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THE TRINIDADE PETREL (*PTERODROMA ARMINJONIANA*) AT GOLFO SAN MATÍAS: A NEW SPECIES FOR ARGENTINA

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ABSTRACT.— As part of a survey of marine birds in the Southwest Atlantic, a field trip was made to Golfo San Matías, on the coast of southern Argentina, to accomplish a first evaluation of seabirds associated with the Argentine squid *Illex argentinus* fishery by jiggers. Between 7–21 July 2003, 20 species of seabirds belonging to 6 families were observed. On July 21, at 41°17'S, 64°36'W, a Trinidad Petrel (*Pterodroma arminjoniana*) was observed along with 100 *Thalassarche melanophris*, 200 *Larus dominicanus*, 10 *Macronectes giganteus*, 20 *Oceanites oceanicus* and 10 *Procellaria aequinoctialis*. We discuss some aspects of field identification, taxonomy and conservation. The data and circumstances of our record allows us to speculate that it is possible that vagrant birds, or maybe sub-observed regular visitors, may be associated with the squid fishery on the Argentine continental shelf.

KEY WORDS: *first record, Patagonia, Pterodroma arminjoniana, Southwest Atlantic, Trinidad Petrel.*

RESUMEN. EL PETREL DE TRINIDADE (*PTERODROMA ARMINJONIANA*) EN EL GOLFO SAN MATÍAS: UNA NUEVA ESPECIE PARA ARGENTINA.— Como parte de un proyecto de relevamiento de aves marinas en el Atlántico Sudoccidental, se realizó una campaña en el Golfo San Matías, en la costa austral de Argentina, con el objetivo de evaluar la interacción de aves con la flota potera que tiene como especie objetivo al calamar argentino *Illex argentinus*. Entre el 7 y el 21 de julio de 2003 se observaron 20 especies de aves marinas pertenecientes a 6 familias. El 21 de julio, en 41°17'S, 64°36'W, un Petrel de Trinidad (*Pterodroma arminjoniana*) fue observado junto a 100 *Thalassarche melanophris*, 200 *Larus dominicanus*, 10 *Macronectes giganteus*, 20 *Oceanites oceanicus* y 10 *Procellaria aequinoctialis*. Se discuten algunos aspectos referidos a la identificación en el campo, taxonomía y conservación. A partir de datos y circunstancias del registro, se especula sobre la posibilidad de que aves errantes o quizás visitantes regulares subobservadas, puedan asociarse con la pesquería del calamar sobre la Plataforma Continental Argentina.

PALABRAS CLAVE: *Atlántico Sudoccidental, Patagonia, Petrel de Trinidad, primer registro, Pterodroma arminjoniana.*

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As part of a survey of marine birds in the Southwest Atlantic carried out by Fundación Patagonia Natural, Wildlife Conservation Society, and Fisheries Observers Program of the Instituto de Biología Marina y Pesquera Alte. Storni, a field trip was made to Golfo San Matías, on the coast of southern Argentina, between 7–21 July 2003 aboard the fishing vessel "Victoria del Mar I". The objective was to accomplish a first evaluation of seabirds associated with the Argentine squid *Illex argentinus* fishery by jiggers in Golfo San Matías (Fig. 1).

Golfo San Matías is located between the northern Bonaerense and the southern Magellanic biogeographic regions. This situation determines the occurrence of species that belong to each of those regions. This semi-closed basin measures 19500 km² with maximum depths of around 200 m in the central zone. Its mouth, approximately 100 km across, extends from Punta Bermeja to Punta Norte, in Península Valdés, connecting the basin with the Argentine Sea in the Southwest Atlantic. Water masses penetrate from the Patagonian Coastal Current, producing a clockwise cur-

rent that exits the Golfo at the northern part of the mouth. The scarcity of rains, the lack of freshwater inputs, and the high evaporation rates that occur in the northern area of the Golfo produce higher salinity than that recorded in the southern zone. A thermohaline front inhibits mixing processes between these water masses. This difference determines the boundary between the above mentioned biogeographical regions.

Once aboard, fixed-ratio censuses of seabird and marine mammals were systematically done, associated with the fishing and in transit, plus detailed observations of offal foraging (heads, tentacles and entrails) discarded from the ship at sea around the clock.

On 21 July, at noon when returning to harbour at 41°17'S, 64°36'W (sunny, Beaufort: 3, 1013 hpa, water temperature: 11.4 °C), a *Trinidad Petrel* (*Pterodroma arminjoniana*) was observed. Smaller than *Procellaria aequinoctialis*, the petrel was all dark in coloration including bare parts such as bill and legs, with a faint blackish dorsal "M". The only discordant pigmentation was confined to white commas or windows in the primaries (ventral side only). The bird flew over a group of approximately 100 *Thalassarche melanophris*, 200 *Larus dominicanus*, 10 *Macronectes giganteus*, 20 *Oceanites oceanicus* and 10 *Procellaria aequinoctialis*. After a couple of glides it settled on the water 40–50 m from the ship and was observed in detail using 10×42 binoculars. The bill was short and heavy-built, typical of the genus *Pterodroma*, with a noticeable naricorn, thus eliminating the possibility of confusion with *Stercorarius* spp. or *Puffinus griseus*. The chromatic patterns of the primaries' shafts and webs also discarded two close species, *Pterodroma solandri* and *Pterodroma neglecta*. *Pterodroma solandri* is dark greyish-brown with whitish commas on underwing, head is darker and is grey-faced (whitish feathers around bill), and the tail is distinctively wedge shaped. *Pterodroma neglecta* has the above mentioned underwing commas, but primaries on upperwing show conspicuous white bases and shafts, and often has pale face. All morphs of *Pterodroma arminjoniana* lack white shafts on the upperwing, and the face is as dark as the rest of the head and body in the dark morph (Harrison 1987, 1989).

We concluded that the observed bird belongs to the subspecies *Pterodroma arminjoniana*

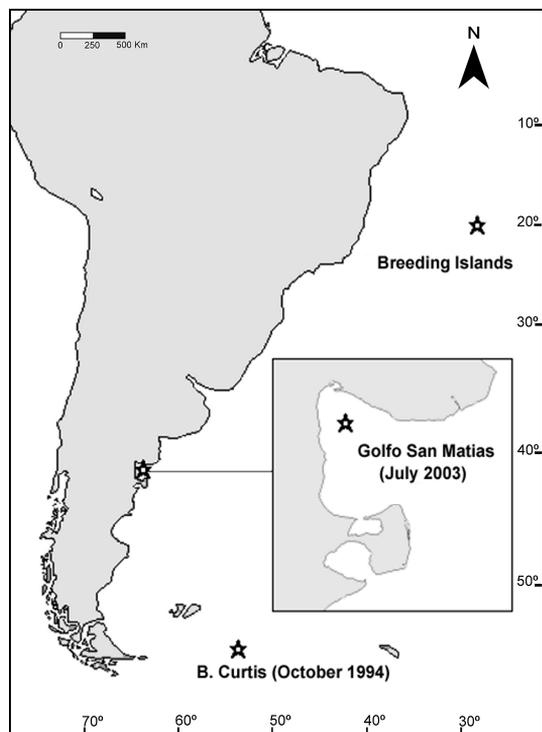


Figure 1. Location of the Golfo San Matías, the breeding islands (Trinidad, Pedro Segundo), and the known records of *Pterodroma arminjoniana* in the Southwest Atlantic.

arminjoniana, which breeds on the Trinidad–Satelite Islands (20°30'S, 29°19'W), 1140 km NE off Brazil, and Pedro Segundo of the Martin Vaz group (20°15'S, 28°55'W), distant 48 km of Trinidad (Silva 1995, BirdLife International 2004). A small population of *Pterodroma neglecta* has been recently discovered on Trinidad Island (Imber 2004). *Pterodroma arminjoniana* is polymorphic and most of the Trinidad birds were thought to be dark morph (Silva 1995), but Imber (2004) has recently stated that 59% ($n = 71$) are light morph. According to Carboneras (1992), the taxonomic status of this form and *Pterodroma arminjoniana heraldica* is uncertain, and while some authors still debate the validity of this subspecific split, others have proposed that both taxa be considered full species. In fact, a population of *Pterodroma arminjoniana heraldica*, which breeds at Pitcairn in the Pacific Ocean, was proposed as full species and named *Pterodroma atrata* by Brooke and Rowe (1996). We have chosen the taxonomic approach proposed by Sibley and Monroe (1990) and the Spanish common name "Petrel de Trinidad",

because it gives a good geographical reference. We suggest this name be used in future editions of checklists (e.g., Navas et al. 1991, Mazar Barnett and Pearman 2001). We have followed the works of Nunn et al. (1996), Burg and Croxall (2001), Penhallurick and Wink (2004), hence we use *Thalassarche* instead of *Diomedea* in the case of the Black-browed Albatross *T. melanophris*.

The only precedent in the Southwest Atlantic is an unpublished record of an intermediate morph bird, observed by B Curtis in October 1994 at circa 200 nautical miles SE of the Falklands Islands (Islas Malvinas; 54°01'S, 54°46'W; R Woods, pers. com.). There are no previous records of this petrel on the continental coast of South America, a fact that confirms its pelagic behaviour. The southern limit of its known range appears to be the Subtropical Convergence. The species has also been reported in the Eastern North Atlantic, and is regularly seen (May to September) off North Carolina, USA (Brinkley and Patteson 1998).

The adults of *Pterodroma arminjoniana* may be mostly sedentary, whereas immature birds could show a vagrant tendency (Harrison 1987, Carboneras 1992). According to Silva (1995), this bird rarely follows or approaches ships. Despite its pelagic behaviour, the presence of *Pterodroma* spp. close to the Argentinian coast has precedents, with records of *Pterodroma mollis*, *Pterodroma incerta* and *Pterodroma lessonii* within sight of shore (Orgeira 2001, C Savigny unpublished data). According to Carboneras (1992) and Silva (1995), *Pterodroma arminjoniana* feeds mostly on cephalopods (*Ommastrephes bartrami*, *Histiotheuthis* sp. and *Japetella diaphana*), flying fish, jellyfish (*Porpita* sp.) and pelagic hemiptera (*Halobates* sp.). Other *Pterodroma* species also feed on squid, at least in some seasons (Simons 1985, Imber et al. 1992, Klages and Cooper 1997). The data and circumstances of our record allows us to speculate that it is possible that vagrant birds, or maybe sub-observed regular visitors, may be associated with the squid fishery on the Argentine continental shelf.

According to BirdLife International (2004), *Pterodroma arminjoniana* is a "Vulnerable species", due to the introduction of exotic animals, mainly cattle, on the islands where it breeds, and threat of human disturbances on these islands continues to grow (e.g., with the con-

struction of airstrips). Future surveys in Golfo San Matías and the continental shelf should provide more data on the occurrence of this procellarid in the Argentine Sea and the Southwest Atlantic.

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