First description of the nest and eggs of the Paramo Pipit (*Anthus bogotensis*)

[Primera descripción del nido y de los huevos de la Cachirla del páramo (*Anthus bogotensis*)]

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ABSTRACT

We describe for the first time the nest of the Paramo Pipit (*Anthus bogotensis*), from Runtacocha in Apurímac Department, central Peru and compare it to the known nests of other Neotropical pipits. We found the nest, which was concealed below dense ichu grass, on 17 November 2004 in a puna grassland at approximately 4250 m elevation. The nest consisted of a shallow dome of dried saltgrass stems, and contained two bluish gray eggs speckled rusty brown and bluish-gray, with denser speckling on the larger side of the egg.

Key words: Peru, grasslands, Andes, paramo, reproduction.

RESUMEN

Describimos por primera vez el nido de la Cachirla del Páramo (*Anthus bogotensis*), en Runtacocha en el Departamento de Apurímac, centro de Perú, y lo comparamos con los nidos de otras especies neotropicales de cachirlas. Encontramos el nido escondido debajo de una cobertura densa de la gramínea *Stipa ichu*, el 17 de noviembre del 2004 en la puna a aproximadamente 4250 m de altura. El nido consistía en una copa flojamente abovedada de tallos secos de *Stipa* y contenía dos huevos grises azulado con manchas café rojizo y gris azulado y con manchado más intenso en el polo mayor del huevo.

Palabras clave: Peru, pastizal, Andes, páramo, reproducción.

INTRODUCTION

The life history and reproductive ecology of several Neotropical pipit (*Anthus*) species is poorly known. Only recently, the nest of Peruvian Pipit (*A. peruvianus*) was described (Arcco Mamani *et al.* 2020) and the nesting ecology of Ochre-breasted Pipit (*A. nattereri*) was uncovered (Lombardi *et al.* 2010). The Paramo Pipit (*A. bogotensis*) is a rather inconspicuous but widespread element of the Andean avifauna and its nesting ecology is completely unknown. Here, we describe for the first time the nest and eggs of Paramo Pipit.

METHODS & RESULTS

DJL found a nest of the Paramo Pipit (Fig. 1) by flushing a parent bird at close range while bird watching in a *Polylepis* patch at Runtacocha, Department of Apurímac, central Peru (13°40'39.2"S /

72°47'42.1"W, 2450 m), on 17 November 2004. The nest was located on the ground below the cover of dense ichu grass (*Stipa ichu*). The area directly surrounding the nest was characterized as wide expanses of puna grassland interrupted by with small patches of *Polylepis forest*.

The nest was built directly on the ground, and consisted of a shallow cup ~ 110 mm in outside diameter, 65 mm inside diameter, 55 mm deep, made apparently exclusively of grass stems, presumably mostly of the surrounding ichu grass. The nest was covered on all sides by live ichu grass stems.

The nest contained two bluish gray eggs (Fig. 2, see also eBird checklist \$14591833), speckled rusty brown and dark bluish-gray. The speckling was denser in both cases on the larger pole of the egg. Eggs were approximately 18 mm in length.



Figure 1. Nest of Paramo Pipit (*Anthus bogotensis*) on ground in dense ichu grass. D. Lebbin.

Figure 2. Egg of Paramo Pipit (*Anthus bogotensis*) with 5 mm grid behind. D. Lebbin.

DISCUSSION

Neotropical **Pipits** (Anthus) form monophyletic group (Van Els Norambuena 2018) and the construction of nests placed on the ground in grassy habitats is a general pattern in this group (e.g. Andors & Vuillemier 1995, Freitas & Francisco 2012, Lombardi et al. 2010, Murphy 1923, Norambuena et al. 2017, Ramo & Busto 1984). Furthermore, several authors (Freitas & Francisco 2012, Ramo & Busto 1984) mention cup nests with parent birds entering not directly to the nest but instead walking laterally from some distance below dense cover to the nest.

The pattern of egg markings concentrated on the large end is widespread among the pipit species, but egg background color can vary from white or whitish in the Yellowish Pipit (A. chii) (Freitas & Francisco 2012, Ramo & Busto 1984), Correndera Pipit (A. correndera) (Andors & Vuillemier 1995) and Peruvian Pipit (Arcco Mamani et al. 2020), to uniformly brown in Hellmayr's Pipit (A. hellmayri) (Lombardi et al. 2010). In the Sprague's Pipit (A. spragueii) intraspecific variations are also described, with background color varying from white to brown, with or without markings.

Clutch size in Neotropical pipits varies, between 2—5 eggs, e.g. 2 for a single Hellmayr's Pipit nest (Lombardi *et al.* 2010), 3.05±0.4 for Yellowish Pipit (Freitas & Francisco 2012), and 2–5 for Correndera Pipit (Andors & Vuillemier 1995). Our observation of 2 eggs fits within this range.

Recordings of territorial Paramo Pipits (as noted by song from xeno-canto.org and Macaulay Library) exist from February and August from NW Argentina, October from Venezuela, October-February and May-June in Ecuador, May-September from N Peru, March-May and August-October from C Peru, and November-December

from S Peru and Bolivia. These dates do not show a clear pattern of correlation with seasonal rainfall or other seasonal climatic factors and the species may breed year-round or have complex local patterns of phenology, in response to localized rainfall conditions. Here we provide the first data for the understanding of the reproductive biology of the Paramo Pipit, which will be useful for future evaluations of the conservation status of this species.

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ARTÍCULO

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