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Sixth report of the Committee for Ecuadorian Records in Ornithology (CERO)

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Sexto reporte del Comité Ecuatoriano de Registros Ornitológicos (CERO)

Resumen

Presentamos nuevos registros de distribución de aves del Ecuador que han sido evaluados por el Comité Ecuatoriano de Registros Ornitológicos (CERO) entre octubre 2019 y noviembre 2021. Incorporamos registros de tres especies nuevas en la lista nacional: Hydrocoloeus minutus y Pterodroma externa de Galápagos, y Tachycineta leucorrhoa del Ecuador continental. Además, incluimos registros documentados de especies raras o poco frecuentes en Ecuador continental, el archipiélago de Galápagos y las extensiones de mar territorial del país, que incluyen siete especies consideradas hipotéticas, raras y errabundas en todo Ecuador: Netta erythrophthalma, Limnodromus scolopaceus, Pluvialis fulva, Chroicocephalus philadelphia, Spheniscus humboldti, Egretta rufescens y Tyrannus dominicensis. Presentamos la primera documentación de dos especies en territorio ecuatoriano, Numenius americanus y Macronectes halli, en el continente y mar territorial, respectivamente. Además, incluimos 16 especies consideradas hipotéticas o accidentales en Galápagos: Sarkidiornis sylvicola, Spatula clypeata, Phoenicopterus chilensis, Fulica americana, Limosa fedoa, Calidris canutus, Calidris subruficollis, Stercorarius parasiticus, Larus belcheri, Pelagodroma marina, Ardenna creatopus, Butorides virescens, Petrochelidon pyrrhonota, Catharus ustulatus, Quiscalus mexicanus y Parkesia noveboracensis. También incluimos registros destacados tanto para el continente, como para Galápagos, de Spatula cyanoptera, Thalasseus sandvicensis, Neocrex erythrops, Sula leucogaster, Ardea herodias, Butorides virescens, Buteo swainsoni, Pipreola jucunda, Protonotaria citrea, Geothlypis philadelphia y Cacicus latirostris. Finalmente, validamos extensiones de distribución de nueve especies: Dendrocygna autumnalis, Cairina moschata, Sarkidiornis sylvicola, Anas georgica, Aramus guarauna, Attagis gayi, Nycticorax nycticorax, Eudocimus ruber y Paroaria gularis. Asimismo, evaluamos 12 registros que no fueron aceptados por ser identificaciones erróneas y 5 registros cuya aceptación fue pospuesta por falta de un respaldo descriptivo sólido. Por último, discutimos registros de Aix galericulata y Spheniscus magellanicus, ambos de identificación correcta y documentación adecuada, pero que posiblemente se traten de arribos asistidos por interferencia humana. Luego de esta revisión y actualización de CERO, el listado nacional de aves de Ecuador incluye un total de 1722 especies: 1673 confirmadas documentadas con evidencia y 49 especies que aún requieren documentación sólida.

Palabras clave: extensiones de distribución, nuevos registros, registros hipotéticos, aves de Ecuador, documentación.

Abstract

We present new distribution records of birds from Ecuador that have been evaluated by the Committee for Ecuadorian Records in Ornithology (CERO) between October 2019 and November 2021. We incorporate records of three new species in the national list: *Hydrocoloeus minutus* and *Pterodroma externa* from Galapagos, and *Tachycineta leucorrhoa* from mainland Ecuador. In addition, we include documented records of rare or infrequent species in mainland Ecuador, the Galapagos archipelago and the country's territorial sea, which include seven species considered hypothetical, rare, and erratic throughout Ecuador: *Netta erythrophthalma*, *Limnodromus scolopaceus*, *Pluvialis fulva*, *Chroicocephalus*



philadelphia, Spheniscus humboldti, Egretta rufescens, and Tyrannus dominicensis. We present the first documentation of two species in Ecuadorian territory, Numenius americanus and Macronectes halli from the mainland and territorial sea, respectively. In addition, we include 16 species considered hypothetical or accidental in Galapagos: Sarkidiornis sylvicola, Spatula clypeata, Phoenicopterus chilensis, Fulica americana, Limosa fedoa, Calidris canutus, Calidris subruficollis, Stercorarius parasiticus, Larus belcheri, Pelagodroma marina, Ardenna creatopus, Butorides virescens, Petrochelidon pyrrhonota, Catharus ustulatus, Quiscalus mexicanus, and Parkesia noveboracensis. We also include notable records for both the mainland and Galapagos of Spatula cyanoptera, Thalasseus sandvicensis, Neocrex erythrops, Sula leucogaster, Ardea herodias, Butorides virescens, Buteo swainsoni, Pipreola jucunda, Protonotaria citrea, Geothlypis philadelphia, and Cacicus latirostris. Finally, we validated distributional expansions of nine species: Dendrocygna autumnalis, Cairina moschata, Sarkidiornis sylvicola, Anas georgica, Aramus guarauna, Attagis gayi, Nycticorax nycticorax, Eudocimus ruber, and Paroaria gularis. Likewise, we evaluated 12 records that were not accepted based on erroneous identifications and 5 records whose acceptance was postponed because of insufficient descriptive support. Lastly, we discuss records of Aix galericulata and Spheniscus magellanicus, both correctly identified and well documented, but possibly originated by human intervention. After this review and update by CERO, the national list of birds of Ecuador totals 1722 species: 1673 confirmed documented with evidence and 49 species that still require solid voucher evidence.

Keywords: birds of Ecuador, documentation, hypothetical records, new country records, range extensions.

INTRODUCTION

Remarkable bird records—i.e., new country records, considerable range extensions, first vouchered reports—have increased in Ecuador in parallel to the rise in numbers of in-country birdwatchers and an upsurge of bird enthusiasts visiting the country and using bird records apps (Freile *et al.*, 2020). Careful and enduring review of rich-data online platforms and databases used by the birding and ornithological communities, like eBird or iNaturalist, can produce new and relevant data about bird distributions, including new country records (Wood *et al.*, 2011; Freile *et al.*, 2018; Mesaglio & Callaghan, 2021).

CERO has been exploring records published in online databases since its second report (Nilsson *et al.*, 2014). Still, the amount of information gathered from such repositories has increased steadily over the years from one record in CERO's fourth report (Freile *et al.*, 2019a) to 30 in the fifth report (Freile *et al.*, 2020). In parallel, the number of records submitted directly to the committee by observers has fallen from 97 in the first report (Freile *et al.*, 2013) to 58 in the fifth report (Freile *et al.*, 2020). However, the fact that observers continue submitting information directly to CERO suggests that some members of the birding community still see value in the work of a national committee. Reviewing records archived on public databases is a challenge that the ornithological community as a whole, including bird records committees like CERO, should carefully discuss to best manage the flow of information and compile noteworthy records.

CERO aims to consolidate a single authoritative species list for the country as a resource that may contribute to further developments in the fields of ornithology, education, birding, and conservation alike (Freile *et al.*, 2018). In this report, we present new distributional records of bird species in Ecuador from reports submitted to CERO from October 2019 through November 2021, including records uploaded to eBird (Sullivan *et al.*, 2009). The updated official checklist of birds of Ecuador (Freile *et al.*, 2022) contains 1722 species (49 undocumented). The complete list is available at www.ceroecuador.wordpress.com.

METHODS

CERO receives and reviews reports of rare species, new country records, and/or significant range extensions, which are submitted voluntarily through CERO's webpage and e-mail address (cero.ecuador@gmail.com). In addition, we stay alert for rarities reported on social media and in online bird observation platforms like eBird. We then request that observers prepare and submit a report for the committee's review or evaluate certain records using information uploaded to eBird. The national country checklist and a list of 'most-wanted' species are published on CERO's webpage, allowing observers to determine the status of Ecuadorian birds (www.ceroecuador.wordpress.com).

For this report, CERO reviewed reports compiled or submitted from October 2019 through November 2021. These records date from November 2005 to November 2021, and were obtained using varied survey protocols and documentation techniques. Records assessed directly from eBird were submitted for discussion by CERO

members when searching for relevant records between 2019 and 2021, despite some records are from previous years. New country records were evaluated and accepted by unanimous vote. First documentation for a species, new reports of still undocumented species, and major range extensions were accepted by majority vote.

Most photo and audio documentation were deposited by observers in Macaulay Library (ML; www.macaulaylibrary.org); ML codes and citations are provided in the following species accounts, when applicable. Other photographs were stored in the CERO archives and the most relevant are published in this report. Taxonomy and species sequence follow the July 2022 version of the Clements Checklist of the Birds of the World (Clements *et al.*, 2021).

RESULTS AND DISCUSSION

In total, CERO reviewed 79 records: 62 were accepted and 17 were rejected/postponed (Table 1). We include three new species for the national list, marked with an asterisk in the species accounts. Further, we present records of 7 species regarded as rare or erratic in Ecuador, 2 species with first documented records in the country, 16 species considered hypothetical/undocumented or rare in Galapagos, and new records and/or notable range extensions of 20 additional species (see Species accounts below). Localities' coordinates and elevation are provided in Table 2; Figures 1–5 show documentary evidence.

Black-bellied Whistling-Duck Dendrocygna autumnalis

Carchi province, Laguna El Salado, 13 July 2019, W. Chulde (photo).

A single adult was observed standing on a grassy shore (Fig. 4a). This report represents the third published highland record in Ecuador; the first one dates back to 1922 from La Carolina marshes near Quito (Ridgely & Greenfield, 2001) and the second from Lago San Pablo, Imbabura province (Mena-Valenzuela, 2021). There are several recent, unpublished, records for the inter-Andean valleys (eBird, 2022). It remains to be determined if the species is establishing a resident population in inter-Andean wetlands or if it visits these wetlands seasonally from its regular known range in the lowlands of west Ecuador (Freile & Restall, 2018).

Muscovy Duck Cairina moschata

Carchi province, Laguna El Salado, 5 August 2020, J. M. Loaiza and P. Molina (photo).

An adult female was observed first in flight, and later found together with a group of Neotropic Cormorants *Nannopterum brasilianum* on the northeastern shore of the lake (Fig. 4b). Flight and behavior described by observers point to a wild individual. There are no previous published records of this endangered species (Freile *et al.*, 2019b) from the Ecuadorian highlands (Freile & Restall, 2018), and only one documented record in eBird, from Micacocha, Antisana, Napo province (Salazar, 2021). We suggest being cautious with reports of *C. moschata* in the highlands, since escapees or domesticated individuals may find their way to natural wetlands.

Comb Duck Sarkidiornis sylvicola

Santa Elena province, Ecuasal Pacoa, 14 September 2021, A. Ágreda (photo). Galápagos province, Isla Santa Cruz highlands, 30 October 2019, D. Valencia (photo).

The Santa Elena record involved a group of 109 individuals: 91 adults and 18 immatures; 46 males, 32 females, and 31 undetermined (Fig. 5a). The Galápagos record, first reported in eBird (Valencia, 2019), was an adult female, and represents the first documented record for the archipelago (Brinkhuizen & Nilsson, 2020) (Fig. 3a). Records of this threatened species—and total counts in some localities—have increased in recent years (eBird, 2022), including more frequent reports from the coastal wetlands of Santa Elena province within its expected distribution (Freile & Restall, 2018). It remains to be determined if the species' population is increasing in the lowlands of western Ecuador.

Northern Shoveler Spatula clypeata

Galápagos province, Playa El Garrapatero, Isla Santa Cruz, 28 February 2021, D. Degel Andrade (photo).

An adult male was photographed in a saline lake (Fig. 5b) (Degel-Andrade, 2021). This record represents the second documented sighting for the archipelago (Jiménez-Uzcátegui & Freire, 2013). A single female,

presumably the same individual, was reported in 2011 and 2012 from Punta Moreno, Isla Isabela (Brinkhuizen & Nilsson, 2020).

Cinnamon Teal Spatula cyanoptera

Santa Elena province, Ecuasal Pacoa, 6 September 2021, A. Ágreda (photo).

A female and a male in breeding plumage were photographed in an artificial salt-evaporating pond (Fig. 5c). Furthermore, in the late afternoon on 14 September 2021, two males and five females were recorded by the same observer at the same locality (Ágreda, 2021). These two records coincide with the beginning of the boreal migratory season in coastal Ecuador, suggesting that both pertain to the subspecies *S. c. septentrionalium* (Freile & Restall, 2018). Worryingly, there is at least one record of hunting of this migratory subspecies in its wintering grounds in western Ecuador's agricultural areas (Camacho & Wilson, 2011). Previous CERO reports included infrequent records of this species, always in low numbers (Freile *et al.*, 2013; Nilsson *et al.*, 2014; Freile *et al.*, 2020), but recent reports of the species have increased in numbers and frequency (eBird, 2022). Therefore, CERO no longer requests reports of this species from the Pacific lowlands.

Yellow-billed Pintail Anas georgica

Manabí province, La Segua, 30 December 2016, R. Ahlman (photos).

A single individual was photographed in this threatened wetland surrounded by shrimp farms (Fig. 4c) (Ahlman, 2016b). There are scattered recent records of this highland species from the Pacific lowlands near the coastline (eBird, 2022), including the following localities, from north to south: Las Peñas and Atacames, Esmeraldas province; Pedernales-Cojimíes and Rocafuerte, Manabí province; Puerto Engabao, Isla Santay, Laguna El Canclón, and La Lagartera, Guayas province. CERO does not request additional reports of this species for the Pacific lowlands and encourages GPS-tagging research to elucidate the movements of *A. georgica* and its potential population growth and range expansion in recent years.

Southern Pochard Netta erythrophthalma

Esmeraldas province, Puro Congo, La Tola, 19–21 March 2021, D. Brinkhuizen and L. Córdova (photo).

A single adult female of this critically endangered anatid (Freile *et al.*, 2019b) was photographed at a shrimp farm pond (Fig. 5d) (Córdova & Brinkhuizen, 2021). It was observed again by L. Navarrete on 21 March, but other observers failed to detect it on 22 March. This is the only documented record for Ecuador since 2007, where last observed at La Segua, Manabí province (Freile *et al.*, 2016).

Chilean Flamingo Phoenicopterus chilensis

Galápagos province, Punta Cormorán, Isla Floreana, 25 July 2008, A. Jaramillo (photo).

In 2008, a single bird was observed in a brackish coastal lagoon (Fig. 3b), but this record was only uploaded to eBird in November 2020 (Jaramillo, 2008). Since 2016, the species has been reported almost annually from the same island (eBird, 2022), but the 2008 record appears to be the first for the Galápagos. Curiously, all subsequent records of *P. chilensis* from the Galápagos are from Isla Floreana, suggesting the possibility of local establishment (eBird, 2022).

Limpkin Aramus guarauna

Carchi province, La Libertad, 19 October 2019, E. Taimal (photo).

A single individual was photographed while foraging in a boggy cattle pasture within a paramo agricultural zone in the Andean highlands (Fig. 4d) (Taimal, 2019). This first documented record in the Andes of Ecuador, at *c*. 3040 m a.s.l., is the highest elevational record for this species, which is known to range mainly below 400 m, with additional recent records at 520 m and 820 m (Freile *et al.*, 2022).

Paint-billed Crake Mustelirallus erythrops

Morona Santiago province, vía al Jardín Botánico, Sucúa, 18 May 2021, G. Utitiaj (photo).

One individual was observed and approached as it appeared to be injured. The habitat was described as dense roadside pasture with a small moriche palm (*Mauritia flexuosa*) swamp (Fig. 5e). This rail is uncommon and poorly known in Ecuador, with scarce records from the Amazon in comparison to western Ecuador and Galápagos (Freile & Restall, 2018). Subspecies identification in mainland Ecuador is unclear, but Ridgely & Greenfield (2001) suggested Ecuadorian populations pertain to *M. e. olivascens*. This record is the first documented for Amazonian Ecuador, but there are two additional observations from Limoncocha, Sucumbíos province (Argüello, 2021; Hervé & Hualinga, 2021). Amazonian records could correspond to *M. e. olivascens* based on distribution only. However, a thorough study of museum specimens is needed to confirm the identity of Amazonian birds, as well as populations in west Ecuador, which might also pertain to *M. e. erythrops* as in Galápagos (Clements *et al.*, 2021).

American Coot Fulica americana

Galápagos province, Isla Isabela, El Estero Ponds, 14 May 2016, K. Jensen (photo). Galápagos province, Isla Isabela, Posada de Flamengos, 30 May 2018, T. Rosenmeier and K. Kluge (photo).

These two recent Galápagos records involve solitary individuals observed in brackish lagoons (Fig. 5f). Brinkhuizen & Nilsson (2020) now consider this species a rare but regular visitor to Isabela and San Cristóbal Islands. Janni (1999) obtained the first photographs of *F. americana* in Galápagos, but as those photos were never published, the records presented in our current report represent the first documented for the archipelago. It should be noted that the 30 May 2018 record shows an uncharacteristic yellowish bill (Rosenmeier & Kluge, 2018). There are a few subsequent documented records for Galápagos, some apparently involving the same individuals, but none after 2019 (eBird, 2022).

Pacific Golden-Plover Pluvialis fulva

Manabí province, La Segua, 3 November 2016, R. Ahlman (photo).

One individual in non-breeding, juvenile, or first winter plumage (Sibley, 2014) was observed and photographed on mudflats and aquatic vegetation (Fig. 5g). A difficult species to identify, carefully reviewed and proposed by the observer (Ahlman, 2016a); identification was based on the following field marks: golden-yellowish tone to upperparts, golden-buffy face and neck, slim, longish legs, and wing tips not projecting beyond tail tip (Jaramillo, 2004). There are two previous records for mainland Ecuador, both from Ecuasal Mar Bravo, Santa Elena province, first by D. Liley in 1991 (Ridgley & Greenfield, 2001) and a photographic record by R. S. Ridgely and F. Sornoza in January 2007 (R. S. Ridgely *in litt.* 2011), not yet published or submitted to CERO, thus its identification is still unconfirmed by the committee. The South American Classification Committee considers *P. fulva* as a vagrant in the entire region based on a single Ecuadorian record from the Galápagos (Freile *et al.*, 2013; Remsen *et al.*, 2022). Ahlman's record is the first documented for mainland Ecuador.

Long-billed Curlew Numenius americanus

Manabí province, Ayampe River, 3 October 2021, D. Arias-Cruzatty, I. Contreras-Rodríguez, I. Esparza, R. Matamoros, S. Plúa Albán, J. Romero and D. Souza (photos).

A group of seven birders observed a single individual on the northern side of the Ayampe River delta, accompanying a flock of Whimbrels *Numenius phaeopus*. Identification of the latter species was based on bill length, unstriped head, and cinnamon underparts (Freile & Restall, 2018). A photograph was secured by I. Contreras Rodríguez and D. Souza (Fig. 2a). The species was considered undocumented/hypothetical in Ecuador (Freile *et al.*, 2022) based on a single, undocumented observation submitted to CERO (Freile *et al.*, 2017), but also a potential vagrant to Galápagos (Brinkhuizen & Nilsson, 2020). This Ayampe record represents the second documented and published record for the entire Pacific coast of South America, the first being a black-and-white photo from Paracas, Peru (Heselden, 2013).

Marbled Godwit Limosa fedoa

Galápagos province, Las Bachas, Isla Santa Cruz, 24 January 2010, S. Young (photo).

One adult individual molting into non-breeding plumage was photographed (Young, 2010) (Fig. 3c). This is the first documented record for Galápagos after a handful of previous sight records dating back to 1957 (Wiedenfeld, 2006). There have been several more records in subsequent years from Galápagos, some including documentation (eBird, 2022).

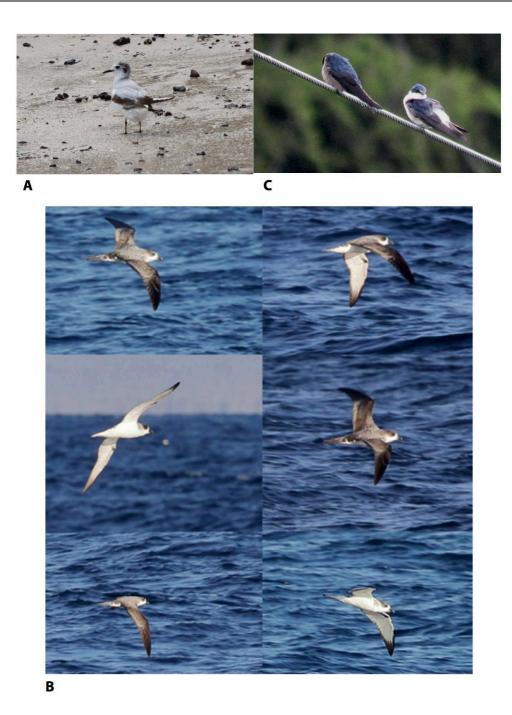


Figure 1: New country records for Ecuador. (a) *Hydrocoloeus minutus*, Puerto Baquerizo Moreno, Galápagos province (L. Die; ML 319175171); (b) *Pterodroma externa*, Islote Sombrero Chino, Galápagos province (R. Vogels); (c) *Tachycineta leucorrhoa*, El Carmelo, Carchi province (E. Ocaña; ML 261824691).

Red Knot Calidris canutus

Santa Elena province, Ecuasal Mar Bravo, 5 September 2014, A. Hinkle and C. Hinkle (photo). Galápagos province, Puerto Villamil, Isla Isabela, 22 April 2017, R. Espinosa (photo). Esmeraldas province, Puro Congo, La Tola, 9 September 2018, R. Ahlman (photo).

The Santa Elena record refers to a single individual in non-breeding plumage that was observed foraging at mudflats in shallow brackish lagoons alongside other waders. The Esmeraldas record involved a flock of 22 adults, including two ringed/banded individuals, some already molting into breeding plumage (Fig. 5h). The ring colors included one red flag (from Canada) and one green flag (from the United States) (see https://www.pbase.com/ahlman/image/168113854). The species is considered a rare visitor to Ecuador (Freile & Restall, 2018), with scarce records almost throughout the year (Haase, 2019). Historical records are sparse

since the species was first recorded in January 1976 (Ridgely & Greenfield, 2001). Still, a single specimen collected near Punta Carnero in Santa Elena province (Academy of Natural Sciences of Philadelphia, ANSP 183813) was the only evidence until recently. Recent records include photos taken in Ecuasal Mar Bravo and Salinas, Santa Elena province, where two individuals were photographed on 14 August 2008 (Haase, 2019) and separately on 18 March 2010 (see https://www.pbase.com/ahlman/image/123079715). The Esmeraldas record is also one of the highest counts for the country (Ridgely & Greenfield, 2001; Haase, 2019), which is relevant from a conservation standpoint as the species is currently ranked as globally Near threatened (BirdLife International, 2022; see Carmona *et al.*, 2013).

The Galápagos record of one individual in non-breeding plumage (Fig. 3d), feeding alongside a small flock of Short-billed Dowitchers *Limnodromus griseus*, represents the first documented report for the Galápagos (Brinkhuizen & Nilsson, 2020), but there are some older, undocumented accounts dating back to May 1969 (Wiedenfeld, 2006).

Buff-breasted Sandpiper Calidris subruficollis

Galápagos province, Playa Espumilla, Isla Santiago, 31 May 2019, K. John (photo).

A single individual was photographed in a shallow pool (Fig. 3e) (Stephenson & John, 2019). This represents the only documented record of this boreal migrant in Galápagos (Brinkhuizen & Nilsson, 2020). There is a previous undocumented record, which also lacks any details on habitat, locality, date, and identification (Wiedenfeld, 2006).

Long-billed Dowitcher Limnodromus scolopaceus

Galápagos province, Puerto Villamil, Isla Isabela, 6 January 2013, O. Nabrovenkov (photo). Chimborazo province, Laguna de Colta, 28 February 2018, E. Ocaña, W. Arteaga Chávez, R. Hipo and F. Ritcher (video, photo).

The Galápagos record involves one individual in non-breeding plumage photographed in flight (Fig. 3f) and video recorded. The underwing pattern, with unbarred lesser underwing coverts, is diagnostic for the species (Sibley, 2014). This is the first and only documented record for Galápagos (Brinkhuizen & Nilsson, 2020).

The Chimborazo record involves a group of four individuals found during a water bird survey (Arteaga-Chávez et al., 2022). All individuals were in non-breeding plumage (Fig. 5i), and identification was first confirmed by D. M. Brinkhuizen and J. Nilsson (Arteaga-Chávez et al., 2022). In non-breeding plumage, this rare boreal vagrant is easily confused with Short-billed Dowitcher *L. griseus*, which is commoner in Ecuador (Freile & Restall, 2018). There are only three previously published records of *L. scolopaceus* in the Ecuadorian highlands (Freile et al., 2013; Freile & Restall, 2018). The first Amazonian record was published later (Freile et al., 2017), whereas the species is not included in Haase (2019) for coastal Ecuador or Galápagos. There is one unpublished record from Las Peñas, Esmeraldas province, on 4 November 2019, the first for the mainland coast of Ecuador, not formally submitted to CERO (Ahlman, 2019). It involved a flock of six individuals in non-breeding plumage foraging in a freshwater marsh.

Rufous-bellied Seedsnipe Attagis gayi

Imbabura province, Volcán Imbabura, 11 November 2020, N. Tutillo Chimarro (photo).

Three individuals of this endangered species (Freile *et al.*, 2019b) were seen along the route to the summit of Imbabura volcano (Fig. 5j). There are no published records of the near-endemic subspecies *A. g. latreillii* north of Pichincha province (Ridgely & Greenfield, 2001), which has a small range south to Chimborazo province (Freile & Restall, 2018). All records from Imbabura and Carchi provinces are recent (2020 onwards) (eBird, 2022), and the species was recently found in extreme southern Colombia for the first time by Loaiza *et al.* (2022).

Parasitic Jaeger Stercorarius parasiticus

Galápagos province, 'at sea' north of Tagus Cove, Isla Isabela, 20 March 2014, J. R. Trimble (photo).

A photo of several light morph individuals floating on the water was obtained by J. R. Trimble at sea while navigating north of Isla Isabela (Fig. 31). There are few documented records of this rare boreal migrant in

Galápagos (Brinkhuizen & Nilsson, 2020) and the entire Ecuadorian sea (Freile & Restall, 2018), including two photographic records in eBird from November 2017 and February 2020 (eBird, 2022). This record is the first formally published for Galápagos.

Bonaparte's Gull Chroicocephalus philadelphia

Manabí province, Puerto López, 21 November 2016, S. Plúa Albán (photo).

This record of this boreal vagrant involved a single individual in first winter plumage standing on a sandy shore (Fig. 5k). This record, which is the second documented in mainland Ecuador, was first available in eBird (Plúa-Albán, 2016), then submitted to CERO, and also included in Haase (2019). The first record of *C. philadelphia* for mainland Ecuador comes from the San Pablo estuary, Santa Elena province (Nilsson *et al.*, 2014).

*Little Gull Hydrocoloeus minutus

Galápagos province, Puerto Baquerizo Moreno, Isla San Cristóbal, 16 March 2021, L. Die (photo).

The photo report consists of a first winter individual (Sibley, 2014) found foraging at a shallow bay, between 7h00 and 11h00 (Fig. 1a) (Die, 2021). It remained in the same area until mid-May 2021, according to eBird records. This represents the first record in Ecuador and the second documented record for the South American Pacific coast, three decades after the first record in Buenaventura, Colombia (Blokpoel *et al.*, 1984; Ewins & Weseloh, 2020). Considered vagrant in Colombia and French Guiana (Remsen *et al.*, 2022).

Belcher's Gull Larus belcheri

Galápagos province, Puerto Baquerizo Moreno, Isla San Cristóbal, 2 and 19 May 2021, K. Berg (photo).

Both records may involve the same individual: an immature or subadult in first-year plumage (Schulenberg *et al.*, 2010), first photographed perching on a roof in the second dock of Puerto Baquerizo Moreno (Fig. 3g) and later wandering around the shore of a coastal lagoon (Berg, 2021). This was an anticipated record for Galápagos (Brinkhuizen & Nilsson, 2020) that is finally documented. Records of individuals in breeding and non-breeding plumages have been documented on the mainland coast of Ecuador (Haase, 2019).

Sandwich Tern Thalasseus sandvicensis

Galápagos province, Bahía Urbina, Isla Isabela, 15 December 2018, T. Dimarzio (photo).

One individual was photographed against a dark sky, but non-breeding features are visible: bold white forehead and dark ocular line (Fig. 3h) (Dimarzio, 2018). According to Brinkhuizen & Nilsson (2020), there is one additional documented record of this boreal species in the Galápagos from April 2016 in Puerto Villamil, Isla Isabela.

Humboldt Penguin Spheniscus humboldti

Santa Elena province, Islote El Pelado, 1 August 2020, J. C. Figueroa (photo).

One adult individual was first observed on a rocky islet (Fig. 51; see also Figueroa, 2020). Two subsequent photo records from the same area, presumably of the same individual (as suggested by an unfeathered patch in the back), indicate that the penguin had likely gotten used to boats with snorkeling tourists, perhaps in search of food or having already been fed by people (Barham, 2021). The last record from the vicinity of El Pelado was in May 2021 (Navarro, 2021). It seems that the same penguin continued roaming north along the Manabí coast until April 2022, when a penguin was last reported near Machalilla (Rivera-Tapia, 2022). Some previous records may involve captured birds or human-assisted arrivals (Haase, 2019). There are few records of this vagrant species from the southwest coast of Ecuador (Freile & Restall, 2018).

White-faced Storm-Petrel Pelagodroma marina

Galápagos province, north of Canal Bolívar, between Isabela and Fernandina, 29 July 2008, S. Olmstead (photo).

One individual landed on a boat deck in poor condition (Olmstead *et al.*, 2008). It was identified by its distinct facial pattern with a dusky mask and whitish face, and long superciliar stripes (Fig. 5m). There are few records

of this vagrant species from the Galápagos, including two reports from 2014 and 2018 published earlier (Freile *et al.*, 2020). The Olmstead report is the first documented record from the Galápagos (Brinkhuizen & Nilsson, 2020).

Northern Giant-Petrel Macronectes halli

Galápagos province, Bahía Gardner, Isla Española, August 2009, R. Plaza (photo).

A single juvenile was photographed resting on calm waters (Fig. 2b). This represents the first documented record from Galápagos and possibly the second for Ecuador (Ridgely & Greenfield, 2021). Although records from mainland Ecuador (Isla de la Plata, Manabí province) reported by various observers have not been reviewed by CERO, the identity of at least one photographed individual has been confirmed as pertaining to this species, and not to Southern Giant-Petrel *M. giganteus*. Additionally, there is a single previous Galápagos record of an unidentified *Macronectes* carcass (Wiedenfeld, 2006).

*Juan Fernandez Petrel Pterodroma externa

Galápagos province, Islote Sombrero Chino, 9 October 2016, R. Vogels and M. Bingley (photo).

One individual of undetermined age and sex was observed (Fig. 1b) in cruising flight at sea, but was only identified to species by D. M. Brinkhuizen later by the underwing pattern with a black 'comma' in the bend of the wing and an obvious blackish mask grading into a more contrasting cap as compared to its mantle (Howell & Zufelt, 2019; Brinkhuizen & Nilsson, 2020). The species was not entirely unexpected in Galápagos, as it is known to linger in its non-breeding Central and Eastern Pacific range (Howell & Zufelt, 2019). This first Ecuadorian record comes from a somewhat unexpected date given that it is reported as a breeder on Isla Más Afuera, Chile, in October–November (Onley & Scofield, 2007), contra Howell & Zufelt (2019) who report breeding in December–May. It was previously recorded at sea off Peru and Colombia (Remsen *et al.*, 2022).

Pink-footed Shearwater Ardenna creatopus

Galápagos province, Canal Bolívar, Isla Isabela, 25 July 2017, A. Jaramillo (photo).

One individual was observed in active, slow, and lumbering flight. Poor documentary photos were obtained, in which the following field marks were noted by the observer: white underparts, partly white underwing surface, and no contrasting cap (Jaramillo, 2017). The photo voucher of this record has poor quality that precluded publication but allowed identification after careful study. Jaramillo excluded other *Ardenna* species as the flight style of the observed *A. creatopus* was not as graceful as Buller's Shearwater *A. bulleri* or Wedge-tailed Shearwater *A. pacifica*. The lack of a dark cap excluded *A. bulleri*. Although *A. creatopus* was recently recognized as a year-round transient in the Galápagos (Brinkhuizen & Nilsson, 2020), this report provides the first documented record for the archipelago (Wiedenfeld, 2006; Freile *et al.*, 2022). It is considered a regular visitor to the continental sea (Freile & Restall, 2018).

Brown Booby Sula leucogaster

Galápagos province, Isla Española, 17 November 2015, L. C. Beltrán (photo).

A single adult of undetermined sex was observed and photographed flying towards rocky ledges and landing (Fig. 5n). It is considered a rare visitor to Galápagos, but year-round records, as early as 2010 (eBird, 2022) suggest it might have been overlooked (Brinkhuizen & Nilsson, 2020). There are scarce records in mainland Ecuador too (Freile & Restall, 2018), but the species was regarded as a regular wanderer or transient, especially in the Santa Elena peninsula area (Freile *et al.*, 2017).

Black-crowned Night-Heron Nycticorax nycticorax

Pichincha province, Quebrada San Pedro, Tumbaco, 16 October 2019, C. Vignat and F. Müller (photo).

A single immature individual was observed for several consecutive days fishing in a small artificial pond (Fig. 4e). There are few highland records of this species in Ecuador, including historical reports from the desiccated La Carolina wetlands in the former outskirts of Quito (Chapman, 1926). However, it has likely established breeding colonies at Yaguarcocha and San Pablo lakes, Imbabura province (Guzmán, 2022), as well as in Yambo lake, Cotopaxi province (Henry, 2012; Poveda, 2021). Additional recent records from the Pichincha highlands date back to 2014 (eBird, 2022).





Figure 2: First documented records of species previously considered hypothetical/undocumented in Ecuador. (a) *Numenius americanus*, Ayampe, Manabí province (I. Contreras; ML 381444161); (b) *Macronectes halli*, Isla Española, Galápagos province (R. Plaza).

Great Blue Heron *Ardea herodias*

Orellana province, Napo River near Yarina, 13 February 2016, K. Keef (photo); Orellana province, Francisco de Orellana (Coca), 21 October 2017, J. Huth (photo).

A single individual was observed 15 min down river from Coca on a sandbar on 13 February 2016 and observed again 7 days later (Keef, 2016). Another individual was observed under a bridge near Francisco de Orellana dock (Huth, 2017). Rare but regular in the lowlands west of the Andes; there are few confirmed records from other regions in mainland Ecuador, including just one previously published from the Amazon region (Nilsson *et al.*, 2014). Records in the Andean valleys are even scarcer, with confirmed reports from only two localities in the last 30 years (Arias-Cruzatty, 2015; Freile & Restall, 2018; eBird, 2022).

Green Heron Butorides virescens

Manabí province, Parque Las Vegas, Portoviejo, 10 January 2021, L. Brunetti (photo). Galápagos province, Caleta Tortuga Negra, Isla Santa Cruz, 14 November 2012, R. Ahlman (photo).

A single adult was observed at Portoviejo for more than 30 min (Fig. 50), first flying and hiding, then being chased and displaced by a Striated Heron *B. striata*. Another single adult was observed at a rocky beach in Caleta Tortuga Negra, Santa Cruz (Fig. 3j). This non-breeding boreal visitor is rare in mainland Ecuador, with scattered records mainly from the northern half of the country (Freile & Restall, 2018). Hence, the Portoviejo sighting represents the southernmost record in Ecuador. In Galápagos, *B. virescens* was known from a single observation of which the voucher photograph was lost (Wiedenfeld, 2006). Therefore, this represents the first documented record for Galápagos.

Reddish Egret Egretta rufescens

Santa Elena province, Ecuasal Pacoa, 5 January 2020, J. C. Figueroa (photo).

A single adult was observed at close range in a brackish estuary adjacent to the sea (Fig. 5p). There are at least three previous records of this species from the same general area (Nilsson *et al.*, 2014, Haase, 2019), first in July 2013 (Haase, 2019). There are regular, subsequent records in January and August 2014, October 2015, June–August and December 2019, January and February 2020, January and February 2022, and September 2022 (Haase, 2019; eBird, 2022). There are no records from mid-February through June, which suggests that this individual (or individuals) migrates somewhere else, possibly north of Ecuador (Haase, 2019).

Bare-faced Ibis Phimosus infuscatus

Napo province, Río Arajuno, 26 May 2018, H. Brieschke (photo). Guayas province, Churute, 19 October 2019, G. Maenz and J. D. Morales (photo).

The Napo record involves 29 individuals in a flock along the shoreline (Fig. 5q), while the Guayas record corresponds to a single individual observed feeding alongside White Ibis *Eudocimus albus*, Little Blue Heron *Egretta caerulea*, and Whimbrel *Numenius phaeopus* (Fig. 4f). Although *P. infuscatus* was occasionally observed since the mid-1960s along the Napo River, records were sparse until the 1990s (Ridgely & Greenfield, 2001). As such, it is considered a recent arrival to Ecuador (Freile *et al.*, 2013), spreading rapidly across northern Amazonia, mostly following deforested areas and river courses towards more forested land (eBird, 2022). At present, its range expands into the Amazonian foothills at *c.* 600–700 m a.s.l., with additional outlying records at higher elevations on the Andean slopes, including the Cosanga-Borja area, above 1600 m a.s.l. (Salagaje *et al.*, 2022), and two exceptional records at 3,000 m a.s.l. in La Libertad, Carchi province (Taimal, 2020) and above 3,600 m a.s.l. in Pampa de Ovejería, Antisana Ecological Reserve, Napo province (Doyle, 2021). Reports from the western slope of the Andes are limited to Chilmá Bajo, in extreme northern Carchi province (Freile *et al.*, 2019a), so the Churute record represents the first from the western lowlands and the southernmost in Ecuador. CERO no longer requests reports of this species.

Scarlet Ibis Eudocimus ruber

Sucumbíos province, Vía Shushufindi-Limoncocha, 7 December 2019, J. Vera Fernández (photo).

Four individuals were observed in a large communal roost of Cattle Egret *Bubulcus ibis*, to which a few individuals of *Phimosus infuscatus* also arrived. As with the previous species, *E. ruber* has been spreading in the Ecuadorian Amazon over the last few years, perhaps at a slower pace than *P. infuscatus* (eBird, 2022). From September 2020 through 2022, a single individual has repeatedly been reported from Puyo, Pastaza province (eBird, 2022). The first documented, and only third Ecuadorian record, was published less than a decade ago (Freile *et al.*, 2013). CERO no longer requests reports of this species from Orellana or Sucumbíos provinces.

Swainson's Hawk Buteo swainsoni

Pichincha province, Parque Lineal de Sangolquí, 17 November 2015, M. F. Salazar (photo). Guayas province, La Lagartera, Churute, 25 July 2016, G. Maenz (photo). Guayas province, La Lagartera, Churute, 11 February 2020, J. C. Figueroa and O. Carrión (photo).

The Pichincha record pertains to a single adult passing high overhead; poor photo quality still allows species identification. Records from Guayas involve a single adult seen landing on pasture (Fig. 5r) and three individuals

seen soaring at moderate height above an extensive agricultural area (Fig. 5r). The photographed individual of this trio is an adult, pale morph, but the observers did not mention the age of the other two individuals. There are few records of *B. swainsoni* from western Ecuador, being more regular in the Amazon lowlands, but western records have increased in recent years (Freile *et al.*, 2020). The July record from La Lagartera indicates a delayed migrant or possibly an over-summering individual.

Orange-breasted Fruiteater Pipreola jucunda

Azuay province, Corona de Oro, 19 May 2019, P. Molina (photo).

One adult male was seen and photographed at close range while foraging along a humid forest border (Fig. 4g). There are several subsequent records from the same locality and nearby Molleturo (eBird, 2022). A presumably different individual showed a distinctly large orange pectoral patch (Molina *et al.*, 2019), a plumage difference that might deserve further investigation. This fruiteater ranges primarily from northern Ecuador to central-west Colombia (Kirwan & Green, 2011), but there are historical specimen records from Cayendeled, Chimborazo province (Chapman, 1926). Corona de Oro represents the southernmost locality for this Chocó endemic species.

Gray Kingbird Tyrannus dominicensis

Pichincha province, Reserva Maquipucuna, 1 October 2021, M. Flores, J. Shyvers and J. Farley (photo).

One individual was observed perching on exposed branches of a *Nectandra* (Lauraceae) tree in a mature secondary forest (Fig. 4h). It was perched next to an Eastern Kingbird *T. tyrannus*. Records of this species have increased recently, especially in western Ecuador (eBird, 2022), although it was only recently documented for the first time in the country (Freile *et al.*, 2017). All records from western Ecuador are from September through April, as expected for a boreal migrant. Birds observed at La Segua, Manabí province, were highly territorial and vocal (JFF, pers. observ.).

*White-rumped Swallow Tachycineta leucorrhoa

Carchi province, El Carmelo, 9 March 2019, E. Ocaña, Y. Luna and A. Boas (photo).

A single bird was observed in a flock of Brown-bellied Swallow *Orochelidon murina* and few Blue-and-white Swallow *Pygochelidon cyanoleuca* that were perching on an electricity cable and repeatedly circling around. Several photos and a video were secured to confirm identification later (Fig. 1c). The superficially similar White-winged Swallow *Tachycineta albiventer* was excluded because the observed individual had a short and narrow white superciliar stripe, lacked the white wing patches, and upperparts were darker blue (Ridgely & Tudor, 2009). This represents the first record of *T. leucorrhoa* in Ecuador and the westernmost in mainland South America (Turner, 2020). There are recent records from Curazao in August 2021 and July 2022 (eBird, 2022). It is considered a partial austral migrant (Jahn *et al.*, 2020), although the date of the Carchi record proves to be somewhat early.

Cliff Swallow Petrochelidon pyrrhonota

Galápagos province, Isla Santa Fe, 24 March 2015, G. Carpentier and K. Adams (photo).

A single bird was observed flying at low height along a sandy beach near a sea lion colony (Fig. 3k). There are very few records from Galápagos, this being the first documented one (Brinkhuizen & Nilsson, 2020). Poor photo quality does not allow for subspecies identification, but the pale buff rump and whitish nuchal collar allowed species identification (Freile & Restall, 2018).

Swainson's Thrush Catharus ustulatus

Galápagos province, Mina Roja, Isla Santa Cruz, 29 October 2020, D. Anchundia (photo).

One bird was observed in a woodland that combines native and exotic vegetation (Fig. 31). Although the species is a common boreal migrant on the mainland (Freile & Restall, 2018), this is the first Galápagos record (Brinkhuizen & Nilsson, 2020).



Figure 3: First documented records of species previously considered as hypothetical/undocumented in Galápagos, Ecuador. (a) Sarkidiornis sylvicola, Isla Santa Cruz (D. Valencia; ML 238723341); (b) Phoenicopterus chilensis, Punta Cormorán, Isla Floreana (A. Jaramillo; ML 278448231); (c) Limosa fedoa, Isla Santa Cruz (W. Scott Young; ML 73467531); (d) Calidris canutus, Isla Isabela (R. Espinosa; ML 56466221); (e) Calidris subruficollis, Isla Santiago (K. John; ML 163378941); (f) Limnodromus scolopaceus, Isla Isabela (O. Nabrovenkov); (g) Larus belcheri, Puerto Baquerizo Moreno (K. Berg); (h) Thalasseus sandvicensis, Isla Isabela (T. Dimarzio; ML 220123521); (i) Stercorarius parasiticus, north of Tagus Cove (J. R. Trimble); (j) Butorides virescens, Isla Santa Cruz (R. Ahlman; ML 205005591); (k) Petrochelidon pyrrhonota, Isla Santa Fe (G. Carpentier); (l) Catharus ustulatus, Isla Santa Cruz (D. Anchundia); (m) Quiscalus mexicanus, Isla Santa Cruz (L. Die; ML 43596861); (n) Parkesia noveboracensis, Isla Santa Cruz (M. Hyett; ML 204032221).

Band-tailed Oropendola Cacicus latirostris

Morona Santiago province, Kapatinentza, 30 October–1 November 2021, D. Brinkhuizen, J. Nilsson and D. Utitiaj (photo).

One or perhaps two birds were briefly observed in a pre-roosting tree at an oxbow lagoon, with Crested Oropendola *Psarocolius decumanus*, Russet-backed Oropendola *P. angustifrons*, and Yellow-rumped Cacique *Cacicus cela*. They were mostly glossy black and cacique-sized, with yellow bill and pale iris (Freile & Restall, 2018); yellow in the tail was not visible while perched. During take-off, the tail was spread, and the diagnostic tail pattern was observed clearly, as was the solid black terminal band and a broad black central stripe; yellow in the spread tail appeared as two separate 'windows' (Fig. 5s). A paler, glossier tone to the upperwing surface, brownish cast to the head/nape, and bright bluish eyes were also visible in flight. This represents the first modern, documented record of this species in Ecuador, as it was previously known from a single specimen collected near Sarayacu, Pastaza province (Ridgely & Greenfield, 2001), as well as a few uncorroborated sightings.

Great-tailed Grackle Quiscalus mexicanus

Galápagos province, Puerto Ayora, Isla Santa Cruz, 8–10 April 2010, L. Die (photo).

A single male was observed first flying into a small mangrove patch near a dock (Fig. 3m). The species was previously recorded just once, also in Santa Cruz (Brinkhuizen & Nilsson, 2020). Given that *Q. mexicanus* is not known to be a long-distance migrant and there is regular shipping traffic between Galápagos and Guayaquil, where the species is a common resident, it is assumed that the species has only arrived on the islands by ship. Therefore, it is not considered to be a naturally-occurring member of the resident or transient avifauna of the archipelago. Die (2010) reports that the photographed individual was seemingly captured by national park personnel and culled.

Northern Waterthrush Parkesia noveboracensis

Galápagos province, El Chato, Isla Santa Cruz, 16 May 2006, M. Hyett (photo).

A single bird was observed in a small pond in an agricultural area (Fig. 3n). This represents the first Galápagos record of this boreal migrant. The late date suggests a northbound migrant.

Prothonotary Warbler Protonotaria citrea

Guayas province, Parque Lineal Kennedy Norte, Guayaquil, 30 December 2019, C. Ponce (photo).

A single male was observed in a small mangrove patch foraging at low heights for three consecutive days (Fig. 4i). Presumably, the same individual was observed again in mid-January and stayed until mid-February (López, 2020). Additional records from the same locality from mid-October 2021 (eBird, 2022) suggest a returning individual. This represents the southernmost record in Ecuador (Petit, 2020) of this rare boreal migrant with scarce records in the country (Freile & Restall, 2018).

Mourning Warbler Geothlypis philadelphia

Pastaza province, Veracruz, March-Abril 2020, A. Argüello (audio, field sketch).

Two individuals were repeatedly observed on various dates in secondary forest and herbaceous-shrubby patches in an open area with scattered grassland (Argüello, 2020). Though the number of records of *G. philadelphia* in Ecuador has increased in recent years, the species is still considered a rare visitor (Freile & Restall, 2018; Ridgely & Greenfield, 2021) and this is among the southernmost records. The species was repeatedly reported from this same locality from March 2020 through December 2021, suggesting wintering site fidelity across three winters (eBird, 2022).

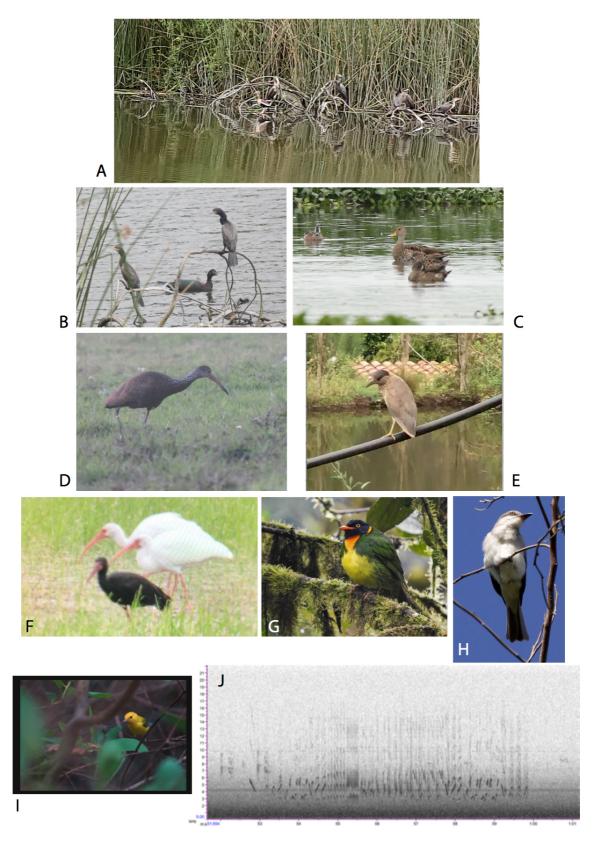


Figure 4: Major range extensions and out-of-range records of birds in Ecuador. (a) *Dendrocygna autumnalis*, El Salado, Carchi province (W. Chulde); (b) *Cairina moschata*, El Salado, Carchi province (J. M. Loaiza); (c) *Anas georgica*, La Segua, Manabí province (R. Ahlman; ML 44389091); (d) *Aramus guarauna*, La Libertad, Carchi province (E. Taimal); (e) *Nycticorax nycticorax*, Tumbaco, Pichincha province (C. Vignat); (f) *Phimosus infuscatus*, Churute, Guayas province (G. Maenz); (g) *Pipreola jucunda*, Corona de Oro, Azuay province (P. Molina; ML 312728821); (h) *Tyrannus dominicensis*, Maquipucuna, Pichincha province (J. Shyvers; ML 374025541); (i) *Protonotaria citrea*, Guayaquil, Guayas province (C. Ponce; ML 196323381); (j) *Sporophila corvina*, La Florida, Zamora-Chinchipe province (M. Sánchez-Nivicela).

Variable Seedeater Sporophila corvina

Zamora Chinchipe province, La Florida Ruins, Palanda, 28 January 2020, M. Sánchez-Nivicela (audio).

An adult male was observed and audio-recorded from a roadside edge along the entrance road to the La Florida Ruins (Fig. 4j). It was first perched low in grasses and then moved up to c. 3 m in dry scrub. A photograph was secured, and the bird was seen at close range, noting its black pectoral collar, white crescent below eyes, white wing speculum, and lack of wing bars (Freile & Restall, 2018). This is the first documented and submitted record of S. corvina from the Río Mayo drainage in Ecuador (Freile & Restall, 2018), the nearest records being only 33 km north and 40 km east (eBird, 2022), in the upper portion of the Pacific versant. Although there are no records of Caquetá Seedeater Sporophila murallae from the Mayo drainage, the expansion of S. corvina range into the Amazon basin might imply a potential contact zone between these two closely related species, considered members of a superspecies complex (Ocampo et al., 2022). A more recent report 1 km from M. Sánchez-Nivicela record of S. corvina, initially misidentified and submitted to eBird as S. murallae, has come to light (Walker & Apolo, 2019).

Red-capped Cardinal Paroaria gularis

Zamora Chinchipe province, Valladolid, 15 August 2020, P. Angulo (photo).

One adult was observed perching on electric wires and then moving into nearby bushes (Fig. 5t). Presumably, the same individual has remained in the area for nearly 2 years (P. Angulo *in litt*. 2022). This species is confined to the Amazonian lowlands in Ecuador, mostly below 300 m, from the Colombian border south to eastern Morona Santiago province (Freile & Restall, 2018). Its presence in Valladolid, above 1500 m a.s.l., is unusual. Additionally, a previous photographic record of a juvenile near Chontayacu bridge, Napo province, at *c*. 1120 m a.s.l., is also remarkably high (Tosta-Mayoral *et al.*, 2018).

Other records received

The following records, received by CERO, do not represent major range extensions but add to our knowledge of bird distributions in Ecuador.

Band-rumped Swift *Chaetura spinicaudus*. Three individuals observed drinking water in flight in an *Arapaima gigas* farm in Rancho Alemán, Guayas province (20 December 2020; L. Navarrete) constitute the southernmost record of this species in Ecuador (Freile & Restall, 2018).

Gray-bellied Hawk *Accipiter poliogaster*. One juvenile was photographed while perching atop a dead stump along the Sumaco road, 2 km north of the Narupa-Loreto Road, Napo province (25 October 2015; R. Espinosa), and another juvenile was photographed in cruising flight above a forested area near Nuevo Paraíso, Zamora Chinchipe province (3 December 2017; R. Tizard). There are few records of this secretive hawk in Ecuador (Freile *et al.*, 2020).

Lesser Hornero *Furnarius minor*. One individual was seen in river island scrub and a mudflat near Sani Lodge, Sucumbíos province (22 April 2021; P. Gössinger). The species has become rather regular on river islands in the lower section of the Napo River, from the Payamino and Coca rivers eastward (Freile & Restall, 2018). A few records along the Napo River and from the Pastaza River need corroboration (eBird, 2022). CERO does not request additional records of this species.

Rejected and postponed records

Table 1 presents 12 records rejected because of insufficient information and/or erroneous identification. Five additional records were not included because submitted information proved unsatisfactory to reach a definitive conclusion. Rejected records also include two species that are correctly identified, but whose presence in Ecuador seems unnatural –i.e., escapees or human-assisted arrivals. Details of these two records follow.

First, Magellanic Penguin *Spheniscus magellanicus* was reported from a single female reported to J. C. Figueroa (*in litt*. 2021) (Fig. 6a). It was captured on an unspecified date in 2015 near La Chocolatera, Santa Elena province, by a person who preferred to remain anonymous, and was taken to a veterinarian. It was later transferred to Valdivia Marine Park, where it died a few days later. Although identification has been correctly established, we cannot determine whether this individual arrived accidentally on its own or was ship-assisted

(or moved by people) from its natural coastal grounds in southern South America. Given that CERO does not yet have a specific policy for ship-assisted and other non-natural or decidedly unexpected arrivals (Freile *et al.*, 2018), we opted to postpone a decision on this record. There are regular vagrant records from Peru (Zavalaga & Paredes, 2009; Vizcarra *et al.*, 2020), but these records, already outliers in the species' distribution, are over 1,000 km south of Santa Elena, Ecuador. We believe that an exceptional record from southern Colombia could also have represented a non-natural arrival since it involved a single individual captured in weak conditions by fishermen and held in captivity for some days until its death (Franke-Ante & Naranjo, 1994).

Second, a single male Mandarin Duck *Aix galericulata* was photographed by A. Ágreda in Pacoa saltpans, Santa Elena province, on 14 September 2021 (Fig. 6b). It was swimming and moving around with a flock of 109 *Sarkidiornis sylvicola*. Identification and documentation are accurate, but we treat this individual's arrival as non-natural, and reject its inclusion in the country species list. The species has successfully established feral populations in Europe after intentional introductions or escapes from captive populations (Svensson, 2009), and occurs in captivity in Venezuela (Ojasti, 2001). However, there are no established wild populations in the Americas, so it is not expected that the observed individual might have arrived on its own. According to the observer, it apparently had a ring/band on one leg, which also suggests a captive origin. A zoo in Cuenca apparently received one *A. galericulata* individual in 2018 (A. Ágreda *in litt.* 2021).

Table 1: Summary of rejected records submitted to the Committee for Ecuadorian Records in Ornithology (CERO) between May 2019 and July 2022.

Record Number	Species	Locality, Province	Date	Reason
2021-025	Mandarin Duck Aix galericulata	Pacoa, Santa Elena	14 September 2021	Unnatural origin, most likely an escapee (see text).
2019-057	Band-tailed Nighthawk Nyctiprogne leucopyga	Laguna Grande, Cuyabeno, Sucumbíos	15 February 2018	Misidentified Ladder- tailed Nightjar Hydropsalis climacocerca.
2019-041	Yellow-breasted Crake <i>Porzana</i> flaviventer	La Segua, Manabí	29 July 2014	Insufficient details and no documentation to verify identification.
2020-001	American Coot Fulica americana	Lago San Pablo, Imbabura	8 December 2019	Misidentified Slate-colored Coot <i>F. ardesiaca</i> . Introgression between <i>F. ardesiaca</i> and <i>F. americana</i> is possibly taking place in south Colombia and north Ecuador.
2019-064	Silvery Grebe Podiceps occipitalis	Chanduy, Santa Elena	7 September 2019	Misidentified Least Grebe <i>Tachybaptus dominicus</i> .
2021-007	Magellanic Penguin Spheniscus magellanicus	La Chocolatera, Santa Elena	Unspecified date in 2015	Presumably ship-assisted (see text).
2019-067	Band-rumped Storm-Petrel Hydrobates castro	off Salinas, Santa Elena	13 October 2018	Misidentified Wedgerumped Storm-Petrel <i>H. tethys</i> .

2021-003	Yellow-eared Toucanet Selenidera spectabilis	Tundaloma Lodge, Esmeraldas	10 January 2021	Misidentified immature or juvenile Collared Aracari <i>Pteroglossus torquatus</i> .
2021-001	Streaked Flycatcher Myiodynastes maculatus insolens	San Pablo del Lago, Imbabura	6 January 2021	Subspecies identification was incorrect; re-identified as <i>M. m. chapmani</i> .
2021-011	Great Crested Flycatcher Myiarchus crinitus	Cuenca, Azuay	25 May 2021	Misidentified Sooty-crowned Flycatcher <i>M.</i> phaeocephalus.
2019-061	Dull-capped Attila Attila bolivianus	Sani Lodge, Sucumbíos	19 July 2019	Misidentified Bright- rumped Attila <i>A</i> . <i>spadiceus</i> ; rufous morph with pale eyes.
2021-014	Southern Martin Progne elegans	Lisan Wasi, 10 km south of Puyo, Pastaza	4 April 2021	Identification not confirmed; probably juvenile Gray-breasted Martin <i>P. chalybea</i> .

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REFERENCES

Ágreda, A. (2021, September 6). *eBird checklist*: https://ebird.org/checklist/S94652546. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Ahlman, R. (2016a, November 3). *eBird checklist*: https://ebird.org/checklist/S32351967. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Ahlman, R. (2016b, December 30). *eBird checklist*: https://ebird.org/checklist/S33288703. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Ahlman, R. (2019, November 4). *eBird checklist*: https://ebird.org/checklist/\$61176949. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Argüello, A. (2020, April 6). *eBird checklist*: https://ebird.org/checklist/S66714823. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Argüello. Y. (2021, October 3). *eBird checklist:* https://ebird.org/checklist/S95563417. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Arias-Cruzatty, D. (2015, February 11). *eBird checklist*: https://ebird.org/checklist/S21775984. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Arteaga-Chávez, W.A., Ocaña, E., Hipo, R., & Santander G., T. (2022). Registro de la Agujeta Piquilarga Limnodromus scolopaceus (Scolopacidae) después de 89 años en la laguna de Colta. Revista Ecuatoriana de Ornitología, 8(1), 1–5. DOI: https://doi.org/10.18272/reo.v8i1.2438

Barham, V. (2021, April 6). *eBird checklist*: https://ebird.org/checklist/S82570644. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Berg, K.R. (2021, May 2). *eBird checklist*: https://ebird.org/checklist/\$93693404. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

BirdLife International (2022, October 13). *IUCN Red List for birds*. BirdLife International. URL: http://datazone.birdlife.org

Blokpoel, H., Naranjo, L.G., & Tessier, G.D. (1984). Immature Little Gull in South America. *American Birds*, 38, 372–374. URL: https://sora.unm.edu/sites/default/files/journals/nab/v038n03/p00372-p00374.pdf

Brinkhuizen, D.M., & Nilsson, J. (2020). Birds and mammals of the Galapagos. Barcelona, Spain: Lynx Edicions.

Camacho, C., & Wilson, R.E. (2011). New record of Cinnamon Teal *Anas cyanoptera* in Ecuador. *Bulletin of the British Ornithologists Club*, 131(1), 69–71. URL: https://www.biodiversitylibrary.org/page/50898395

Carmona, R., Arce, N., Ayala-Pérez, V., Hernández-Álvarez, A., Buchanan, J.B., Salzer, L.J., Tomkovich, P.S., Johnson, J.A., Gill, R.E., McCaffery, B.J., Lyons, J.E., Niles, L.J., & Newstead, D. (2013). Red Knot *Calidris canutus roselaari* migration connectivity, abundance and non-breeding distribution along the Pacific coast of the Americas. *Wader Study Group Bulletin*, 120(3), 168–180. URL: https://www.waderstudygroup.org/article/1289/

Chapman, F.M. (1926). The distribution of bird-life in Ecuador. *Bulletin of the American Museum of Natural History*, 55, 1–784. URL: http://digitallibrary.amnh.org/handle/2246/1244

Clements, J.F., Schulenberg, T.S., Iliff, M.J., Billerman, T.A., Fredericks, T.A., Sullivan, B.L. & Wood, C.L. (2021). *The eBird/Clements checklist of birds of the world: v2019*. Ithaca, NY: Cornell Lab of Ornithology. URL: http://www.birds.cornell.edu/clementschecklist/download

Córdova, L., & Brinkhuizen, D.M. (2021, March 19). *eBird checklist*: https://ebird.org/checklist/S84515810. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Degel-Andrade, D. (2021, February 28). *eBird checklist*: https://ebird.org/checklist/S82610495. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Die, L. (2010, April 8). *eBird checklist*: https://ebird.org/checklist/S33221868. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Die, L. (2021, March 16). *eBird checklist*: https://ebird.org/checklist/\$83944951. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Dimarzio, T. (2018, December 15). *eBird checklist*: https://ebird.org/checklist/S65213579. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

- Doyle, D. (2021, November 14). *eBird checklist*: https://ebird.org/checklist/S97794702. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org
- eBird. (2022). eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org
- Ewins, P.J., & Weseloh, D.V. (2020). Little Gull (*Hydrocoloeus minutus*), version 1.0. In S.M. Billerman (Ed), *Birds of the World*. Ithaca, NY: Cornell Lab of Ornithology. DOI: https://doi.org/10.2173/bow.litgul.01
- Figueroa, J.C. (2020, August 1). *eBird checklist*: https://ebird.org/checklist/S72029780. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org
- Franke-Ante, R., & Naranjo, L.G. (1994). Primer registro del Pinguino de Magallanes en costas colombianas. *Trianea*, 5, 401–406.
- Freile, J. & Restall, R. (2018). Birds of Ecuador. London, UK: Helm Field Guides.
- Freile, J.F., Brinkhuizen, D.M., Solano-Ugalde, A., Greenfield, P.J., Ahlman, R., Navarrete, L., & Ridgely, R.S. (2013). Rare birds in Ecuador: first annual report of the Committee of Ecuadorian Records in Ornithology (CERO). *Avances en Ciencias e Ingenierías*, 5, B24–B41. DOI: http://dx.doi.org/10.18272/aci.v5i2.135
- Freile, J.F., Lesterhuis, A.J., & Clay, R.P. (2016). Assessment of the distribution and status of the Southern Pochard *Netta e. erythrophthalma* in South America. *Wildfowl*, 66, 3–21. URL: https://wildfowl.wwt.org.uk/index.php/wildfowl/article/view/2657
- Freile, J.F., Solano-Ugalde, A., Brinkuizen, D.M., Greenfield, P.J., Lysinger, M., Nilsson, J., Navarrete, L., & Ridgely, R.S. (2017). Rare birds in Ecuador: third report of the Committee for Ecuadorian Records in Ornithology (CERO). *Revista Ecuatoriana de Ornitología*, 2, 8–27. DOI: http://dx.doi.org/10.18272/reo.v0i1.446
- Freile, J.F., Solano-Ugalde, A., Kenefick, M., Lees, A., Piacentini, V.Q., Sandoval, L. Valqui, T., Angulo-Pratolongo, F., Miranda, J., Claessens, O., & Sharpe, C.J. (2018). An overview of bird records committees in the Neotropics. *Neotropical Birding*, 23, 68–75.
- Freile, J.F., Solano-Ugalde, A., Brinkuizen, D.M., Greenfield, P.J., Lysinger, M., Nilsson, J., Navarrete, L., & Ridgely, R.S. (2019a). Fourth report of the Committee for Ecuadorian Records in Ornithology (CERO) and a revision of undocumented and erroneous records in the literature. *Revista Ecuatoriana de Ornitología*, 5, 52–79. DOI: http://dx.doi.org/10.18272/reo.vi5.1277
- Freile, J.F., Santander-G., T., Jiménez-Uzcátegui, G., Carrasco, L., Cisneros-Heredia, D., Guevara, E.A., Sánchez-Nivicela, M., & Tinoco, B.A. (2019b). *Lista roja de las aves del Ecuador*. Quito, Ecuador: Aves y Conservación, Comité Ecuatoriano de Registros Ornitológicos, Fundación Charles Darwin, Universidad del Azuay, Red Aves Ecuador & Universidad San Francisco de Quito.
- Freile, J.F., Olmstead, S., Athanas, N., Brinkuizen, D.M., Navarrete, L., Nilsson, J., Sánchez-Nivicela, M., Solano-Ugalde, A., & Greenfield, P.J. (2020). Fifth report of the Committee for Ecuadorian Records in Ornithology (CERO), with comments on some published, undocumented records. *Revista Ecuatoriana de Ornitología*, 6, 103–133. DOI: https://doi.org/10.18272/reo.vi6.1990
- Freile, J.F., Athanas, N., Brinkuizen, D.M., Greenfield, P.J., Lysinger, M., Navarrete, L., Nilsson, J., Olmstead, S., Ridgely, R.S., Sánchez-Nivicela, M., Solano-Ugalde, A., Ahlman, R., & Boyla, K.A. (2022, July 20). *Lista oficial de las aves del Ecuador*. Comité Ecuatoriano de Registros Ornitológicos. URL: http://www.ceroecuador.wordpress.com
- Guzmán, L. (2022, February 21). *eBird checklist*: https://ebird.org/checklist/S104173371. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org/

Haase, B. (2019). Aves marinas y costeras de Ecuador, las piscinas de Ecuasal y las islas Galápagos. Guayaquil, Ecuador: Ecuasal S. A., Conservación Internacional, Canadian Wildlife Service, Fundación Jocotoco & Museo de Ballenas.

Henry, P.I. (2012). Distributional and altitudinal range extensions for birds from Ecuador. *Boletín de la Sociedad Antioqueña de Ornitología*, 20(2), 89–106. URL: http://sao.org.co/publicaciones/boletinsao/20%282%29/AP720%282%29Henry.pdf

Hervé, J., & Hualinga, P.W. (2021, December 18). *eBird checklist*: https://ebird.org/checklist/S99076673. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Heselden, R. (2013, June 15). *eBird checklist*: https://ebird.org/checklist/\$14564533. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Howell, S.N.G., & Zufelt, K. (2019). *Oceanic birds of the world. A photo guide*. Princeton: Princeton University Press.

Huth, J. (2017, October 21). *eBird checklist*: https://ebird.org/checklist/S40043943. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Jahn, A., Cueto, V.R., Fontana, C.S., Guaraldo, A.C., Levey, D.J., Marra, P.P., & Ryder, T.B. (2020). Bird migration within the Neotropics. *Auk*, 137(1), 1–23. DOI: https://doi.org/10.1093/auk/ukaa033

Janni, O. (1999). First record of American Coot *Fulica americana* in the Galápagos Islands. *Cotinga*, 12, 83. URL: http://www.neotropicalbirdclub.org/articles/12/C12-neonote.pdf

Jaramillo, A. (2004). Identification of adult Pacific and American Golden Plovers in their southbound migration. *Western Birds*, 35, 120–123. URL: https://archive.westernfieldornithologists.org/archive/V35/35(2)-p0120-p0124.pdf

Jaramillo, A. (2008, July 25). *eBird checklist*: https://ebird.org/checklist/S11093600. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Jaramillo, A. (2017, July 25). *eBird checklist*: https://ebird.org/checklist/S38420310. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Jiménez-Uzcátegui, G., & Freire, P. (2013). Northern Shoveler *Anas clypeata*: a new species for the Galápagos Islands, Ecuador. *Cotinga*, 35, 86.

Keef, K. (2016, February 13). *eBird checklist*: https://ebird.org/checklist/S27979383. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Kirwan, G.M., & Green, G. (2011). Cotingas and manakins. London, UK: Helm Identification Guides.

Loaiza, J.M., Arteaga-Chávez, W.A., Molina-Criollo, P.G., & Obando, E. (2022). Primer registro de la Agachona Ventrirrufa (*Attagis gayi*) en Colombia. *Ornitología Colombiana*, 22, 57–63. URL: https://asociacioncolombianadeornitologia.org/revista-ornitologia-colombiana-no-22/

López, J. (2020, February 13). *eBird checklist*: https://ebird.org/checklist/S64431887. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Mena-Valenzuela, P. (2021). Registros inusuales de algunas aves costeras y de tierras bajas en el lago San Pablo, Andes norte del Ecuador. *Revista Ecuatoriana de Ornitología*, 7, 61–67. DOI: https://doi.org/10.18272/reo.v7i2.1609

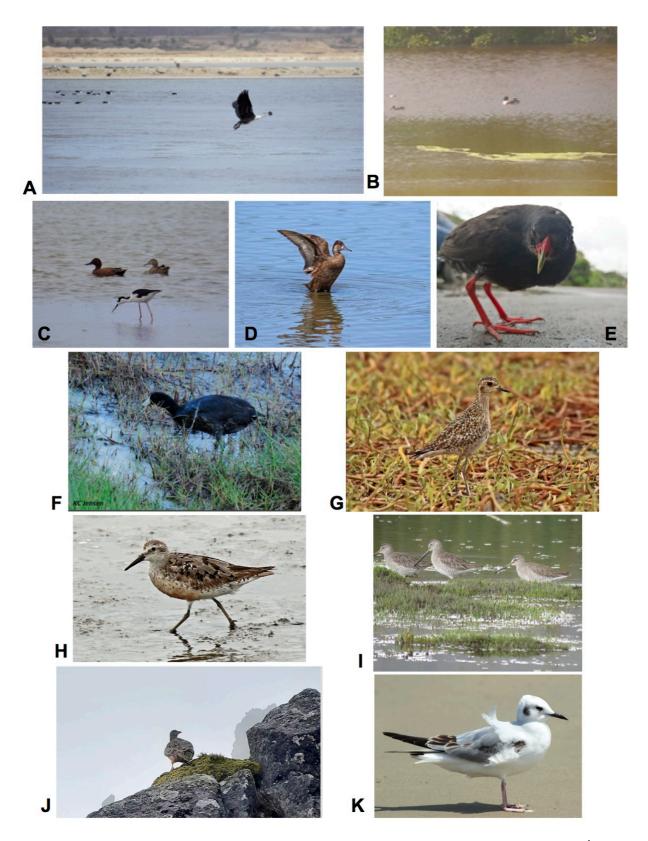


Figure 5: Rare birds recorded in Ecuador. (a) Sarkidiornis sylvicola, Ecuasal Pacoa, Santa Elena province (A. Ágreda); (b) Spatula clypeata, Playa El Garrapatero, Galápagos province (D. Degel; ML 312875651); (c) Spatula cyanoptera, Ecuasal Pacoa, Santa Elena province (A. Ágreda); (d) Netta erythrophthalma, Puro Congo, Esmeraldas province (D. M. Brinkhuizen; ML 319788261); (e) Mustelirallus erythrops, Sucúa, Morona Santiago province (G. Utitiaj); (f) Fulica americana, Isla Isabela, Galápagos province (K. Jensen; ML 28835691); (g) Pluvialis fulva, La Segua, Manabí province (R. Ahlman; ML 40053861); (h) Calidris canutus, Puro Congo, Esmeraldas province (R. Ahlman; ML 114647521); (i) Limnodromus scolopaceus, Laguna de Colta, Chimborazo province (E. Ocaña; ML 312119151); (j) Attagis gayi, Volcan Imbabura, Imbabura province (N. Tutillo; ML 367889591); (k) Chroicocephalus philadelphia, Puerto López, Manabí province (S. Plúa Albán; ML 41341721)...



Figure 5: Rare birds recorded in Ecuador. ...(l) Spheniscus humboldti, Islote El Pelado, Santa Elena province (J. C. Figueroa; ML 252941451); (m) Pelagodroma marina, Canal Bolívar, Galápagos province (S. Olmstead; ML 70445801); (n) Sula leucogaster, Isla Española, Galápagos province (L. C. Beltrán); (o) Butorides virescens, Portoviejo, Manabí province (L. Brunetti); (p) Egretta rufescens, Ecuasal Pacoa, Santa Elena province (J. C. Figueroa; ML 331454011); (q) Phimosus infuscatus, Río Arajuno, Napo province (H. Brieschke; ML 102484021); (r) Buteo swainsoni, La Lagartera, Guayas province (G. Maenz, J. C. Figueroa); (s) Cacicus latirostris, Kapatinentza, Morona Santiago province (D. M. Brinkhuizen; ML 386825261); (t) Paroaria gularis, Valladolid, Zamora Chinchipe province (P. Angulo).

Mesaglio, T., & Callaghan, C.T. (2021). An overview of the history, current contributions and future outlook of iNaturalist in Australia. *Wildlife Research*, 48(4), 289–303. DOI: https://doi.org/10.1071/WR20154

Molina, P., Carrasco, A., Tinoco, B., & Pacheco-Osorio, D. (2019, May 19). *eBird checklist*: https://ebird.org/checklist/S56517651. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Navarro, J.C. (2021, May 22). *eBird checklist*: https://ebird.org/checklist/S89807167. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Nilsson, J., Freile, J.F., Ahlman, R., Brinkhuizen, D.M., Greenfield, P.J., & Solano-Ugalde, A. (2014). Rare birds in Ecuador: second annual report of the Committee for Ecuadorian Records in Ornithology (CERO). *Avances en Ciencias e Ingenierías*, 6, B38–B50. DOI: http://dx.doi.org/10.18272/aci.v6i2.178

Ocampo, D., Winker, K., Miller, M.J., Sandoval, L., & Uy, J.A.C. (2022). Rapid diversification of the Variable Seedeater superspecies complex despite widespread gene flow. *Molecular Phylogenetics and Evolution*, 173, 107510. DOI: https://doi.org/10.1016/j.ympev.2022.107510

Ojasti, J. (2001). Estudio sobre el estado actual de las especies exóticas. Estudio nacional. Caracas, Venezuela: Comunidad Andina, Secretaría General.

Olmstead, S., Swanson, L., & Fischer, R. (2008, July 29). *eBird checklist*: https://ebird.org/checklist/S39480891. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Onley, D., & Scofield, P. (2007). *Albatrosses, petrels and shearwaters of the world*. London, UK: Helm Field Guides.

Petit, L.J. (2020). Prothonotary Warbler (*Protonotaria citrea*), version 1.0. In A.F. Poole & F.B. Gill (Eds), *Birds of the World*. Ithaca, NY: Cornell Lab of Ornithology. DOI: https://doi.org/10.2173/bow.prowar.01

Plúa-Albán, S. (2016, November 21). *eBird checklist*: https://ebird.org/checklist/S32788663. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Poveda, E. (2021, October 3). *eBird checklist*: https://ebird.org/checklist/S97962260. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Remsen, J.V., Areta, J.I., Bonaccorso, E., Claramunt, S., Jaramillo, A., Pacheco, J.F., Robbins, M.B., Stiles, F.G., Stotz, D.F., & Zimmer, K.J. (2022, August 20). *A classification of the bird species of South America*. American Ornithologists' Union. URL: http://www.museum.lsu.edu/~Remsen/SACCBaseline.html

Ridgely, R.S., & Greenfield, P.J. (2001). The birds of Ecuador. Ithaca, NY: Cornell University Press.

Ridgely, R.S., & Greenfield, P.J. (2021). *The birds of Ecuador, field guide app version 1.0.0*. Birds in the Hand LLC.

Ridgely, R.S., & Tudor, G. (2009). Birds of South America. Passerines. London, UK: Helm Field Guides.

Rivera-Tapia, W. (2021, July 25). *eBird checklist*: https://ebird.org/checklist/S92347063. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Rosenmeier, T., & Kluge, K. (2018, May 30). *eBird checklist*: https://ebird.org/checklist/S46281059. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Salagaje, L., Alquinga, E., Montenegro, J., Muñoz, M., & Quishpe, M. (2022, February 19). *eBird checklist*: https://ebird.org/checklist/S103131138. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Salazar, S. (2021, September 9). *eBird checklist*: https://ebird.org/checklist/S94437634. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Schulenberg, T.S., Stotz, D.F., Lane, D.F., O'Neill, J.P., & Parker, T.A. (2010). *Birds of Peru*, second edition. London, UK: Helm Field Guides.

Sibley, D.A. (2014). The Sibley guide to birds, second edition. New York: Alfred A. Knopf.

Stephenson, B., & John, K. (2019, May 29). *eBird checklist*: https://ebird.org/checklist/S57002991. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Sullivan, B.L., Wood, C.L., Iliff, M.J., Bonney, R.E., Fink, D., & Kelling, S. (2009). eBird: a citizen-based bird observation network in the biological sciences. *Biological Conservation* 142: 2282–2292. DOI: https://doi.org/10.1016/j.biocon.2009.05.006

Svensson, L. (2009). Collins bird guide, second edition. London, UK: Harper Collins Publishers.

Taimal, E. (2019, October 19). *eBird checklist*: https://ebird.org/checklist/S60807881. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Taimal, E. (2020, May 9). *eBird checklist*: https://ebird.org/checklist/S68845098. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Tosta-Mayoral, C., Boas, A., Weaver, D., Soto, G., Hutton, J., & Velasteguí, J.D. (2018, May 26). *eBird checklist*: https://ebird.org/checklist/S46157458. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Turner, A. (2020). White-rumped Swallow (*Tachycineta leucorrhoa*), version 1.0. In J. del Hoyo, A. Elliot, J. Sargatal, D.A. Christie, & E. de Juana (Eds), *Birds of the World*. Ithaca, NY: Cornell Lab of Ornithology. DOI: https://doi.org/10.2173/bow.whrswa1.01

Valencia, D. (2019, October 30). *eBird checklist*: https://ebird.org/checklist/S61240822. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Vizcarra, J.K., Zambrano, M.A., Mamani, J.E., & Riveros, G.C. (2020). Hallazgo de un individuo juvenil de Pingüino de Magallanes (*Spheniscus magellanicus*) en la provincia de Ilo, costa sur del Perú. *Boletín de la Unión de Ornitólogos del Perú*, 15(1), 5–8. URL: vizcarra.pdf

Walker, C., & Apolo, N. (2019, December 13). *eBird checklist*: https://ebird.org/checklist/S62280019. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Wiedenfeld, D.A. (2006). Aves, the Galápagos Islands, Ecuador. *Check List*, 2, 1–27. DOI: https://doi.org/10.15560/2.2.1

Wood, C., Sullivan, B., Illif, M., Fink, D., & Kelling, S. (2011). eBird: Engaging birders in science and conservation. *Plos Biology*, 9(12), e1001220. DOI: https://doi.org/10.1371/journal.pbio.1001220

Young, S. (2010, January 24). *eBird checklist*: https://ebird.org/checklist/S22564446. eBird: an online database of bird distribution and abundance. Ithaca, NY: Cornell Lab of Ornithology. URL: https://ebird.org

Zavalaga, C.B., & Paredes, R. (2009). Records of Magellanic Penguin *Spheniscus magellanicus* in Peru. *Marine Ornithology*, 37, 281–282. URL: http://www.marineornithology.org/PDF/37_3/37_3_281-282.pdf

Table 2: Localities of records submitted to the Committee for Ecuadorian Records in Ornithology (CERO) between May 2019 and July 2022. * indicates localities mentioned in the text accounts, not records reported to CERO. ** Indicate approximate coordinates.

Locality, Province	Latitude	Longitude	Elevation (m)
Atacames, Esmeraldas*	0.8666	-79.8333	10
Ayampe, Manabí	-1.669527	-80.81804	0
Bahía Gardner, Isla Española, Galápagos	-1.351636	-89.66178	0
Bahía Urbina, Isla Isabela, Galápagos	-0.392748	-91.22588	0
Borja, Napo*	-0.4375	-77.8517	1750
Buenaventura, Colombia* (**)	3.88304	-77.019	20
Caleta Tortuga Negra, Isla Santa Cruz, Galápagos	-0.640249	-90.372585	0
Canal Bolívar, Galápagos	-0.29523	-91.383848	0
Cayendeled, Chimborazo*(**)	-2.116	-79.9833	1370
Chanduy, Santa Elena	-2.3844	-80.50511	0
Chilmá Bajo, Carchi*	0.8667	-78.075	2070
Churute, Guayas	-2.50525	-79.600805	10
Corona de Oro, Azuay	-2.636076	-79.44937	750
Cuenca, Azuay	-2.92644	-79.0427	2550
Ecuasal Mar Bravo, Santa Elena	-2.246064	-80.94171	0
Ecuasal Pacoa, Santa Elena	-2.09651	-80.73544	0
El Carmelo, Carchi	-0.655788	-77.57079	2750
El Chato, Isla Santa Cruz, Galápagos	-0.64025	-90.3726	610
El Estero Ponds, Isla Isabela, Galápagos	-0.958738	-90.99153	10
El Salado, Carchi	0.582416	-77.789646	2980
Guayaquil, Guayas	-2.163077	-79.9015	5
Isla de la Plata, Manabí*	-1.2687	-81.0652	0
Isla Española, Galápagos	-1.410872	-89.637268	0
Isla Santa Fe, Galápagos	-0.81691	-90.04068	0
Isla Santay, Guayas*	-2.22549	-79.8576	5
Islas Mar Afuera, Chile*(**)	-33.776	-80.799	0
Islote El Pelado, Santa Elena	-1.93543	-80.789125	0
Islote Sombrero Chino, Galápagos	-0.36944	-90.58361	0
Kapatinentza, Morona Santiago	-2.68008	-77.486306	225
La Carolina, Pichincha*	-0.18275	-78.484	2780
La Chocolatera, Santa Elena	-2.189	-81.011	0
La Florida, Zamora Chinchipe	-4.635738	-79.13077	1055
La Lagartera, Churute, Guayas	-2.48677	-79.61163	10
La Libertad, Carchi	0.664528	-77.95855	3040
La Segua, Manabí	-0.70318	-80.2014	5
Laguna de Colta, Chimborazo	-1.730035	-78.75512	3310
Laguna de Yambo, Cotopaxi*	-1.102	-78.5891	2580

Laguna El Canclón, Guayas*	-2.4256	-79.6079	5
Laguna Grande de Cuyabeno, Sucumbíos	-0.0121	-76.1875	230
Las Bachas, Isla Santa Cruz, Galápagos	-0.494164	-90.34071	0
Las Peñas, Esmeraldas*	1.0996	-79.15205	0
Limoncocha, Sucumbíos*	-0.39556	-76.61703	245
Lisan Wasi, Pastaza	-1.5924	-77.9023	850
Machalilla, Manabí*	-1.4781	-80.781	0
Micacocha, Napo*	-0.5455	-78.2118	3900
Mina Roja, Isla Santa Cruz, Galápagos	-0.63657	-90.35872	630
Molleturo, Azuay*	-2.655	-79.436	1400
near Chontayacu bridge, Napo*	-0.72699	-77.7659	1120
near Francisco de Orellana, Orellana	-0.44266	-76.83922	250
near Yarina Lodge, Orellana	-0.46566	-76.84412	250
north of Tagus Cove, Isla Isabela, Galápagos (**)	-0.262	-91.37126	0
Nuevo Paraíso, Zamora Chinchipe	-4.26001	-78.64747	1050
Pampa de Ovejería, Napo*	-0.50931	-78.2262	4000
Paracas, Perú*(**)	-13.841	-76.2508	0
Parque Las Vegas, Portoviejo, Manabí	-1.06061	-80.44916	40
Parque Lineal Sangolquí, Pichincha	-0.333	-78.44225	2500
Pedernales-Cojimíes, Manabí*(**)	0.09803	-80.0431	0
Playa El Garrapatero, Isla Santa Cruz, Galápagos	-0.69465	-90.22079	0
Playa Espumilla, Isla Santiago, Galápagos	-0.204083	-90.82964	0
Posada de Flamengos, Isla Isabela, Galápagos	-0.945527	-90.97487	10
Puerto Ayora, Isla Santa Cruz, Galápagos	-0.74233	-90.31457	0
Puerto Baquerizo Moreno, Isla San Cristóbal,	-0.901811	-89.612789	0
Galápagos			
Puerto Engabao, Guayas*	-2.5781	-80.48406	0
Puerto López, Manabí	-1.560328	-80.80456	0
Puerto Villamil, Isla Isabela, Galápagos**	-0.80106	-91.12871	0
Punta Carnero, Santa Elena*	-2.2928	-80.9152	0
Punta Cormorant, Isla Floreana, Galápagos	-1.226127	-90.42834	0
Punta Moreno, Isla Isabela, Galápagos*	-0.6979	-91.2455	0
Puro Congo, La Tola, Esmeraldas	1.195194	-79.06519	0
Puyo, Pastaza*	-1.492208	-78.002811	930
Quebrada San Pedro, Tumbaco, Pichincha	0.182482	-78.404145	2400
Rancho Alemán, Guayas	-2.3296	-79.2097	340
Reserva Maquipucuna, Pichincha	0.118726	-78.63516	1360
Río Arajuno, Napo	-1.073625	-77.561503	360
River island near Sani Lodge, Sucumbíos	-0.439735	-76.28034	210
Road to Pacto Sumaco, Napo	-0.684361	-77.60236	1450

Salinas, Santa Elena*	-2.2041	-80.966	0
San Pablo, Imbabura	0.2183	-78.2351	2600
San Pablo, Santa Elena*	-2.1447	-80.7746	0
Sani Lodge, Sucumbíos	-0.43973	-76.2803	220
Santa Cruz highlands, Galápagos	-0.666	-90.325	515
Sarayacu, Pastaza*	-1.73432	-77.4833	400
Sucúa, Morona Santiago	-2.46469	-78.16323	820
Tundaloma Lodge, Esmeraldas	1.183095	-78.75338	35
Valladolid, Zamora Chinchipe	-4.55046	-79.13202	1670
Veracruz, Pastaza	-1.50588	-77.9413	960
Vía Shushufindi-Limoncocha, Sucumbíos	-2.6578	-76.65095	260
Volcán Imbabura, Imbabura	0.28028	-78.1275	4200
Yaguarcocha, Imbabura*	0.37147	-78.10146	2190





В

Figure 6: Records of two previously unreported species in Ecuador postponed (a) and rejected (b) by CERO due to presumed unnatural causes of arrival. (a) *Spheniscus magellanicus*, La Chocolatera, Santa Elena province (anonymous); (b) *Aix galericulata*, Ecuasal Pacoa, Santa Elena province (A. Ágreda).