

NOTES ON THE DISTRIBUTION OF THE
SPECTACLED PETREL
PROCELLARIA CONSPICILLATA
IN THE SOUTH ATLANTIC OCEAN
DE VERSPREIDING VAN DE GEBRILDE STORMVOGEL
IN HET ZUID-ATLANTISCHE GEBIED

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At least 30 Spectacled Petrels Procellaria conspicillata were observed during systematic seabird surveys between Walvisbaai (Namibia) and Cape Town (South Africa) in February 2000. Because the pelagic distribution of this rare seabird species is only poorly understood, a description is provided of all sightings. Contrary to most Spectacled Petrels seen away from the breeding grounds elsewhere in the South Atlantic, there were no indications that these (non-breeding) birds heavily relied on commercial fisheries, but these birds are potentially at risk for substantial tuna longline fisheries in this area.

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INTRODUCTION

The Spectacled Petrel *Procellaria conspicillata* only breeds at Inaccessible Island in the Tristan da Cunha group (37°18'S, 12°41'W; central South Atlantic). It was considered a subspecies of the White-chinned Petrel *P. aequinoctialis* until recent research has shown that it is a valid species (Ryan 1998; Ryan 1999). Spectacled Petrels, until recently regarded as 'Endangered' because of their small population size (estimated at *ca.* 1000 pairs in the early 1980s), its restricted range and known mortality from long-line fishing, was found to breed with 3-4000 pairs on Inaccessible Island in 1999/2000 (Ryan & Moloney *in press*). In the light of this new census, its status will now be re-evaluated, and while the status still qualifies as 'Critical' (criteria B1 and 2e), it is only 'Vulnerable' in terms of other criteria (Ryan *pers. comm.*). Enticott & O'Connell (1985) have summarised the information on the distribution of the Spectacled Petrel at sea from five sources (Table 1). All records ($n = 79$) were either in April-July (28) or in September-November (51). Away from the breeding island, Spectacled Petrels disperse throughout the South Atlantic between 25°S

Table 1. Sources of information and total numbers of Spectacled Petrels used by Enticott & O'Connell 1985 for their description of the distribution of Spectacled Petrels at sea.

Tabel 1. Bronnen van informatie en het aantal Gebrilde Stormvogels dat door Enticott & O'Connell werd gebruikt voor hun overzicht van de verspreiding van deze soort op zee.

source	number of birds	observer effort (10-minute periods)
+ published records	9	unknown
+ BIOMASS , eight voyages to the Tristan da Cunha group	40	14000
+ British Antarctic Survey (voyages South Georgia - South America) during the breeding season	10	4000
+ commercial fishing trawlers in the Benguela region (SW Africa)	5	unknown
+ winter cruise (Jun-Jul) of MS <i>Agulhas</i> , Cape Town-Cough Island-South America and back via Inaccessible Island	16	751

Table 2. Sightings of White-chinned Petrels and Spectacled Petrels, February 2000, RV Pelagia. Shown are: date, ten-minute counts (effort), noon positions, area surveyed and numbers of petrels.

Tabel 2. Waarnemingen van Witkinstormvogels en Gebrilde Stormvogels, februari 2000, RV Pelagia. Gegeven worden: datum, aantal 10-minuten perioden (effort), middenposities, onderzoeksgebied en het aantal stormvogels.

date	observer effort	°S	°E	study area	White-chinned Petrel	Spectacled Petrel
15 2 2000	60	23	14	shelf Walvisbaai	934	
16 2 2000	77	24	13	shelf edge Namibia	25	
17 2 2000	77	26	11	ocean		
18 2 2000	76	27	7	ocean		
19 2 2000	24	27	4	ocean		
20 2 2000	28	30	3	ocean	2	4
21 2 2000	54	29	6	ocean	1	1
22 2 2000	28	30	8	ocean	2	
23 2 2000	60	31	9	ocean	30	16
24 2 2000	76	33	13	ocean	31	9
25 2 2000	65	33	16	shelf edge South Africa	15	
26 2 2000	4	34	18	shelf Cape Town	11	
	629				1051	30

and 40°S. Many birds visit the waters off southern Brazil, where interactions with long-line fisheries are frequent (Neves & Olmos 1998; Ryan 1999). For a rare seabird like the Spectacled Petrel, it is of considerable interest to assemble what is known of its distribution at sea (cf. Enticott & O'Connell 1985), particularly so, because the species is threatened by long-line fishing.

MATERIAL AND METHODS

This paper reports on sightings of Spectacled Petrels and White-chinned Petrels during a cruise on board RV *Pelagia* between Walvisbaai (Namibia) and Cape Town (South Africa) in February 2000 (629 10-minute periods, Table 2). Methods of observation were similar to those used in NW Europe (cf. Tasker *et al.* 1984), but with extra attention to foraging behaviour and interactions between species (cf. Camphuysen & Webb 1999).

RESULTS

The Namibian shelf and shelf-edge waters were rich in seabirds, marine mammals and commercial fisheries. White-chinned Petrels were among the most abundant seabirds following trawlers in these waters, but Spectacled Petrels were not seen. Further to the west, over deep oceanic waters between the Namibian shelf and Walvis Ridge, very low densities of seabirds were recorded, with Cory's or Scopoli's Shearwaters *Calonectris* spp., Great-winged Petrels *Pterodroma macroptera* and Leach's Petrels *Oceanodroma leucorhoa* numerically dominating.

On 20 February, two Spectacled Petrels joined the ship when it was stationary at 29°50'S, 02°25'E, soon followed by a third individual when the surveys were resumed. Later that day, a fourth Spectacled Petrel was following the steaming vessel for a while at 29°43'S, 02°47'E. On 21 February, one Spectacled Petrel was found in a mass feeding over some moribund squid, together with Scopoli's Shearwater *Calonectris diomedea**, Leach's Petrel, Great-winged Petrel and Atlantic Yellow-nosed Albatross *Thalassarche chlororhynchus*. Spectacled Petrels were frequently observed on 23 February and the use of individually characteristic head patterns and wing-moult stages was important to avoid double counts. Of at least 16 different individuals observed during the surveys, eight individuals followed the ship for some time, three of which subsequently joined a nearby mass-feeding with Great-winged Petrels and Leach's Petrels over unidentified prey. Of four further individuals, which alighted near the ship on a station at 31°27'S, 09°18'E, it was not clear whether or not they had been seen before and these have been excluded from the present analysis. On 24 February, surveys spanned the entire daylight period,



Spectacled Petrels *Procellaria conspicillata* Gebilde Stormvogels (C.J. Camphuysen)

but nine Spectacled Petrels were seen between 07:40 GMT-08:00 GMT (approx. position 32°24'S, 12°20'E). Up to five individuals at a time were seen in association with the ship, one was seen in a resting group together with (2) Leach's Petrels and (5) Great-winged Petrels. Again, double counts were avoided by carefully recording individual head patterns and moult stages.

Most Spectacled Petrels observed were actively moulting flight feathers. The observations did not allow time to carefully record the precise stage of wing moult, but most showed progressed primary moult, although not quite so dramatically as in the White-chinned Petrels observed in these waters. Either fewer feathers were shed simultaneously in Spectacled Petrels than in White-chinned Petrels, or the moult had not progressed quite so far in the former species. Head patterns ranged from narrow rings around the eye, difficult to detect at over 500m from the observers, to broad rings, suggesting to almost completely whitish heads.

DISCUSSION

Enticott & O'Connell (1985) report no Spectacled Petrels for December-March and Rowlands (1992) recorded none on cruises between Ascension, St Helena, Tristan da Cunha and Cape Town between December and May. Our records, indicating the presence of (moulting) birds in February at over 1100 nautical miles from the breeding grounds, are indicative for a non-breeding population over deep oceanic waters. The Spectacled Petrels were heavily attracted to the survey vessel (despite non-fishing operations onboard), so that densities of birds (n per km²) cannot reliably be calculated. Sightings of at least 30 individuals are substantial, however, in comparison with a breeding population of a few thousands of pairs only.

Spectacled Petrels were seen together with White-chinned Petrels while following the ship and readily joined feeding assemblages with smaller species such as Great-winged Petrels and Leach's Petrels. Commercial trawler fisheries are rather rare away from the SW African shelf, and these non-breeding Spectacled Petrels perhaps mainly relied on natural sources of prey. The birds showed 'interest' in discarded kitchen scraps by the research vessel on stations, but were not seen to feed on it (in contrast to Leach's Petrels).

Enticott & O'Connell (1985) concluded that 8.4% of 190 White-chinned Petrels seen on their winter cruise between Cape Town and South America were '*conspicillata*'. Our results indicate that the (summer) at sea distribution of both species is highly dissimilar, with White-chinned Petrels largely being confined to shelf and shelf-edge waters (93.7%, $n = 1051$) and with Spectacled Petrels being found over deep ocean waters, so that such a comparison is not particularly meaningful. Recent sightings indicate that

Spectacled Petrels are regular visitors over the shelf off the Cape in summer, attending trawlers with vastly larger numbers of White-chinned Petrels (Peter Ryan *pers. comm.*).

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SAMENVATTING

Tijdens zeevogeltellingen vanaf het onderzoeksschip Pelagia in februari 2000 werden tenminste 30 verschillende Gebrilde Stormvogels Procellaria conspicillata waargenomen. Deze zeldzame stormvogel wordt nog maar sinds kort als een aparte soort beschouwd en heeft een totale wereldpopulatie van ongeveer 3-4000 broedparen (Inaccessible Island, Tristan da Cunha; 37°18'S, 12°41'W). Vooral voor de Braziliaanse kust komen jaarlijks veel Gebrilde Stormvogels om het leven als bijvangst in de 'long-line' visserij. Van de verspreiding op zee is nog maar weinig bekend en daarom worden de waarnemingen hier individueel besproken. Het voorkomen in het nu beschreven gebied (1100 nm ten noordoosten van de broedplaats) tijdens de broedtijd was nog niet gepubliceerd en het betreft vermoedelijk vooral niet-broedende vogels. Het voorkomen van de Gebrilde Stormvogels bleef tijdens deze surveys beperkt tot de open zee, terwijl de nauw verwante Witkinstormvogel Procellaria aequinoctialis hoofdzakelijk op de Continentale Shelf te vinden was. Trawlvisserij is op de open oceaan nauwelijks te vinden en mogelijk leven de Gebrilde Stormvogels hier vooral van natuurlijke prooi.

REFERENCES

- Anonymous 1998. Spectacled Petrel: A new species instantly endangered! *Birds & Birding* 3(2): 13.
- Enticott J.W. & M. O'Connell 1985. The distribution of the spectacled form of the White-chinned Petrel (*Procellaria aequinoctialis conspicillata*) in the South Atlantic Ocean. *Br. Antarct. Surv. Bull.* 66: 83-86.
- Neves T. & F. Olmos 1998. Albatross mortality in fisheries off the coast of Brazil. In: Robertson G. & R. Ales (eds) *Albatross biology and conservation*: 214-219. Surrey Beatty & Sons, Chipping Norton.
- Rowlands B.W. 1992. Seabird observations between Ascension, St Helena and Tristan da Cunha in the central south Atlantic. *Marine Ornithology* 20: 25-42.
- Ryan P.G. 1998. The taxonomic and conservation status of the Spectacled Petrel *Procellaria conspicillata*. *Bird Conserv. Intern.* 8: 223-235.
- Ryan P.G. 1999. Spectacled Petrel *Procellaria conspicillata*. *World Birdwatch* 21(1): 24-25.
- Ryan P.G. & C.L. Moloney *in press*. The status of Spectacled Petrels *Procellaria conspicillata* and other seabirds at Inaccessible Island. *Marine Ornithology*.
- Tasker M.L., P.H. Jones, T.J. Dixon & B.F. Blake 1984. Counting seabirds at sea from ships: a review of methods employed and a suggestion for a standardized approach. *Auk* 101: 567-577.

*Scopoli's Shearwater *Calonectris diomedea* known as Cory's Shearwater *C. d. diomedea* on the British list.