

First record of *Leucophaeus atricilla* (Linnaeus, 1758) on the southern coast of Santa Catarina

Primeiro registro de Leucophaeus atricilla (Linnaeus, 1758) no litoral sul de Santa Catarina

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ABSTRACT

On November 8, 2021, an adult individual of the laughing gull (*Leucophaeus atricilla*) was observed on a stretch of sandy beach in the municipality of Imbituba, State of Santa Catarina (SC), between the beaches of Vila and Itapirubá Norte. The second record took place on November 12, 2021, in the municipality of Laguna, also in SC. These are the first records of this species for the State, on the southern coast of Brazil, demonstrating the potential for southern displacement of *Leucophaeus atricilla*, pointing to a possible expansion of its non-reproductive distribution area on the Brazilian coast. The present observations can serve as a pioneer indication of the establishment of new populations in this new region of occurrence.

Keywords: displacement; distribution; laughing gull; migration; occurrence.

RESUMO

Em 8 de novembro de 2021, foi observado um indivíduo adulto de gaivota-alegre (*Leucophaeus atricilla*) em um trecho de praia arenosa no município de Imbituba, estado de Santa Catarina (SC), entre as praias da Vila e Itapirubá Norte. O segundo registro ocorreu em 12 de novembro de 2021, no município de Laguna, também em SC. Trata-se dos primeiros registros dessa espécie para o estado, no litoral sul do Brasil, demonstrando o potencial de deslocamento austral de *Leucophaeus atricilla*, o que aponta para uma possível expansão de sua área de distribuição não reprodutiva na costa brasileira. As presentes observações podem servir como indicação pioneira do estabelecimento de novas populações nessa nova região de ocorrência.

Palavras-chave: deslocamento; distribuição; gaivota-alegre; migração; ocorrência.

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INTRODUCTION

Leucophaeus atricilla (Linnaeus, 1758) is a medium size seabird, measuring 42 cm on length, 102 cm of wingspan and weighing 320 grams (SIBLEY *et al.*, 2001). As described by Olsen & Larsson (2004):

Adult birds display breeding feathering from april to august, which is characterized by a black hood on the head that extends from the nape to the flanks. There are two white eye arches above and below the eyes, the beak is red, long and fallen with a dark tip. On flight, wings are long and peaked, primary feathers are black with small white mirrors, secondary feathers have thin white edges that gradually merges to the grayish-blue mantle. Legs and feet are dark red. The breast, belly, flanks and undertail coverts are white, as is the tail. Winter feathering displays from september to april and looks the same as the breeding feathering, except

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that the black hood is replaced by a black mask that penetrates over the crown and ear coverts and the tip of the beak is pale.

This bird belongs to Laridae family, together with approximately another 50 species that are distributed all over the world, although greater diversity is found on temperate regions, birds in this family being typically coastal, found on beaches, lagoons and mangroves, although some species may inhabit areas inland (HOWELL & DUNN, 2007).

At least nine species of Laridae are present in Brazilian territory but only three of them (*Chroicocephalus maculipennis* (Lichtenstein, 1823), *Chroicocephalus cirrocephalus* (Vieillot, 1818) and *Larus dominicanus* (Lichtenstein, 1823)) breed on national land, while the other six species (*Leucophaeus atricilla*, *Leucophaeus pipixcan* (Wagler, 1831), *Larus atlanticus* (Olog, 1958), *Larus delawarensis* (Ord, 1815), *Larus fuscus* (Linnaeus, 1758) and *Xema sabini* (Sabine, 1819) are visitors from the north hemisphere or from the south region of South America (SICK, 1997).

These migrant species displace themselves for great distances between their breeding and wintering areas (BURGER & GOEHFELD, 1996). Among gulls that come from the northern hemisphere, *Leucophaeus atricilla* is the only species with regular seasonal occurrence in the country (PIACENTINI *et al.*, 2015), being the others considered as 'pseudovagrant' for performing genuine annual migration in an area and/or migration route not yet clearly understood (PRADO *et al.*, 2021). Migratory movements are a wild population's response to a seasonal condition of low resource availability, in which they move to a region where the resource is plentiful, and, in most cases, the resource involved is food or nesting area (CORNELL UNIVERSITY, 2014). Migration can also be related to water availability or to reduce competition (ABLE, 1999).

Leucophaeus atricilla usually breeds on the Atlantic coast of United States, from Maine to Florida and in Mexico Gulf coast, from Florida to south coast of Texas (DIAS *et al.*, 2010). Breeding colonies of this species are also found on Caribe, in some few areas on West coast of Mexico and on French Guiana (BURGER & GOEHFELD, 1996). The north coast of South America is considered as the main wintering area of *L. atricilla* (SICK, 1997; RIDGELY *et al.*, 2003; HOWELL & DUNN, 2007). Although it is a species relatively well studied on breeding areas, detailed information about distribution and abundance of *L. atricilla* on South America are yet sparse.

Lima *et al.* (2010) did a revision of occurrence records of *L. atricilla* on Brazilian coast and showed that its regular distribution is restricted to Amapá, Pará, Maranhão to São Luís island, Ceará, Bahia, Rio de Janeiro and São Paulo. The only record of *L. atricilla* on the south of Brazil was registered on Lagoa dos Peixes (State of Rio Grande do Sul), on July 1985 (SICK, 1997). Even so, the isolated record is questionable since it lacks on documentation, the unusual date and the occurrence of a lot of similar species on this region. All of this made Bencke (2001) to remove *L. atricilla* from the birds list of Rio Grande do Sul. However, an uplift made on the online platform for sharing and recording bird occurrences Wiki Aves resulted in a record of the species on Rio Grande do Sul, made by Fenalti (2016), on January, in the municipality of Cidreira.

Due to these facts, we undertook a search for this bird in beaches of the Southern part of the Santa Catarina State.

MATERIAL AND METHODS

The work was done along the daily monitoring made by the Beaches Monitoring Project PMP-BS/Petrobras, Section 1, which consists of daily 44 kilometers driven with an engine vehicle on 25 km/h of medium speed, to verify the beaches. The focused monitored patch is located inside of Right Whale Environmental Protection Area (APABF), that is characterized by a mosaic of ecosystems that represents an important sample of the south coast of Santa Catarina, in which dozens of bird species, both migratory and residents, find optimal conditions for feeding, resting and breeding (PALUDO *et al.*, 2018). The sighting was made with a Bushnell 10x42mm binoculars and the photographic record was registered by a Canon EOS Rebel T6 with 55-250mm lens.

RESULTS

On November 8th 2021, an adult specimen of the laughing gull *Leucophaeus atricilla* was recorded in a sandy beach coast on the municipality of Imbituba, Santa Catarina. The individual was recorded between Vila's and North Itapirubá's beaches (-28,290618, -48,697049), displaying non-breeding feathering (figure 1). On the occasion, the bird was feeding among a group of approximately ninety individuals of *Larus dominicanus*. It was registered at 10h20m am, during the daily monitoring. During the sighting, the predominant wind was from southeast quadrant, with intensity between 1 and 3 knots, and with cloudy weather. An additional record was made by Farias (2021) on November 12th on Barra do Camacho (-28,6078549, -48,8600441), in the municipality of Laguna, Santa Catarina, as it can be seen on the identified bird list of the online platform of birds records, eBird.



Figure 1 – Record of *Leucophaeus atricilla* and *Larus dominicanus* between Vila's and North Itapirubá's beaches. Source: primary.

DISCUSSION

The southern coast of Brazil is an important feeding area for seabirds which use resources distributed from shallow waters to depths that go beyond the slope of the continental shelf (VALLS *et al.*, 2023). Besides that, the region is used as wintering area to migrant seabirds and also as feeding area during breeding period of some species that breed on subantartic islands (ICMBIO, 2018). Migratory species might have special requirements to survive, considering the need of protected habitat and feeding resources on surrounding areas, as they frequently travelled thousands of kilometers between breeding and wintering areas (BRANCO, 2003). There are also species for which it is essential to maintain specific areas, used for resting or feeding during the migratory movement, which are fundamental for the completion of their life cycle (OLIVEIRA *et al.*, 2020).

These records are the first of this species to Santa Catarina state, located on the southern coast of Brazil and show the potential austral displacement of *Leucophaeus atricilla*, indicating a possible expansion of its non-reproductive distribution area on Brazilian seashore. The present observations may be a first indication of the establishment of new populations in this new occurrence area. Due to the lack of studies that seek to understand the occurrence, critical areas and migratory pattern of sea and coastal birds, it is necessary to continue systematic monitoring in this region,

since the available knowledge about South America is incipient, especially when compared with that of North America.

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DECLARATIONS AND DECLARATIONS

I, Samira Effting, responsible author for the submission of the manuscript entitled “First record of *Leucophaeus atricilla* (Linnaeus, 1758) on the south coast of Santa Catarina” and all the other co-authors here presented, declare that “we do not have conflict of interests” related to the content of the paper.

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