

Appendix 1

Sabine's Gulls outside of their main wintering areas are not necessarily vagrants

Jonatas H. F. Prado*; Gabriel Canani; Pedro V. Castilho; Nicholas W. Daudt

*Corresponding author: jonatashenriquef@gmail.com

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Supplementary material from Prado *et al.* (2021) referred above. Figures presented here depict raw data sets from the three databases used to verify potential unusual records of Sabine's Gull *Xema sabini* worldwide (Figs. S1, S2, S3), and the complete data set after thinning procedure for building up the kernel 75% countour line used by us (Fig. S4). For more details, see main text. After, it is also presented two new records for Brazil mentioned within the Table of the maintext (Fig. S5 and S6).

Fig. S1. Plot of the raw GBIF dataset from Sabine's Gull *Xema sabini* between January 1800 and June 2020

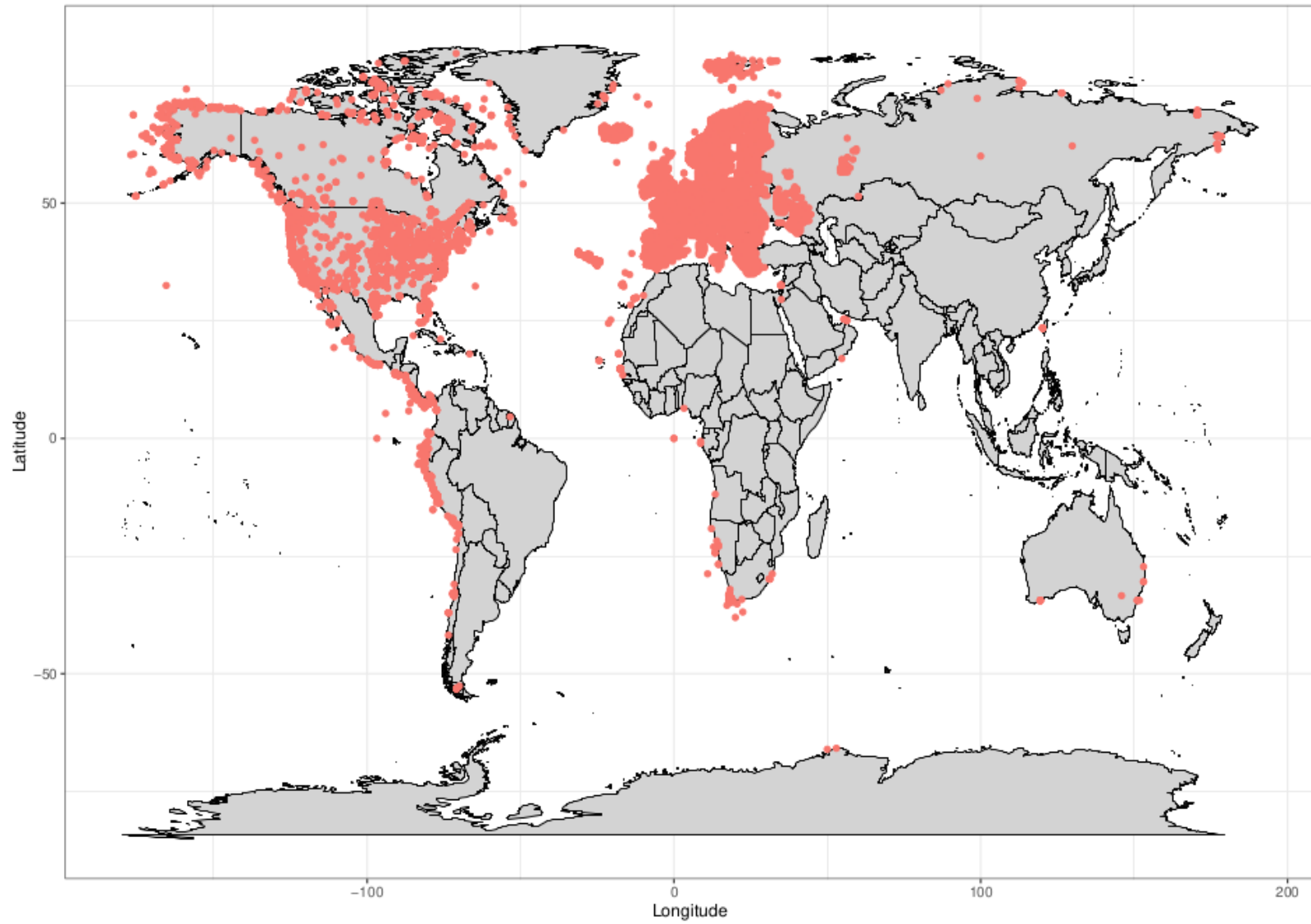


Fig. S2. Plot of the raw OBIS dataset from Sabine's Gull *Xema sabini* between May 1970 and October 2019

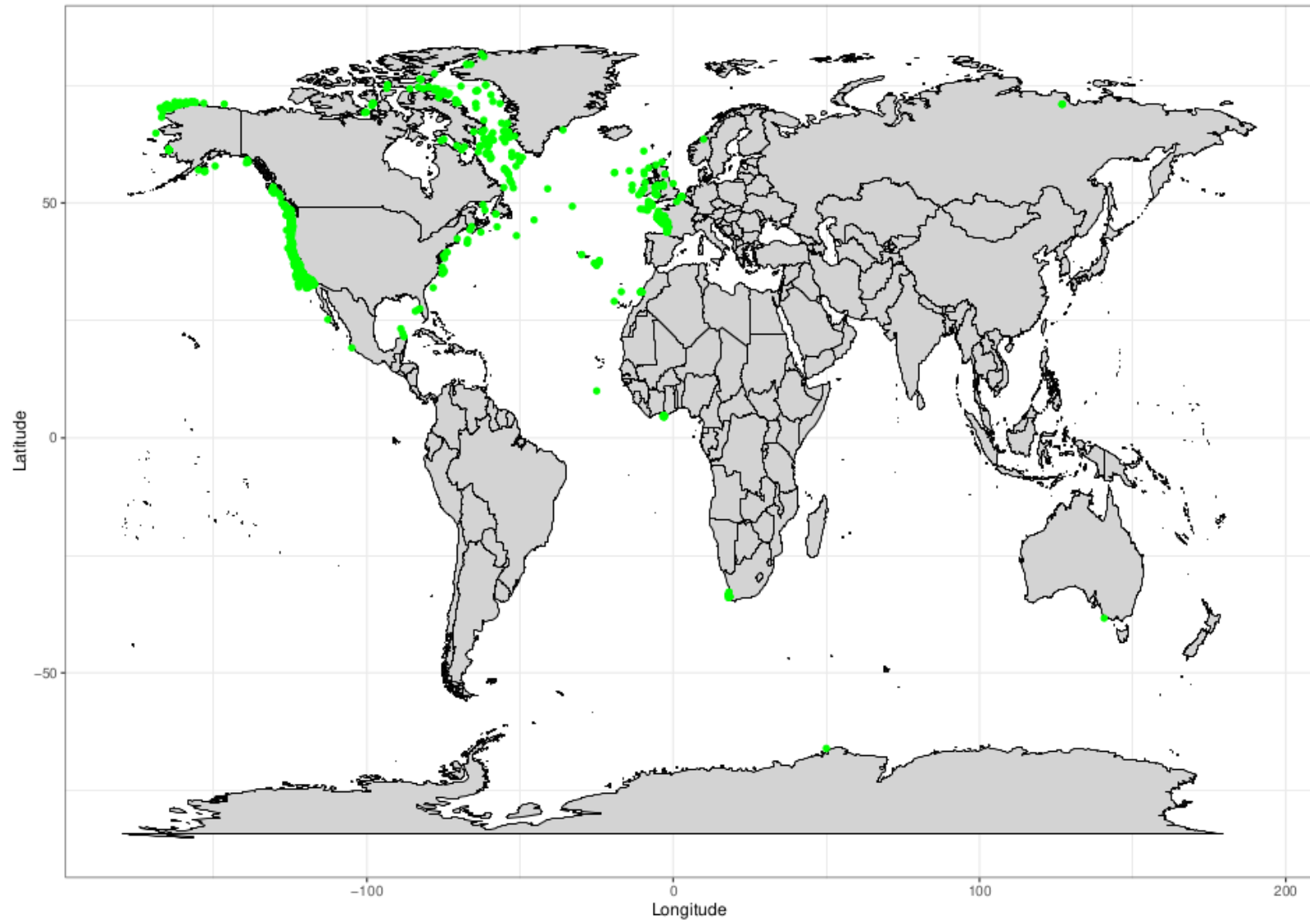


Fig. S3. Plot of the raw eBird dataset from Sabine's Gull *Xema sabini* between November 1871 and June 2020

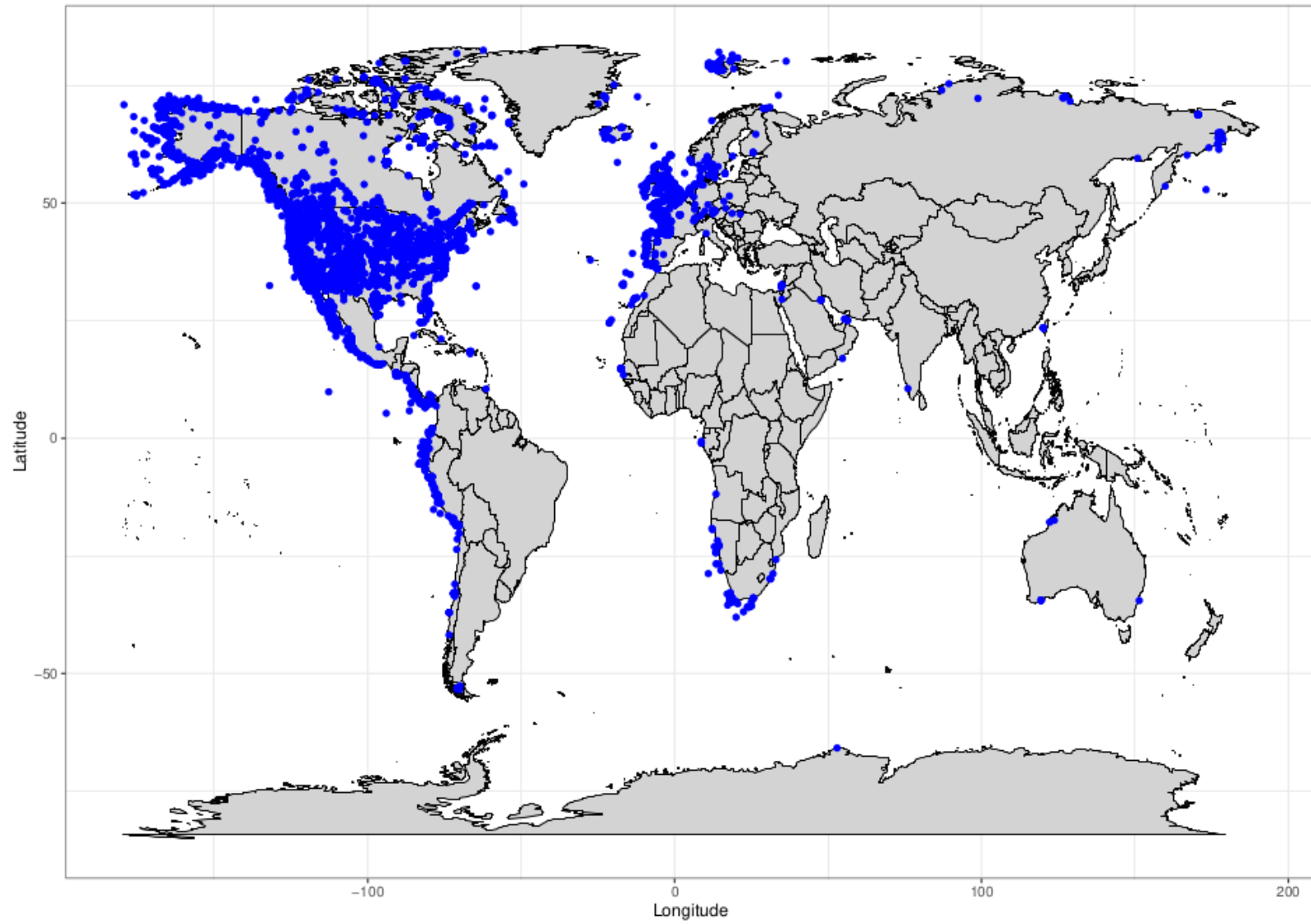
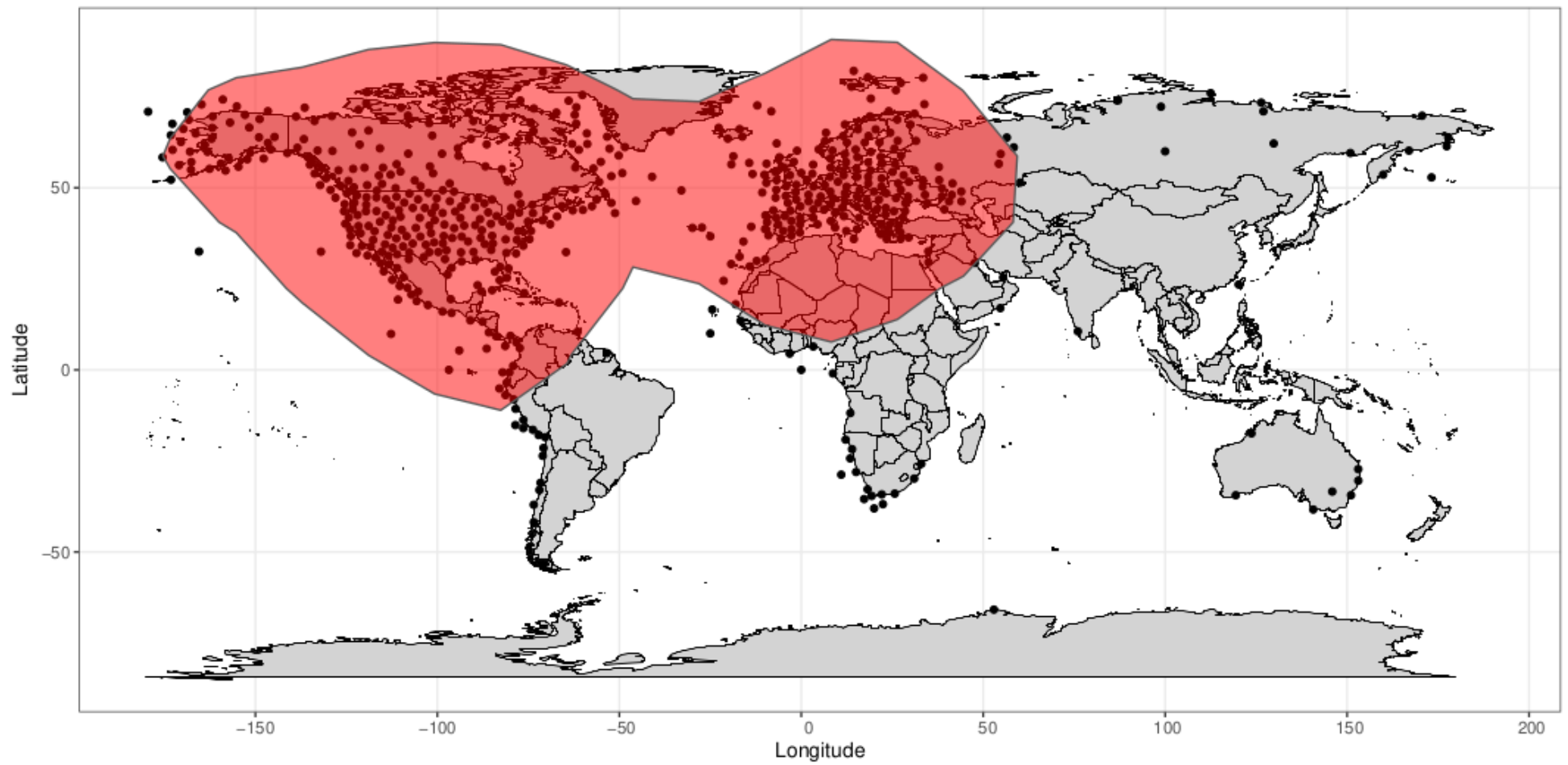


Fig. S4. Plot of the kernel 75% contour line (red filled polygon) and points from the thinned dataset used as basis for its calculation.



New records for Brazil

The first record was a bird found at Praia da Vila, municipality of Imbituba (28°28.86'S, 48°40.86' W), Santa Catarina (SC) State, Brazil, on 16 March 2017, during a daily beach survey carried out by the field team of *Projeto de Monitoramento de Praias da Bacia de Santos* (PMP-BS). Although the animal was alert and active, it was slightly injured on its left wing. The animal was sent to an advanced Medical Center for Marine Animals (*Associação R3 Animal*) at Florianópolis city, SC, 19 March. A smoky-gray color on sides of neck and nape, as well as the yellow bill-tip indicates that it was an adult winter-plumaged individual (Fig. S5; Howell & Dunn 2007; Olsen 2018). However, the pale-flesh legs instead dusty-black of adults, suggested that the bird could be younger, in its first adult-plumage (Olsen 2018). The bird measures as follows: exposed culmen (from feathers to bill-tip) 26.4 mm; bill depth at base 8.7 mm; head plus bill length (from occipital to bill-tip) 68.0 mm; tarsus length (middle of mid-tarsal joint to the distal end of tarsus-metatarsus) 37.7 mm; and flattened wing chord 270 mm. After its recovery, the animal received an individual numbered metal band (L77702 CEMAVE) and was released on 28 March 2017 by the rehabilitation center personnel at Praia do Moçambique, Florianópolis, SC.

The second record was photographed at-sea on 08 June 2017 at 3 o'clock p.m. by GC (onboard observer of *Projeto Albatroz*) from a pelagic longline fishing vessel operating at 1,430 m depth off Rio Grande do Sul State (RS), Brazil (32°40.5'S, 49°47.6'W). The smoky-gray hood and yellow-tipped bill confirm it was an adult summer-plumaged Sabine's Gull (Fig. S6; Howell & Dunn 2007; Olsen 2018). As the hood was incomplete, it was probably a younger adult (Olsen 2018). The sea surface temperature and southeasterly wind speed were 21.3 °C and 20–28 km/h (10–15 kt; Beaufort 4), respectively. The bird was flying along with Atlantic Yellow-nosed Albatrosses (*Thalassarche chlororhynchos*), Black-browed Albatrosses (*T. melanophris*), Cape Petrels (*Daption capense*), White-chinned Petrels (*Procellaria aequinoctialis*) and Spectacled Petrels (*P. conspicillata*), apparently following the boat attracted by the associated seabird assemblage and the discarded baits and offal. The bird stayed close to the boat for at least half-hour, and then flew off.

REFERENCES

- HOWELL, S.N.G. & DUNN, J. 2007. *Gulls of the Americas*. New Jersey, USA: Princeton University Press.
- OLSEN, K.M. 2018. *Gulls of the world: a photographic guide*. New Jersey, USA: Princeton University Press.

Fig. S5. Sabine's Gull *Xema sabini* photographed at Praia da Vila, municipality of Imbituba, Santa Catarina State, Brazil, 16 March 2017; (a) dorsal view; (b) detail of the head and bill; (c) at the beach. Photographs: PMP-BS (State University of Santa Catarina - UDESC)



Fig. S6. Sabine's Gull *Xema sabini* photographed offshore off Rio Grande do Sul State, Brazil, 8 June 2017 (a, b); and (c) with associated seabird assemblage. Photographs: GC/Projeto Albatroz

