



*Northernmost record and range of the Galapagos Petrel
(Pterodroma phaeopygia)*

*Registro y rango más septentrional del Petrel de Galápagos
(Pterodroma phaeopygia)*

Tyler Wenzel¹ and Sergio Arias²

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Abstract

The Galapagos Petrel (*Pterodroma phaeopygia*) has a limited range in the Eastern Tropical Pacific with breeding sites centered around the Galapagos Islands. It is an infrequent visitor to the waters of Central America. This report from January 2024, the second with photos, marks a new northernmost record for this species. We also clarify the northernmost extent of the species' range, which has likely been misclassified.

Keywords: Petrel, oceanic birds, *Procellariidae*, pelagic, *Pterodroma phaeopygia*, Galapagos Petrel.

Resumen

El Petrel de las Galápagos (*Pterodroma phaeopygia*) tiene una distribución limitada en el Pacífico Este Tropical y su zona de reproducción se centra en las Islas Galápagos. Es un visitante poco frecuente de las aguas de América Central. Este registro de enero de 2024, el segundo con fotografías, marca el récord más septentrional para esta especie. También aclaramos la extensión al norte del Ecuador de la distribución de la especie, que probablemente haya sido mal clasificada.

Palabras clave: Petrel, aves oceánicas, *Procellariidae*, pelágica, *Pterodroma phaeopygia*, Petrel de Galápagos.

Introduction

The distribution and population status of pelagic bird species in Costa Rica's Pacific and Caribbean waters

remain significantly understudied (Arias 2023, 2024). This knowledge gap is even more pronounced across the broader Central American region. Most available records originate from sporadic efforts by

¹ Independent Educator, Coordinator of Multimedia Digital for the Wild Bird Research Group (Grupo de Investigaciones de Aves Silvestres) Email: tyler@tylerwenzel.com

² Researcher and Professor, Proyecto Plumas Marinas UCR (PluMare), Recinto de Paraíso, Sede del Atlántico, Universidad de Costa Rica. Casa Dowii, San Isidro, El Guarco, Apdo 30802, Cartago, Costa Rica. Email: sergio.chaconarias@ucr.ac.cr

birdwatching enthusiasts who charter vessels to survey nearshore waters, typically within 40 nautical miles (74 km) off the coast. One of the most comprehensively documented offshore transects is the Puntarenas route to Isla del Coco and its surrounding pelagic zone (Arias and Montoya 2023).

The Galapagos Petrel (*Pterodroma phaeopygia*) is currently listed as Critically Endangered (CR) by the International Union for Conservation of Nature (IUCN), with an estimated global population of 6,000 to 15,000 mature individuals. The species faces serious threats from invasive mammalian predators, and habitat degradation due to introduced plant species at its breeding sites, which include the islands of Santa Cruz, Floreana, Santiago, San Cristóbal, Isabela, and possibly others, within the Galápagos Archipelago (BirdLife International 2024).

Although considered relatively common in the vicinity of the Galápagos Islands, the full extent of its at-sea range remains poorly defined (Carboneras *et al.*, 2020). Like other members of the *Pterodroma* genus (gadfly petrels), individuals are known to occur well outside their expected range (Bourne 1967). The species' southern range was extended into Peruvian waters based on photographic documentation by Huila (2013) and further extended to central Chile (Walden 2024) during the preparation of this note.

The first confirmed record of *P. phaeopygia* in Costa Rican waters dates to a 1935 museum expedition (Expédition

de l'Île de Pâques), during which a female specimen was collected and deposited in the Muséum National d'Histoire Naturelle in Paris. The record's location was listed as 9°15'N, 85°24'W, approximately 53.7 km southwest of Cabo Blanco (Slud 1964). Prior to the present report, this was the northernmost confirmed observation of the species. An earlier but unconfirmed record from 1925 described a "shearwater" seen 96.6 km south of Isla del Coco and later interpreted by Slud (1967) as a probable sighting of *P. phaeopygia*, was located at approximately 4°50'N, 87°W.

A third documented observation occurred on 1 May 2009 at 6°39'33"N, 86°24'26"W (Young and Zook 2016). Overall, sightings of *P. phaeopygia*, and other pelagic seabirds in Central American waters, remain rare (Vallely and Dyer 2018). Occasional published records exist from waters off the coast of Panama (Eisenmann 1955, Kimball 1984) and in the pelagic zone surrounding Cocos Island, Costa Rica (Figure 1).

Observation

On January 11, 2024, between 12:00 and 13:00 h, a single Galapagos Petrel (*Pterodroma phaeopygia*) was observed at sea during a pelagic birding expedition by a group of seven birdwatchers (Figure 2). The bird was recorded at approximately 9°17'28"N, 85°00'27"W, with coordinates derived from the GPS track of the vessel as logged in the corresponding eBird checklist (Vallely 2024). The weather conditions during the observation were favorable:

mostly sunny skies, minimal wind, and a nearly calm sea.

The individual (Figure 3) was first identified by James Zook, who noticed the bird while it was being pursued by a Pomarine Jaeger (*Stercorarius pomarinus*). Photographic documentation was obtained by Tyler Wenzel and other observers aboard the vessel (Vallely 2024).

The petrel was seen flying approximately 1.5 m above the ocean surface, clearly attempting to evade the Pomarine Jaeger. The bird passed close to the boat, flying among a mixed foraging flock that included Black Terns (*Chlidonias niger*), Wedge-tailed Shearwaters (*Ardenna pacifica*), and Pink-footed Shearwaters (*A. creatopus*). After moving 75 to 100 m away from the vessel, the bird circled back and passed directly in front of the bow, still pursued by the jaeger, before eventually disappearing.

Pterodroma phaeopygia is distinguished from similar species, such as *P. sandwichensis* (formerly considered conspecific) by its geographic distribution, which, although still under study, suggests that *P. sandwichensis* occurs only rarely in the Eastern Tropical Pacific, where *P. phaeopygia* is more frequently encountered and closely associated with its breeding range (Simons and Bailey 2020).

The individual was well documented through photographs, which clearly show its diagnostic features, including a dark hood and upperparts, white underparts extending to the chest and cheeks, a long tail, and pointed wings. It was distinguished from

P. sandwichensis by the presence of dark freckling on the forehead, broader wings, and a longer bill. It was also separated from *P. externa* by the more pronounced black markings along the leading edge of the underwing (Simons and Bailey 2020, Carboneras *et al.* 2020). Identification was confirmed through comparison with reference photographs, literature search, and consultation with experts.

Northern Range of the Galapagos Petrel

The observation at approximately 9°17'28"N, 85°00'27"W represents the northernmost documented record of the Galapagos Petrel (*P. phaeopygia*) to date and potentially the northernmost occurrence of the species overall. Some confusion persists regarding the northern extent of its range, due in part to earlier records of the Dark-rumped Petrel (*P. phaeopygia*) made before the 2002 taxonomic split between the Galapagos Petrel (*P. phaeopygia*) and the Hawaiian Petrel (*P. sandwichensis*). Many of these records lack precise locality data.

The Galapagos Petrel has been reported to occur regularly over offshore waters of Central America, based on ship-based census work conducted during the 1980s and 1990s (Zook 2015, Spear *et al.* 1995). It is expected to range far offshore outside its breeding season, with limited presence near the coast except around its nesting colonies (Bourne 1967). Satellite telemetry data published on Movebank further supports this offshore distribution pattern (Proaño, pers. com.). According to BirdLife International, the species' range extends as far north as central Mexico, an interpretation likely based on earlier census models. However, more

recent evidence suggests that *P. phaeopygia* is, neither as widespread, nor as common in Central American waters as previously believed.

Without access to detailed census transects or species-specific counts from Spear *et al.* (1995), it remains uncertain whether any individuals observed in northern Central America were Galapagos or Hawaiian Petrels. The authors modeled population densities across large spatial blocks (5×5 or 6 degrees of latitude and longitude) based on 22 cruises in the eastern and central Pacific. Except for one outlier block (10–15°N, 95–100°W) with a projected spring density of 0.38 individuals per 100 km², all presumed Galapagos Petrel sightings were concentrated south of 10°N, specifically between 4° and 10°N and 90° to 115°W, with projected abundances ranging from 0.07 to 0.82 individuals per 100 km².

This anomalous block at 10–15°N is likely the reason the species has been hypothetically included in national checklists for both Guatemala (Eisermann 2007, 2018) and Mexico (Berlanga *et al.* 2019), as well as on BirdLife's range map. However, the basis for these records remains unverified. Communications with regional experts confirm that no definitive documentation exists to assign these older records to either *P. phaeopygia* or *P. sandwichensis* (Valdes pers. comm. 2024, Eisermann pers. comm. 2024).

In Mexico, the species was reportedly added based on a sighting of a Dark-rumped Petrel (pre-split) by Steve Howell, conveyed to Héctor Gómez de

Silva of the Mexican Bird Checklist Committee (Valdes pers. comm. 2024). In Guatemala, the record stems from a 1986 report by Pitman of a Dark-rumped Petrel (*P. phaeopygia*) approximately 300 km off the Pacific coast (Eisermann 2018).

The decision to associate these records with *P. phaeopygia*, rather than *P. sandwichensis*, appears to have been based on earlier assumptions about their respective distributions at the time of the taxonomic split (Jiménez-Uzcátegui 2013). However, more recent and well-documented sightings suggest that *P. sandwichensis* may be the more likely vagrant in northern Central America and Mexico. Confirmed photographic records now exist for Hawaiian Petrel as far south as 17° 26' 33"N (eBird checklist S65146535) and off the Baja California coast (eBird checklist S105689381). To date, no confirmed sightings of *P. phaeopygia* exist north of 10°N latitude.

Satellite telemetry data from Proaño (in prep.), available on Movebank, further corroborates that Galapagos Petrels rarely range into Central American waters. During the non-breeding season, individuals are more likely to travel southward, including Chilean waters (Proaño pers. comm. 2024). The uncertainty in the geographic resolution of the earlier census data may have led to overinterpretation of the species' abundance north of its breeding grounds.

Despite decades of pelagic birding efforts, both from academic surveys such as the PluMare Project (University of Costa Rica) and amateur expeditions, only three documented sightings have been

recorded in Costa Rican and Panamanian waters in the last 30 years. The individual reported in this note is located several degrees farther north than any previous record.

Importantly, the Spear *et al.* (1995) census did not report any individuals in the nearest census blocks to Costa Rica or Panama. This discrepancy may be attributed to the highly pelagic nature of the species, the limited coverage of nearshore waters during those cruises, or both. While the Spear *et al.* dataset includes at least 100 km² of nearshore waters, most observations were made farther offshore. Conversely, modern GPS-based records from PluMare, and recent surveys, do not indicate that *P. phaeopygia* regularly ranges into offshore waters farther north.

Updated population estimates from BirdLife International (2024) and Jiménez-Uzcátegui (2013) now suggest a much smaller global population, between 6,000 and 15,000 mature individuals, than the estimate of 88,000 adults and subadults (20,000 breeding pairs) from Spear *et al.* (1995). This discrepancy is not attributable to a sudden population crash, as the IUCN notes the decline has “been much slower” since the 1980s (IUCN 2018). The earlier overestimation, based on 201 raw observations, later adjusted to 175.9 individuals, likely results from inflated projections of abundance and range, particularly north of the breeding colonies.

Conclusion

Without additional data, the discrepancy between the species’ previously projected abundance and its

designation as a regular presence in Central American waters remains unresolved. It is uncertain whether this gap is due to a historical contraction of the range, small sample sizes leading to inflated projections, the species’ tendency to remain farther offshore than most pelagic surveys reach, misinterpretation of early census data, or a combination of all these factors. However, the cumulative evidence from recent eBird records, satellite telemetry (Proaño in prep.), and revised population assessments, suggests that *P. phaeopygia* is generally restricted to waters south of 2°N (Jiménez-Uzcátegui 2013), is very rarely north of 5°N, and is extremely rare beyond 10°N, with no concrete documentation above that latitude. The observation reported here, at 9°17’N, now stands as the northernmost well-documented occurrence of the Galapagos Petrel.

Pelagic birding tours and scientifically oriented offshore expeditions are essential tools for improving the understanding of the distribution and seasonality of rare seabirds like the Galapagos Petrel in Costa Rica’s Pacific waters. These efforts can help refine range maps, inform conservation status assessments, and detect shifting patterns in species occurrences due to environmental or anthropogenic changes.

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Referencias

- Arias, S. (2023). Observación de aves oceánicas en el Océano Pacífico costarricense y en el Área de Conservación Marina Coco. *Zeledonia*, 27(1): 18–27.
- Arias, S. (2024). Primer registro del Albatros de Salvin (*Thalassarche salvini*) y nuevos registros del Albatros de Galápagos (*Phoebastria irrorata*) en Costa Rica. *Zeledonia*, 28(1): 59–62.
- Arias, S., and M. Montoya. (2023). Observaciones ornitológicas en la Isla del Coco y sus aguas oceánicas, Costa Rica (julio y setiembre, 2020). *Biocenosis*, 34(1): 65–80.
- Arias, S., and M. Montoya. (2025). *Guía de las Aves de la Isla del Coco A Guide to the Birds of Cocos Island*. Mesa Nacional de Aviturismo Costa Rica.
- Balvin, J. H. (2024). eBird Checklist. *eBird: An Online Database of Bird Distribution and Abundance* [web application]. eBird, Ithaca, New York. <https://ebird.org/checklist/S16339768>. (Accessed November 2nd, 2024).
- Berlanga, H., H. Gómez de Silva, V. M. Vargas-Canales, V. Rodríguez-Contreras, L. A. Sánchez-González, R. Ortega-Álvarez, and R. Calderón-Parra. (2019). *Aves de México: Lista actualizada de especies y nombres comunes*. CONABIO, México D.F.
- BirdLife International. (2024). Species Factsheet: Galapagos Petrel *Pterodroma phaeopygia*. <https://datazone.birdlife.org/species/factsheet/galapagos-petrel-pterodroma-phaeopygia> (consulted October 13th, 2024).
- Bourne, W. R. P. (1967). Long Distance Vagrancy in the Petrels. *Ibis*, 109: 141–167.
- Carboneras, C., F. Jutglar, and G. M. Kirwan. (2020). Galapagos Petrel (*Pterodroma phaeopygia*), version 1.0. In *Birds of the World*, ed by J. del Hoyo, A. Elliott, J. Sargatal, D. A. Christie and E. de Juana. Cornell Lab of Ornithology, Ithaca, NY. <https://doi.org/10.2173/bow.galpet.01>.
- Eisenmann, E. (1955). *The Species of Middle American Birds: A List of All Species Recorded from Mexico to Panama, with Suggested English Names, Outlines of Range, and a Distributional Bibliography*. Transactions of the Linnaean Society of New York, 7.
- Eisermann, K., and C. Avendaño. (2007). *Lista Comentada de las Aves de Guatemala*. Lynx Editions.
- Eisermann, K., and C. Avendaño Mendoza. (2018). An Update on the Inventory, Distribution and Residency Status of Bird Species in Guatemala. *Bulletin of the British Ornithologists' Club* 138: 148–229. <https://doi.org/10.25226/bboc.v138i3.2018.a2>.
- Huila, J. (2013). eBird Checklist. *eBird: An Online Database of Bird Distribution and Abundance* [web application]. eBird, Ithaca, New York. <https://ebird.org/checklist/S16339768>. (Accessed October 28th, 2024).
- IUCN Red List of Threatened Species. (2018). *Pterodroma phaeopygia*. <https://www.iucnredlist.org/ja/species/2269802/0/132619647#population>.
- Jiménez-Uzcátegui, G., F. Cruz-Delgado, C. B. Proaño, C. Sevilla, W. Tapia, S. Cruz, E. Espinoza, J. Samaniego, S. Naranjo, and N. Zambrano. (2013). Addition of a New Species to Annex I of ACAP: The Galápagos Petrel *Pterodroma phaeopygia*. *AC7 Doc 25*, Seventh Meeting of the Advisory Committee, La Rochelle, France, 6–10 May 2013.
- Kimball, G. (1984). eBird Checklist. *eBird: An Online Database of Bird Distribution and Abundance* [web application]. eBird, Ithaca, New York. <https://ebird.org/checklist/S18072047>. (Accessed October 28th, 2024).
- Kovacic, M. W. (2013). eBird Checklist. *eBird: An Online Database of Bird Distribution and Abundance* [web application]. eBird, Ithaca, New York. <https://ebird.org/checklist/S188319307>. (Accessed November 2nd, 2024).
- Muzika, Y. (2022). eBird Checklist. *eBird: An Online Database of Bird Distribution and Abundance* [web application]. eBird, Ithaca, New York. <https://ebird.org/checklist/S105689381>. (Accessed November 2nd, 2024).

Nolan, W. (2020). eBird Checklist. *eBird: An Online Database of Bird Distribution and Abundance* [web application]. eBird, Ithaca, New York. <https://ebird.org/checklist/S65146535>. (Accessed November 2nd, 2024).

Proaño, C. B. (2024). MPIAB Galapagos Dark-rumped Petrel. Movebank ID: 403960582, MPI Radolfzell. Data collected in 2009 and 2024.

Simons, T. R., and C. N. Bailey. (2020). Hawaiian Petrel (*Pterodroma sandwichensis*), version 1.0. En *Birds of the World*, editado por A. F. Poole y F. B. Gill. Cornell Lab of Ornithology, Ithaca, NY. <https://doi.org/10.2173/bow.hawpet1.01>.

Spear, L. B., D. G. Ainley, N. Nur, and S. N. G. Howell. (1995). Population Size and Factors Affecting At-Sea Distributions of Four Endangered Procellariids in the Tropical Pacific. *The Condor*, 97(3), 613–638. <https://doi.org/10.2307/1369172>.

Slud, Paul. (1964). The Birds of Costa Rica: Distribution and Ecology. *Bulletin of the AMNH*, 128, 1–430. <https://www.biodiversitylibrary.org/bibliography/90112>.

Slud, Paul. (1967). The Birds of Cocos Island (Costa Rica). *Bulletin of the AMNH*, 134(4), 263–317.

<https://www.biodiversitylibrary.org/bibliography/89765>.

Ugarte, M., F. Angulo, D. F. Lane, H. Lloyd, J. O'Neill, M. Plenge, T. Schulenberg, T. Valqui, B. Walker, and R. Zepilli. (2014). Reporte del Comité de Registros de Aves Peruanas (CRAP) del periodo 27313. *Boletín UNOP*, 9(3), 45–54.

Vallely, A. C., and D. Dyer. (2018). *Birds of Central America: Belize, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, and Panama*. Princeton University Press.

Vallely, M. (2024). eBird Checklist. *eBird: An Online Database of Bird Distribution and Abundance* [web application]. eBird, Ithaca, New York. <https://ebird.org/checklist/S159933839> (Accessed November 2nd, 2024).

Walden, M. (2024). "eBird Checklist." *eBird: An Online Database of Bird Distribution and Abundance* [web application]. eBird, Ithaca, New York. <https://ebird.org/checklist/S188319307> (Accessed November 2nd, 2024).

Young, B. E. Y., and J. R. Zook. (2016). Observation Frequency and Seasonality of Marine Birds off the Pacific Coast of Costa Rica. *Revista de Biología Tropical*, 64(S1), 235–248.



Figure 1. Dates and locations of reports of *Pterodroma phaeopygia* in Central American waters. Reports in orange are approximate locations. Isla del Coco is marked in green.

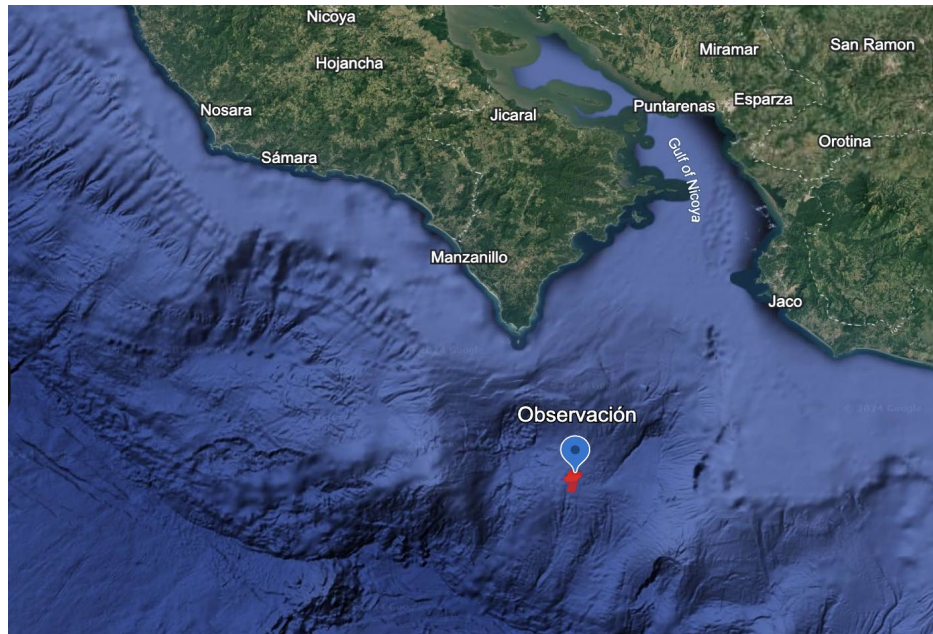


Figure 2. Location of Observación and GPS track of *Pterodroma phaeopygia*, 12:00h - 13:00 h pm, January 11, 2024, on a Google Earth layer.



Figure 3. Galapagos Petrel *Pterodroma phaeopygia*, observed on January 11, 2024, in the craters area in front of the Nicoya Peninsula.