

Coastal records of the Sparkling Violetear Hummingbird (*Colibri coruscans*)

[Registros costeros del Colibrí Oreja-Violeta de Vientre Azul (*Colibri coruscans*)]

C. Steven Sevillano-Ríos¹ & Oscar E. Morales²

¹Territorio y Desarrollo SAC – TEYDE, Calle Cantuarias # 160, Oficina 1101, Miraflores, Lima.

²Observador de aves independiente.

Autor para correspondencia: C. Steven Sevillano-Ríos <css279@cornell.edu>

ABSTRACT

The Sparkling Violetear (*Colibri coruscans*) is a conspicuous and common hummingbird of the Andes. In this article we document the presence of this species in the city of Lima, Peru. In conjunction with additional records deposited in eBird, we discuss the seasonal distribution of this species along the Pacific coastline. We conclude that the Sparkling Violetear, although mainly an Andean species, occasionally uses the Pacific coastal areas located below 400 m of elevation, especially during their non-breeding cycle (October - November). Human-created green spaces could be facilitating their incursions along the coast.

KEY WORDS: cities, citizen science, hummingbirds, lower altitudinal limits, parks, Lima.

RESUMEN

El Colibrí Oreja-Violeta de Vientre Azul (*Colibri coruscans*) es un colibrí bastante conspicuo y común de zonas andinas. En este artículo documentamos la presencia de esta especie en la ciudad de Lima, Perú.

En conjunto con registros adicionales depositados en eBird, discutimos la distribución estacional de esta especie a lo largo del litoral costero del Pacífico. Concluimos, que el Colibrí Oreja-Violeta de Vientre Azul, si bien es una especie principalmente andina, ocasionalmente usa las áreas costeras ubicadas por debajo de los 400 m de altitud, especialmente durante la época no reproductiva (octubre - noviembre). Las áreas verdes creadas por el ser humano podrían estar facilitando sus incursiones a lo largo de la costa.

PALABRAS CLAVE: ciudades, ciencia ciudadana, colibríes, límites altitudinales inferiores, parques, Lima.

INTRODUCTION

The Sparkling Violetear (*Colibri coruscans*) is a very conspicuous and common hummingbird of the Andes of Venezuela, Colombia, Ecuador, Peru, Bolivia, Chile and Argentina (Fjeldså & Krabbe, 1990, Schulenberg *et al.* 2010). Primarily associated with agricultural fields, secondary forest with scattered shrublands and human-modified areas with planted

Eucalyptus, this species has been reported as a resident hummingbird occurring between 400 to 4500 m along the Andes (Schulenberg *et al.* 2010, Gonzáles & Castañeda 2020). It is especially abundant over 2500 m although its numbers could seasonally change close to their upper limit in response to climatic and phenological conditions of different plant communities located in, for example, *Eucalyptus* or *Polylepis* forest (Sevillano-Ríos 2016).

The lower elevational limit was defined based on a 1977 observation by Schulenberg & Parker (1981), where several individuals were seen in riverbank vegetation Granada, Lambayeque (5°45'S/79°39'W, 525 m). Together with other observations by Koepcke (1970), these sightings were interpreted as evidence of a possible seasonal altitudinal migration to ~ 400 m. Here we present a documented observation of the Sparkling

Violetear in the city of Lima, at 106 m, and discuss how, combined with recent eBird records, these observations suggest that the Sparkling Violetear could be a seasonal visitor to the Pacific coast, facilitated by the creation of urban green spaces.

RECORDS

Garcilaso de la Vega Park - Miraflores, Lima (12° 7'10.85"S / 77° 0'47.84"W, 106 m): On January 2, 2021, three Sparkling Violetears were observed and photographed (Fig. 1) in Garcilaso de la Vega municipal park (0.8 ha) in the district of Miraflores (Fig. 2) during a two-hour birding walk. First, the short, metallic-sounding calls of an individual perched in a flowering Tipa tree (*Tipuana tipu*) called our attention. They were monosyllabic chirps as described by Schulenberg *et al.* (2010), but no aerial



Figure 1. Two of the three Sparkling Violetears (*Colibri coruscans*) observed in Miraflores, Lima (106 m) were photographed during a birding walk.



Figure 2. Location of the observation of the three individuals of Sparkling Violetear (*Colibri coruscans*) in the city of Lima (a) district of Miraflores; (b) park Garcilaso de la Vega; (c) Hummingbirds were perched in a Tipa tree (*Tipuana tipu*) (d).

displays were observed. Later, the bird moved, and we had a good view of it and a second individual which was also photographed (Fig. 1). Both perched on the outer side of the same Tipa tree at a height of ~ 12 m while vocalizing. After 10 min of observation, a third individual appeared (not photographed) and all of them flew out of the park, chasing each other.

eBird records

We downloaded 76,190 records of Sparkling Violetear presence from eBird (eBird 2021), obtaining: record date, latitude, longitude, and locality, including country. Elevation data for each point was obtained from a 1-km resolution land surface digital

elevation model (DEM) derived from United States Geological Survey (USGS) 30 arc-second SRTM30. We checked for low elevation records (<400 m) and any evidence of seasonal occurrences. We used QGIS -v3.0-Girona (QGIS Development Team 2020) to create the maps and histograms of records along elevation.

DISCUSSION

Our observation of three Sparkling Violetear individuals in Miraflores show that in Lima this species occurs under the 400 m of elevational limit proposed by Schulenberg *et al.* (2010). While this is the first reported record for the city of Lima, it is not unique

along the Pacific coast of South America, as a total of 61 other low elevation records grouped in 29 sites were obtained from eBird records along the coasts of Colombia (n= 4 records/3 sites), Ecuador (13/4), Peru (43/21) and Chile (1/1) (Fig. 3a). Although they represent a small percentage of the total (0.06%, Fig. 3b), most of these low-elevation, coastal records occurred between September and November (Fig. 3c), corresponding to the non-breeding season of the species (González & Castañeda 2020), although they have been recorded throughout the entire year.

This suggests that some Sparkling Violetear individuals migrate down to elevations as

low as 100 m on the Western Andean flanks during the non-breeding season, similar to the seasonal altitudinal migration observed on the eastern Andean-Amazon slopes by a recent eBird analysis (Fink *et al.* 2020). Thus, it appears that seasonal altitudinal migration is not limited to the highly productive eastern slopes of the Andes and some individual may go to suitable areas along the xeric Pacific coast. Of course, given the lower productivity of these regions, we expect low numbers that may only increase seasonally in response to local habitat conditions (Züchner *et al.* 2020). For example, possible suitable areas may include highly productive river valleys with streamside vegetation.

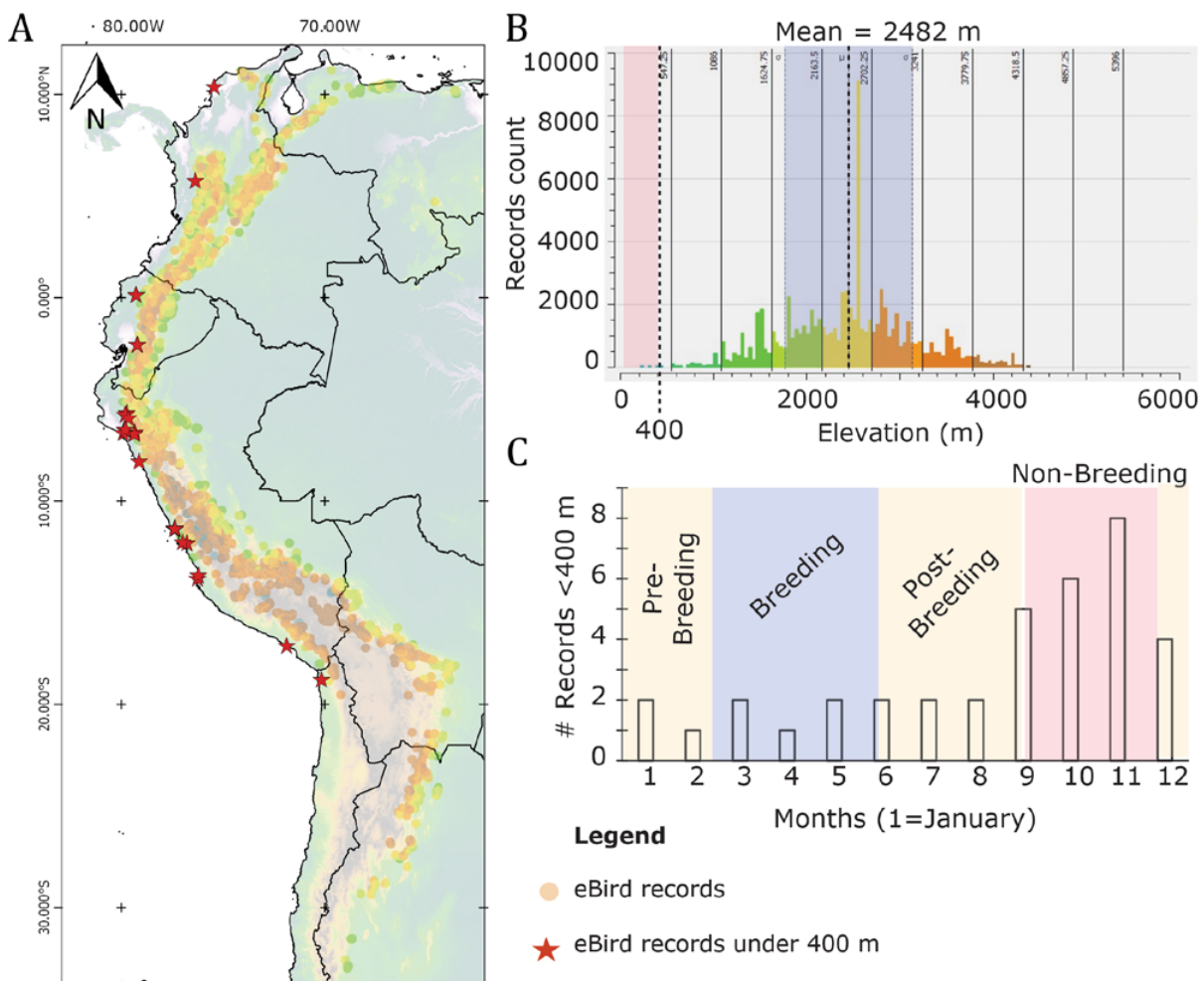


Figure 3. eBird records of Sparkling Violetear (*Colibri coruscans*), including the 43 low elevation records. (a) Frequency of eBird records along the elevation; (b) Colours correspond to the points plotted in the map (a), with the mean= dotted line, 1 SD = blue-grey area, records under 400 m = pink area. (c) Low elevation records within breeding seasons timeline.

However, parks in coastal cities may provide these suitable conditions throughout the year, especially if they are maintained and managed with irrigation. In the Garcilaso de la Vega park, as in many other parks of Lima, the vegetation structure consists of a mosaic of ornamental bushes and a wide variety of native and exotic trees that provide multiple resources to many birds. However, as water is a limited resource in the xeric Pacific coast and parks need a constant investment for greenspace management, it is unclear if these actions are financially and environmentally sustainable in time. For the moment, however, it appears that parks and other green spaces with tall vegetation (e.g., large trees) could be facilitating visits or even colonization events of the Sparkling Violetear hummingbird along the Pacific coast of South America.

ACKNOWLEDGMENTS

We thank Fernando Angulo and Laura Morales for their comments and recommendations that helped to improve our initial manuscript.

LITERATURE CITED

eBird (2021) eBird: Una base de datos en línea para la abundancia y distribución de las aves [aplicación de internet]. eBird, Ithaca, New York. Disponible: <https://ebird.org/> (Accedido el 05/01/2021).

Fink, D., T. Auer, A. Johnston, M. Strimas-Mackey, O. Robinson, S. Ligocki, W. Hochachka, C. Wood, I. Davies, M. Iliff, & L. Seitz (2020). eBird Status and Trends, Data Version: 2019; Released: 2020. Cornell Lab of Ornithology, Ithaca, New York. <https://doi.org/10.2173/ebirdst.2019> Available: [https://ebird.org/science/status-and-](https://ebird.org/science/status-and-trends/spvear1/range-map)

[trends/spvear1/range-map](https://ebird.org/science/status-and-trends/spvear1/range-map) (Accessed on 07/06/2021).

Fjeldså, J., & N. Krabbe (1990). Birds of the high Andes: A manual to the birds of the temperate zone of the Andes and Patagonia, South America. Zoological Museum, University of Copenhagen and Apollo Books, Svendborg, Denmark, pp. 1-876.

González, P. & E. Castañeda (2020). Aspectos sobre la biología reproductiva del colibrí Oreja-Violeta de Vientre Azul (*Colibri coruscans*) en el departamento de Lima, con notas sobre su dieta. Boletín de la Unión de Ornitólogos del Perú (UNOP), 15 (2): 30-39.

Koepcke, M. (1970). The birds of the Department of Lima, Peru. Livingston Publishing Company, Wynnewood, Pennsylvania, pp. 1-144.

QGIS Development Team. (2020). QGIS geographic information system. Open-source geospatial foundation project. Open Source Geospatial Foundation Project. <http://qgis.osgeo.org>

Schulenberg, T. S., & T. A. Parker III (1981). Status and distribution of some northwest Peruvian birds. Condor, 83: 209-216.

Schulenberg, T. S., Stotz, D. F., Lane, D. F., O'Neill, J. P. & T. A. Parker III (2010). Birds of Peru: Revised and updated edition. Princeton University Press, Princeton, New Jersey, pp. 1-664.

Sevillano-Ríos, C. S. (2016). Diversity, ecology, and conservation of bird communities of Polylepis woodlands in the northern Andes of Peru. Master of Science Thesis, Cornell University, Ithaca, New York, pp. i-viii, 1-149.

Sevillano-Ríos, S. S., Lloyd, H., & A. Valdés-Velásquez (2011). Bird species richness, diversity and abundance in Polylepis woodlands, Huascarán Biosphere Reserve, Peru. *Studies on Neotropical Fauna and Environment*, 46: 69-76.

Züchner, T., P. F. D. Boesman, & G. M. Kirwan (2020). Sparkling Violetear (*Colibri coruscans*), version 1.0. In *Birds of the World* (J. del Hoyo, A. Elliott, J. Sargatal, D. A. Christie, and E. de Juana, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA.]. Available: <https://birdsoftheworld.org/bow/species/spvear1/1.0/introduction?login> (Accessed on 07/06/2021)

Artículo recibido: 22/01/2021

Artículo aceptado: 09/06/2021

Artículo publicado: 14/06/2021