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Magellanic, a forgotten plover at the end of the map

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Magellanic Plover Pluvianellus socialis*, a charismatic, evolutionarily unique and ecologically surprising shorebird of southern South America, is currently considered Near Threatened at a global level. But recent surveys spanning Argentina and Chile suggest that it may be in severe trouble.*

All photos depict Magellanic Plover *Pluvianellus socialis* (Near Threatened), unless otherwise specified.

1 Adult, Laguna Los Palos, Magallanes, Chile, February 2020 (Ricardo Matus). This species is one of a trio of sought-after breeding birds of southern Patagonia.

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When perusing books preparing a birding trip to southern Patagonia, one's eyes are quickly drawn to three of the most sought-after birds of the region (indeed, arguably of the Neotropics): the 'Austral Grail' (aka Austral Rail *Rallus antarcticus*; Vulnerable), believed extinct barely 25 years ago but rediscovered thanks to a NBC conservation award (Mazar Barnett *et al.* 1998, 2014); the Critically Endangered and very handsome 'Holy Grebe' (Hooded Grebe *Podiceps gallardoi*), which has featured several times in this magazine (Imberti & Casañas 2010; Roesler *et al.* 2011, 2018); and Magellanic 'Magic' Plover *Pluvianellus socialis*, an intriguing, Near Threatened and perpetually poorly known shorebird. This article focuses on the last member of the trio.

First studied in some detail in the 1970s (Jehl 1975), Magellanic Plover partially shares its habitat with the Hooded Grebe – and so too a superficially similar history in that it has been considered to be 'safe', conservation-wise, due to the remoteness and mostly pristine condition of the areas it inhabits. But as with the bird itself, we now know that there is more to its conservation than meets the eye.

A shorebird engima

A very singular bird, Magellanic Plover looks more like a dove than a plover. Evolutionarily unique, it is the sole species of its family and is only very distantly related to true plovers. Indeed, it is more closely related to the (also very strange) sheathbills *Chionis* spp. A particularly strange characteristic of the species' ecology also sets it apart from other plovers: adults eagerly dig the ground searching for food items and later feed young by regurgitating food from their crop.

For decades, most of the work on shorebirds in Patagonia (indeed, in southern South America) was focused on Nearctic migrants, with little interest or funding dedicated to the region's several endemic breeding species. This problematic situation has been flagged up a few times by researchers in recent years, and some gaps have been filled subsequently. Nevertheless, for many species, the level of basic knowledge remains inadequate.

Mythical species such as Fuegian Snipe *Gallinago stricklandii* (Near Threatened; once treated to a Photospot in this magazine: Schmitt 2017), the larger seedsnipes (*Attagis* spp.) or even some more common, even relatively abundant,

species still 'hide' most of their natural history from us. For Magellanic Plover, a few dedicated studies in the last two decades have revealed some interesting facts about the species and its adaptations, including evidence that a couple can breed up to three times (maybe even four!) per season (Lishman 2008, Lishman & Nol 2012). Researchers have also pinpointed the areas where most of the population seems to gather in just a few flocks to spend the winter (Ferrari *et al.* 2003, 2008). Another interesting study, carried out by the Centro de Rehabilitación de Aves Leñadura (CRAL) in Chile, focused on ringing (banding) and following individuals through their breeding season. Subsequent observations of banded birds have provided us with most of the scant data available on the species' longevity, with individuals being at least five, six and seven years old when last observed (RM unpublished data).

However, basic data such as an accurate population estimate, which currently ranges from 1,500 to 7,000 mature individuals according to BirdLife International (2022), have remained a guesstimate at best – an educated one for sure, but something that has always bothered and intrigued us since we started looking and showing the species to birders in the early 1990s. If there are

2 Adult, Laguna Los Palos, Magallanes, Chile, February 2020 (Ricardo Matus). Magellanic Plover is restricted to fairly shallow brackish lagoons which tend to be fragile due to changes in precipitation between years (a factor that has become crucial during recent very dry decades).

3 Adult near its chick, Laguna Los Palos, Magallanes, Chile, November 2020 (Ricardo Matus).

4 Sub-adult, Río Gallegos Estuary, Santa Cruz, Argentina, May 2016 (Santiago Imberti). In winter, plovers congregate at Atlantic estuaries where they actively search for food, usually on the upper shore near the waterline and mostly away from other shorebirds.

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5–6 Despite its unusual behaviour and anomalous general appearance, Magellanic Plover does actually look rather plover-like in flight. The striking wing pattern quickly distinguishes the species from other plovers in the same habitat. **5** Adult, Parque Nacional Monte León, Santa Cruz, Argentina, October 2004 (Santiago Imberti). **6** Adults, Laguna Los Palos, Magallanes, Chile, September 2022 (Santiago Imberti).

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7 Surveyor at Laguna Los Palos, Magallanes, Chile, May 2022 (Ricardo Matus). BirdLife International estimates that the Magellanic Plover global population to be 1,500–7,000 mature individuals. In 2021/22, Asociación Ambiente Sur and Centro de Rehabilitación de Aves Leñadura co-ordinated surveys of 180 sites during the breeding season and 65 sites during the non-breeding season. They found just 264 individuals in the former survey and 300 in the latter.

indeed 'so many', *where* are they? We really wondered!

Revealing the 'Magic' Plover's secrets: the plan

For years we sought a way of obtaining a more realistic population number for the 'Magic Plover', based on actual fieldwork rather than on a hunch or impression, dreaming how a major concerted effort could perhaps shed some light about the status of the species. Who would believe that during the COVID-19 pandemic this plan would finally blossom and find enough funding for its execution? Perhaps bored by inactivity and in dire need of a meaningful project, our long winter conversations escalated. In 2021, we received keen interest and support from Manomet (a NGO dedicated to the conservation and study of shorebirds across the Americas, notably through the Western Hemisphere Shorebird Research Network), which turned the concept into a full-scale census to be conducted during the breeding season later that year.

The joint effort of two long standing NGOs – Asociación Ambiente Sur (Argentina) and CRAL (Chile) – became the first binational attempt to survey the entire population of the plover. Involving both countries in which Magellanic Plover breeds was critical for comprehensiveness. Like any big plan, the idea was simple: choose a time of the year in which the plovers are actively breeding (and thus strongly bound to their chosen locations so less likely to switch lakes), then go there and count them.

Considering the very extensive area to be covered, however, this was easier said than done! With almost three decades of experience with the species, we knew where to find them but would we be able to cover all the necessary territory in reasonable time, surveying all the sites where the species is or could be present? We needed help, and a lot of it.

Delivering the plan

In December 2021, 20 researchers simultaneously took to the field, divided into 9 teams and travelling 8,200 km to survey 180 sites in southern Argentina and Chile. The results defied belief:

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an appalling total of only 264 individuals, mostly adults as anticipated for this time of year. This was lower than our most pessimistic expectations. Even if we failed to find even half the birds, it was clear that the numbers should be considered critical as they would be well below BirdLife's lower-end population estimate.

Magellanic Plover is never very abundant at any single location, even 'where they are common.' Even big lakes that support hundreds of individuals of other shorebird species may, at best, hold only a handful of Magellanic Plover pairs. Huge concentrations of the species are unlikely, and given that we believe we have surveyed nearly 80% of the suitable locations in the known breeding range, the reality might actually be that there are not very many more plovers than we found. This would be very worrying indeed.

The second part of our plan thus became inescapable: it was promptly confirmed and quickly organized. Another census would be conducted, this time during the subsequent non-breeding season. Mid-May 2022 was the time we settled on. For most shorebird species, the non-breeding period is a time of greater detectability, as flocks are formed for the winter, making them theoretically easily located and typically more straightforward to count. That is, in our case, if you can get to the locations where they are when winter is unfurling in Patagonia.

Part of the work accomplished during the previous two decades had indicated Magellanic Plover's main wintering locations, namely a few 'stopover' lakes at which they gather before eventually moving to the vast bays and estuaries of the Atlantic coast. The latter, massive and somehow boundless territories, affected by enormous tides and offering a generally hostile climate, had to be surveyed swiftly and effectively in the rapidly shortening days of autumn (fall).

In the non-breeding season, a few plovers also spread north along the Atlantic coast, regularly reaching Buenos Aires province, so we enlisted the help of volunteers to cover as many suitable places as possible along a 2,000-km-long stretch of coast. Only three plovers were found in this area (incidentally including the first record for Uruguay: see, e.g., eBird checklist S109264043), indicating that at this time of the year most plovers are still in the southern estuaries and lakes, as we expected.

In the main area, our team of 18 researchers were this time divided into eight groups that drove 2,000 km to visit 65 localities in only four days. The results were again shocking: a total of just 300 individuals. This total was very similar to

Surveys and conservation action at Magellanic Plover breeding sites included: **8** locating nesting adults (Laguna Los Palos, Magallanes, Chile, November 2020; Ricardo Matus); **9** checking clutch size (Laguna Los Palos, Magallanes, Chile, October 2017; Ricardo Matus); **10** setting a cage trap to catch adults on the nest to ring (band) and colour-flag them, and deploy geolocators (Laguna Los Palos, Magallanes, Chile, September 2016; Santiago Imberti); **11** counting chicks (Tierra del Fuego, Chile, December 2014; Ricardo Matus); **12** Carmen Lishman and Rita López ringing (banding) chicks at Estancia Los Pozos, Santa Cruz, Argentina, December 2008 (Santiago Imberti); and **13** fitting adults with coloured bands (rings) and flags, to enable individuals to be tracked in the field (Laguna Los Palos, Magallanes, Chile, September 2016; Santiago Imberti).

14 Juvenile, Laguna Las Coloradas, Strobel Plateau, Santa Cruz, Argentina, November 2010 (Santiago Imberti). Recently fledged juveniles remain dependent on their parents for some meals.

15 Juvenile, Laguna Los Palos, Magallanes, Chile, February 2020 (Ricardo Matus). Pairs can breed up to three times (maybe even four) per season. Juveniles from early broods often remain with the wider family group. Juveniles moult into adult plumage before the start of the following breeding season.

the one obtained during the breeding season – all the more so if we consider that 55 of these 300 plovers were juveniles, all born since the first census. This provided another strong hint that our results might not be too far from the actual number of plovers in existence.

Across the breeding and non-breeding censuses, our teams visited roughly 250 sites. We have been visiting a good number of these frequently for close to 30 years. Even taking into account normal fluctuations in plover numbers, years of drought when lakes completely disappear and other likely factors, the numbers of plovers at these sites seem to us to be quite stable during this period. They are present where they are supposed to be – but are they disappearing, slowly vanishing without anyone noticing? Are Magellanic Plover numbers too low to have a sustainable population? Maybe not: perhaps there are simply not as many individuals as we have always thought, and the population has been forever overestimated? In our opinion, there are too many fundamental, important unknowns for such a special bird.

Why this matters

At any rate, we need to know more. To the raft of known threats – of desiccating lakes (whether naturally or due to water extraction and climate change); overgrazing; shoreline degradation; nest destruction through trampling by people, cattle or sheep – a new force is building.

The future of the landscapes where plovers live is being threatened by plans to install hundreds of wind turbines to produce 'green' hydrogen that supposedly will be exported to Europe and beyond. With neither territorial planning nor risk maps for migratory birds available in this part of the world, and little understanding of the migratory details (route, timing, altitudes etc.) of Magellanic Plover and many other Patagonian birds, migrating plovers could be affected by wind turbines during their north or southward movements. Tracking the plovers during the non-breeding season and repeating our counts are now urgent goals if we are to determine how best to ensure a safe, ongoing existence. And continuous monitoring of plover numbers is of course also fundamental for a species which evidently has a very small total global population that, at times, is concentrated in barely a handful of locations.

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16–17 Road to Río Verde, Magallanes, Chile, June 2021 (Santiago Imberti). Like many shorebirds, this species flocks together in winter. Such seasonal concentrations inherently increase the species' vulnerability.

Our recent results, combined with the threats and conditions with which the plover is currently dealing, and may face in the near future, strongly suggest that an urgent review of the IUCN status of the species is justified. The current categorisation as 'Near Threatened' is based fundamentally on numbers that our surveys suggest are a very optimistic overestimate. Magellanic Plover is likely to meet qualifying thresholds for one of the formal globally threatened categories.

If this story from southern Patagonia sounds familiar, that is because it is. Hooded Grebe was long considered Near Threatened, but was catapulted to Endangered in 2009, then Critically Endangered three years later. Reviewing the global status of Magellanic Plover is essential – and hopefully it will draw more attention to this beautiful but somehow forgotten and singular shorebird.

REFERENCES

BirdLife International (2022) Species factsheet: *Pluvianellus socialis*. Accessed from www.birdlife.org on 31 May 2022.

Ferrari, S., Imberti, S. & Albrieu, C. (2003) Magellanic Plovers *Pluvianellus socialis* in southern Santa Cruz Province, Argentina. *Wader Study Group Bull.* 101/102: 70–76.

18 Flock in proximity to a wind turbine, road to Río Verde, Magallanes, Chile, May 2022 (Ricardo Matus). Key threats to Magellanic Plovers have been known for some time now but a new threat looms on the horizon. Multiple plans for major developments of wind-turbine farms for energy production are set to change the Patagonian landscape on a scale seen previously only for oil production and farming. The impacts on birdlife are unknown; proper studies are lacking.

Ferrari, S., Albrieu, C., Imberti, S. & Lishman, C. (2008) Estado actual del conocimiento de un chorlo endémico de la Patagonia Austral, el Chorlito Ceniciento (*Pluvianellus socialis*) reuniendo las piezas de un rompecabezas. *Ornitol. Neotrop.* 19: 433–443.

Imberti, S. & Casañas, H. (2010) Hooded Grebe *Podiceps gallardoi*: extinct by its 50th birthday? *Neotrop. Birding* 6: 66–71.

Jehl, J. R. (1975) *Pluvianellus socialis* : biology, ecology and relationships of an enigmatic Patagonian shorebird. *Trans. San Diego Soc. Nat. Hist.* 18: 31–72.

Lishman, C. L. (2008) Breeding biology and habitat selection of the Magellanic Plover *Pluvianellus socialis*. Unpublished MSc thesis for Trent University, Ontario, Canada.

Lishman, C.L. & Nol, E. (2012) Ecology and habitat selection of the Magellanic Plover (*Pluvianellus socialis*): a little-known Patagonia shorebird. *Wilson J. Ornithol.* 124: 487–496.

Mazar Barnett, J., della Seta, M., Imberti, S. & Pugnali, G. (1998) Notes on the rediscovery of the Austral Rail *Rallus antarcticus* in Santa Cruz, Argentina. *Cotinga* 10: 96–101.

Mazar Barnett, J., Imberti, S. & Roesler, I. (2014) Distribution and habitat use of the Austral Rail *Rallus antarcticus* and perspectives on its conservation. *Bird Conserv. Internat.* 24: 114–125.

Roesler, I., Casañas, H. & Imberti, S. (2011) Final countdown for the Hooded Grebe? *Neotrop. Birding* 9: 3–7.

Roesler, I., Fasola, L. & Buchanan, P. (2018) Sympathy for the grebes: Hooded Grebe conservation programme update (2011–17). *Neotrop. Birding* 23: 14–23.

Schmitt, F. (2017) Fuegian Snipe on Cape Horn! *Neotrop. Birding* 20: 71–76.

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