probably concentrated in May–September (Brooke 2004, Onley & Scofield 2007), though chicks have been observed in November on Socotra (Jennings 2010). This is consistent with October/November records of fresh juveniles, worn adults, and adults in the early stages of post-breeding wing moult (eg Plates 6–8), and a few birds completing wing moult in April (Plate 9) (also see www.birdsoman.com, Campbell & Smiles 2013). Timing of the cruise was probably within the period of return to colony.

An identification issue to be considered in the region is published photographic evidence that reveals a possible 'new' taxon of *Bulweria*, most like Jouanin's Petrel, in the Comoros archipelago (Shirihai & Bretagnolle 2015b). It could wander to the region. That said, the recognised potential confusion species for Jouanin's Petrel is Bulwer's Petrel *Bulweria bulwerii*, though the distribution of Bulwer's Petrel in the Indian ocean is poorly known. The following records suggest a widespread distribution and that it could wander to the region. Transect studies found five Bulwer's Petrels March/April in the area c5°S–9°N and 50–52°E and, intriguingly, one c22° 5' N and 61° 2' E, c160 kilometres east-northeast of Al Hadd, Oman (Bailey *et al* 1968). One was captured in the Maldives in August 1958 (Phillips 1959) and one was captured in the Seychelles in June 2009 (Andrews & Skerrett 2012). Bulwer's Petrel was recently found breeding on Round island, Mauritius (Merton & Bell 2003). It was observed in numbers from 1–20 on eight out of nine pelagic trips off Reunion island December 2012 (Shirihai *et al* 2014) and December 2014 (Flood *et al* 2015).

Separation of Jouanin's Petrel from Bulwer's Petrel can be problematic. Poorer calibre photographs can make one species look like the other. Field experience is therefore of great value. Key characteristics are found in the structure, plumage, and flight behaviour/jizz:



Plate 8 (left). Jouanin's Petrel *Bulweria fallax* off Muscat, Oman, November 2014. © Peter Harrison. Adult showing the start of wing moult.

Plate 9 (right). Jouanin's Petrel *Bulweria fallax* off Oman, 15 April 2013. © Jens Eriksen. Presumed adult completing wing moult with p10 half grown, and some old and heavily-worn secondaries.

Structure The relatively larger head, broader wings, and less attenuated tail of Jouanin's were most obvious at close range. Jouanin's showed a heavier and more steeply dipped bill in *travelling* flight (not always evident in photographs) (eg Plates 10–12).

Plumage Onley & Scofield (2007), like some other guides, stated that Jouanin's Petrel lacks the pale upperwing ulnar bars of Bulwer's Petrel, except when the plumage is very worn. This is a bit misleading. The Jouanin's Petrels that I observed were in relatively fresh plumage having undergone a complete post-breeding moult (see above). Yet, from time to time, I saw pale upperwing ulnar bars, even at mid-range, though they were less distinct than on Bulwer's (see video clips below). The bars showed during wing strokes when strong light caught and reflected off the paler feathers. Also see Plates 6, 10 and 12.

Flight behaviour/jizz This proved important to identification. The relatively large size of Jouanin's Petrel was evident in its heavier flight in the different wind conditions. The flight appeared unlike any other petrel that I have seen and quite different from Bulwer's Petrel. Links to rare clips of the *travelling* flight of Jouanin's and Bulwer's Petrels are given below (view on maximum quality). Also see the video of Bulwer's Petrel in Flood & Fisher (2013). In both species, low wing loading and very long flexible wings give an effortless buoyant flight. Both species flap wings and glide in calm conditions, and glide for longer periods and shear in moderate to strong winds. Onley & Scofield (2007) stated that Jouanin's Petrel flaps its wings almost continuously in light winds, contrary to my experience. However, the main and significant difference in flight action is the slower, typically floppy wingbeats of Jouanin's. Bulwer's Petrel's flight action is springier with faster wingbeats. It makes quicker manoeuvres, tighter turns, and will suddenly flip/change direction. Bulwer's can be quite zippy in travelling flight, while the travelling flight of Jouanin's is mostly measured.



Plate 10 (above left). Jouanin's Petrel *Bulweria fallax* off Oman, 15 September 2014. © Jens Eriksen

Plate 11 (above right). Jouanin's Petrel *Bulweria fallax* off Oman, 8 September 2006. © Jens Eriksen

Plates 10 & 11: note the large head, broad wings, and heavy, steeply dipped bill. Pale upperwing ulnar bars are visible at times, even at mid-range.

Plate 12 (left). Bulwer's Petrel *Bulweria bulwerii* off Réunion island, southwest Indian ocean, 11 December 2014. © Mike Danzenbaker. Better images are available from the Atlantic, but this photo shows a bird from the populations under discussion. Note the less robust, more rakish build compared to Jouanin's Petrel. Pale upperwing ulnar bars are more distinct than on Jouanin's.

Jouanin's Petrel travelling in moderate breeze (HD): www.youtube.com/watch?v=EJyJrwDUJDI

Bulwer's Petrel travelling in moderate breeze (SD): www.youtube.com/watch?v=61TZLRoaRi4

A Bulwer's Petrel on a chum slick collects food by foot-pattering and surface-seizing, like a large storm-petrel. It faces into the breeze and hovers over the spot with heavy, buzzard-like wing flaps. I saw Jouanin's Petrels collect food on several occasions and they used the same basic technique; however, the Jouanin's Petrels appeared even heavier. Also, Bulwer's Petrel manner of investigation over potential prey is more excited and energetic. Of further note, Jouanin's Petrel showed no interest in the ship and only altered flight behaviour when hastening to cross the bow. Rafting birds were flushed from the sea on several occasions. Rafts of both species take to the wing en masse when flushed; rafts of the smaller Bulwer's Petrel burst into flight and scatter in all directions (Robb *et al* 2008, Flood & Fisher 2013), while the rafts of Jouanin's Petrels that I saw lifted off the sea and steadily dispersed.

Jouanin's Petrel flushed off sea (HD): www.youtube.com/watch?v=nFzv3N-U-E

Red-necked Phalarope

On 30 March, a total of 400+ Red-necked Phalaropes *Phalaropus lobatus* were seen, including birds from a 3-hour morning 'dolphin cruise' a few miles off Muscat. The phalaropes were very common in coastal waters, mainly in groups of up to 30 birds. On 31 March, 800+ were seen, evenly spread throughout the day. On 1 April, 30+ were seen, most around noon. There were no sightings on subsequent dates when the ship took a central route through the gulf of Aden, where food productivity is low. None were seen in the Red sea.

Red-necked Phalarope numbers and movements in the region are not well studied. It is a common migrant and winter visitor to waters off Oman (Eriksen & Victor 2015), and very erratic and prone to sudden influxes off United Arab Emirates (O Campbell *in litt*). The sightings during the cruise are in line with older records (*eg* Mörzer-Bruyns & Mörzer-Bruyns 1957) and recent geolocator studies (van Bemmelen *et al* 2015), which indicate northward movements in March/April. Van Bemmelen and co-workers retrieved four loggers; one logger died in December, so only three were functional in spring. Although two of the three phalaropes stayed in the gulf of Aden or adjacent seas October–February, they had moved out of the area by April. One went back to the Omani coast, while the others moved to the Persian gulf and Pakistan. March had few geolocator data due to problems of accuracy during the spring equinox.

ACKNOWLEDGEMENTS

Thanks to Captain Broomhall for access to the ship's log book, James Parry for general assistance on the cruise, and Swan Hellenic for a first-class cruise. Alan Hannington and Steve & Margaret Bosworth participated in deck watches and contributed to counts. Jens Eriksen commented on a draft of this article and provided helpful information about Persian Shearwater and Jouanin's Petrel off Oman. Rob van Bemmelen kindly commented on the Red-necked Phalarope account and provided some useful extra literature for the region. I am grateful to Oscar Campbell and a second reviewer for helpful comments on the original submission.

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