WHITE-CHINNED PETREL PROCELLARIA AEQUINOCTIALIS FEEDING ON A DEAD DOLPHIN

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ABSTRACT

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The White-chinned Petrel *Procellaria aequinoctialis* is an opportunistic forager that often follows fishing boats to feed upon scraps or escaped/discarded fish. Although its diet in non-breeding areas is not well understood, studies of stomach contents indicate that its diet consists of fish, crustaceans, and squid. In June 2024, during a pelagic birding trip off the coast of Santa Catarina State, Brazil, a White-chinned Petrel was spotted feeding on the floating carcass of a Franciscana Dolphin *Pontoporia blainvillei*. This behavior has not been previously documented in the literature, online citizen science platforms, or by personal observation. We believe this to be an uncommon, opportunistic feeding strategy for this petrel species.

Key words: Atlantic Ocean, conservation, foraging behavior, ocean birds, scavenging

Shearwaters and petrels (Procellariidae) include 16 genera and 98 species that are distributed widely across Earth's oceans (Winkler et al., 2020). They feed mainly on small aquatic invertebrates and fish, employing different strategies, including diving, surface capture, and scavenging. Different procellarid species of varying size feed on carcasses of large vertebrates, and a few procellarids are active predators of eggs and chicks of other seabirds (Spear et al., 2007; Winkler et al., 2020).

Many procellarid species follow fishing vessels to feed on discards, occasionally becoming accidentally captured, which can lead to mortality and, in some cases, contribute to population declines (Phillips et al., 2016). Among these species, the White-chinned Petrel *Procellaria aequinoctialis* (WCPE), designated globally as Vulnerable (International Union for Conservation of Nature [IUCN], 2024), occurs in cooler waters from tropical latitudes to the edge of the Antarctic continent. It nests on sub-Antarctic islands such as the Falklands/Malvinas, South Georgia, and the Antipodes (Marchant & Higgins, 1990). Exceptional records occur in the Northern Hemisphere (Carboneras et al., 2020).

Owing to their association with fishing vessels, more WCPEs are accidentally killed by fishing gear each year than any other seabird in Southern Hemisphere waters (Robertson et al., 2006; Weimerskirch et al., 1999), and possibly worldwide

(Montevecchi, 2001). They are also killed by longline fisheries in Brazilian waters (Bugoni et al., 2008). Globally, annual mortality reaches at least tens of thousands, not including losses from illegal and unregulated fishing. Therefore, the total bycatch is likely much higher than the currently reported estimate (Martin et al., 2009).

The WCPE is an adaptable species that primarily feeds on fish, crustaceans, and squid, but it also consumes bird and mammal meat, plant material, and feathers (Berrow et al. 2000; Berrow & Cooper et al., 1992; Croxall et al., 1995; Croxall et al., 1999; Jackson, 1988). Similar to its association with fishing vessels (Olmos, 1997; Olmos & Bugoni, 2006), the WCPE is also associated with various cetacean species, likely taking advantage of prey that has been killed or caught but not consumed or retrieved in time (Hodges & Woehler, 1994; Williams et al., 1990).

On 22 June 2024, the authors were on a pelagic birding trip off the centre-north coast of Santa Catarina State (Balneário Camboriú region), Brazil, where WCPEs are among the most common opensea birds (see eBird lists). At 13h40, about 20 km from shore at 26°54′33.7″S, 48°27′14.7″W, one WCPE was spotted sitting on the water pecking at the floating carcass of a dolphin (Fig. 1A, video: https://macaulaylibrary.org/asset/621515223). As we approached, we found the dead Franciscana Dolphin *Pontoporia blainvillei* (Fig. 1B), which was mostly intact but showed signs of possible



Fig. 1. (A) Adult White-chinned Petrel *Procellaria aequinoctialis* (WCPE) recorded near a dead Franciscana Dolphin *Pontoporia blainvillei* in waters off the coast of the state of Santa Catarina, Brazil; (B) detail of the dolphin; (C) detail of possible pecking marks; and (D) detail of exposed flesh, likely the area where the individual WCPE was pecking. Photos credits: (A) Leandro Correa; (B–D) Fabio Schunck.

bird peck marks (distinguishable from fishing net marks, which are typically more linear and circular) between the flippers and the head on the right part of the body (Fig. 1C), along with a wide area of exposed flesh at the base of the jaw on the same side (Fig. 1D). Therefore, the WCPE was possibly feeding on the carcass. We were unable to photograph the WCPE pecking at the dolphin because of the rapid approach of the (large) boat. However, the bird moved only a few meters away and remained near the carcass for approximately 10 min while we were there.

Mammalian flesh is an uncommon food item in the WCPE's diet (Cooper et al., 1992), a finding further supported by review of online bird image libraries (Macaulay Library, https://www.macaulaylibrary.org; and WikiAves, https://www.wikiaves.com.br/). We did not find any indications of similar behavior among 5,458 WCPE images posted as of 26 June 2024.

This record of a WCPE feeding on a dead Franciscana Dolphin represents an unusual, likely opportunistic occurrence, similar to the record of Atlantic Yellow-nosed Albatrosses *Thalassarche chlororhynchos* feeding on a dead sea turtle off the coast of Brazil (Schunck et al., 2022). These species appear to exploit carcasses

when available, a behavior that may be linked to a potential scarcity of their usual prey or opportunistic feeding.

Between 06h00 and 12h00, before making this observation, we observed large groups of WCPE, with up to 55 birds in each group, totaling around 186 individuals, all foraging near fishing boats—a very common behavior in the area. Therefore, the single bird attending the Franciscana Dolphin carcass may have been engaging in exploratory behavior, driven by curiosity. Because most of the available data on the WCPE's diet comes from its nesting period, any information obtained outside this time is crucial to provide a more comprehensive understanding of the ecology of this threatened species.

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REFERENCES

- Berrow, S. D., & Croxall, J. P. (1999). The diet of white-chinned petrels *Procellaria aequinoctialis*, Linnaeus 1758, in years of contrasting prey availability at South Georgia. *Antarctic Science*, 11(3), 283–292. https://doi.org/10.1017/S0954102099000371
- Berrow, S. D., Wood, A. G., & Prince, P. A. (2000). Foraging locations and range of White-chinned petrels *Procellaria* aequinoctialis breeding in the South Atlantic. *Journal of* Avian Biology, 31(3), 303–311. https://doi.org/10.1034/j.1600-048X.2000.310305.x
- Bugoni, L., Neves, T. S., Leite Jr., N. O., Carvalho, D., Sales, G., Furness, R. W., Stein, C. E., Peppes, F. V., Giffoni, B. B., & Monteiro, D. S. (2008). Potential bycatch of seabirds and turtles in hook-and-line fisheries of the Itaipava Fleet, Brazil. *Fisheries Research*, 90(1–3), 217–224. https://doi.org/10.1016/j.fishres.2007.10.013
- Carboneras, C., Jutglar, F., Juana, E. (2020). White-chinned Petrel (*Procellaria aequinoctialis*), version 1.0. In J. Del Hoyo, A. Elliot, J. Sargatal, D. A. Christie, & E. De Juana, E. (Eds.), *Birds of the World*. Cornell Lab of Ornithology. https://doi.org/10.2173/bow.whcpet1.01
- Clark, B. L., Carneiro, A. P. B., Pearmain, E. J., Rouyer, M-M., Clay, T. A., Cowger, W., Phillips, R. A., Manica, A., Hazin, C., Eriksen, M., González-Solís, Adams, J., Albores-Barajas, Y. V., Alfaro-Shigueto, J., Alho, M. S., Araujo, D. T., Arcos, J. M., Arnould, J. P. Y., Barbosa, N. J. P., . . . Dias, M. P. (2023). Global assessment of marine plastic exposure risk for oceanic birds. *Nature Communications*, 14, 3665. https://doi.org/10.1038/s41467-023-38900-z
- Cooper, J., Fourie, A., & Klages, N. T. W. (1992). The diet of the White chinned Petrel *Procelaria aequinoctialis* at sub-Antarctic Marion Island. *Marine Ornithology*, 20(1), 17–24. http://doi.org/10.5038/2074-1235.20.1.280
- Croxall, J. P., Hall, A. J., Hill, H. J., North, A. W., & Rodhouse, P. G. (1995). The food and feeding ecology of the white-chinned petrel *Procellaria aequinoctialis* at South Georgia. *Journal of Zoology*, 237(1), 133–150. https://doi.org/10.1111/j.1469-7998.1995.tb02752.x
- Dias, M. P., Martin, R., Pearmain, E. J., Burfield, I. J., Small, C., Phillips, R. A., Yates, O., Lascelles, B., Borboroglu, P. G., & Croxall, J. P. (2019). Threats to seabirds: A global assessment. *Biological Conservation*, 237, 525–537. https://doi.org/10.1016/j.biocon.2019.06.033
- Hodges, C. L., & Woehler, E. J. (1994). Associations between seabirds and cetaceans in the Australian sector of the southern Indian Ocean. *Marine Ornithology*, 22(2), 205–212. http://doi.org/10.5038/2074-1235.22.2.306
- International Union for Conservation of Nature. (2024). The IUCN Red List of Threatened Species. Version 2024-1. Retrieved on July 15, 2024, from http://www.iucnredlist.org

- Jackson, S. (1988). Diets of the White-Chinned Petrel and Sooty Shearwater in the Southern Benguela Region, South Africa. *The Condor*, 90(1), 20–28. https://doi.org/10.2307/1368428
- Marchant, S., & Higgins, P. J. (1990). Handbook of Australian, New Zealand and Antarctic birds. Vol. 1: Ratites to ducks. Oxford University Press. <a href="https://www.vgls.vic.gov.au/client/en_AU/vgls/search/detailnonmodal/ent:\$002f\$002f\$D_ILS\$002f0\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$002f\$D_ILS\$002f0\$D_ILS\$
- Martin, A. R., Poncet, S., Barbraud, C., Foster, E., Fretwell, P., & Rothery, P. (2009). The white-chinned petrel (*Procellaria aequinoctialis*) on South Georgia: Population size, distribution and global significance. *Polar Biology*, 32, 655–661. https://doi.org/10.1007/s00300-008-0570-5
- Montevecchi, W. 2001. Interactions between fisheries and seabirds. In E. A. Schreiber & J. Burger (Eds.), *Biology of marine birds*. CRC Press. https://doi.org/10.1201/9781420036305
- Olmos, F. (1997). Seabirds attending bottom long-line fishing off southeastern Brazil. *Ibis*, *139*(4), 685–691. https://doi.org/10.1111/j.1474-919X.1997.tb04692.x
- Olmos, F., & Bugoni, L. (2006). Agregações de aves marinhas associadas a pesca de espinhel-de-fundo na região Sudeste e Sul do Brasil. In T. Neves, L. Bugoni & C. L. B. Rossiwongtschowski (Eds.), Aves oceânicas e suas interações com a pesca na região Sudeste-Sul do Brasil. Universidade de São Paulo.
- Phillips, R. A., Gales, R., Baker, G. B., Double, M. C., Favero, M., Quintana, F., Tasker, M. L., Weimerskirch, H., Uhart, M., Wolfaardt, A. (2016). The conservation status and priorities for albatrosses and large petrels. *Biological Conservation*, 201, 169–183. https://doi.org/10.1016/j.biocon.2016.06.017
- Robertson, G., McNeill, M., Smith, N., Wienecke, B., Candy, S., & Olivier, F. (2006). Fast sinking (integrated weight) longlines reduce mortality of White-chinned petrels (*Procellaria aequinoctialis*) and sooty shearwaters (*Puffinus griseus*) in demersal longline fisheries. *Biological Conservation*, 132, 458–471. https://doi.org/10.1016/j.biocon.2006.05.003
- Schunck, F., Pina, P. I., barata, F. L., & Olmos, F. (2022). Atlantic Yellow-nosed Albatross *Thalassarche chlororhynchos* feeding on a dead Sea Turtle. *Marine Ornithology*, 50(2), 143–145. http://doi.org/10.5038/2074-1235.50.2.1482
- Spear, L. B., Ainley, D. G., & Walker, W. A. (2007). Trophic relationships of seabirds in the eastern Pacific Ocean. *Studies in Avian Biology*, 35, 1–99.
- Weimerskirch, H., Catard, A., Prince, P. A., Cherel, Y., Croxall, J. P. (1999). Foraging White-chinned petrels *Procellaria aequinoctialis* at risk: from the tropics to Antarctica. *Biological Conservation*, 87(2), 273–275. https://doi.org/10.1016/S0006-3207(98)00039-1
- Williams, A. J., Dyer, B. M., Randall, R. M., & Komen, J. (1990).
 Killer whales *Orcinus orca* and seabirds: "Play", predation and association. *Marine Ornithology*, 18(1), 37–41. http://doi.org/10.5038/2074-1235.18.1.233
- Winkler, D. W., Billerman, S. M., & Lovette, I. J. (2020). Shearwaters and Petrels (*Procellariidae*), version 1.0. In S. M. Billerman, B. K. Keeney, P. G. Rodewald & T. S. Schulenberg (Eds.), *Birds of the world*. Cornell Lab of Ornithology. https://doi.org/10.2173/bow.procel3.01