



First record of Dot-winged Crane, *Porzana spiloptera*, Durnford, 1877 (Rallidae) for the central Andes in Argentina

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Abstract

Porzana spiloptera, the Dot-wing Crane, has a patchy distribution in southern South America and has previously been considered as inhabiting exclusively lowland wetlands. Here we present evidence of a new population inhabiting a high-elevation site in the Central Andes of Argentina. This record suggests not only a broader distribution but greater tolerance of the species to higher elevation and lower temperatures than has previously been assumed.

Key words

Rare rail; range extension; Andes; Argentina; wetland.

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Introduction

The Rallidae (Order Gruiformes) comprises 133 cosmopolitan extant species of which 33 (25%) are listed as globally threatened (Taylor 1996, Taylor and van Perlo 1998). Since 1600, 16 species have faced extinction while several rails seem to be undergoing continuous population decline (Taylor 1996). To evaluate the status and vulnerability of several rallids, information on distribution and identification of new populations is urgently needed. This will allow for a better evaluation of the status of species that are particularly vulnerable to extinction due to small geographic ranges, small local populations and specialized habitat requirements (Fitzpatrick 2004).

The genus *Porzana* includes 13 living species (Taylor 1996) and 5 recently extinct (IUCN 2013). *Porzana spiloptera* Durnford, 1877, the Dot-winged Crane, is a

rare rail, which, due to scarce records and a fragmented suitable environment, is considered vulnerable and undergoing a continuing population decline (IUCN 2013). The spatial distribution of the species is patchy, with records in Argentina (Giacomelli 1923, Navas 1991, Chebez 2008, Chatellenaz and Zaninovich 2009, Birdlife International 2010, Luna and Manassero 2010, Pagano et al. 2011, López-Lanus et al. 2012, Lucero 2013), Uruguay (Azpiroz 2001) and Brazil (Bencke et al. 2003) (Fig. 1). Most of these records refer to one or two individuals, being observed from sea level to about 865 m.

Porzana spiloptera inhabits brackish and fresh water marshes and inundated grasslands, while absent from disturbed areas (Martínez et al. 1997, Isacch and Cardoni 2011). Since wetlands are considered threatened and are diminishing in extent across southern South America

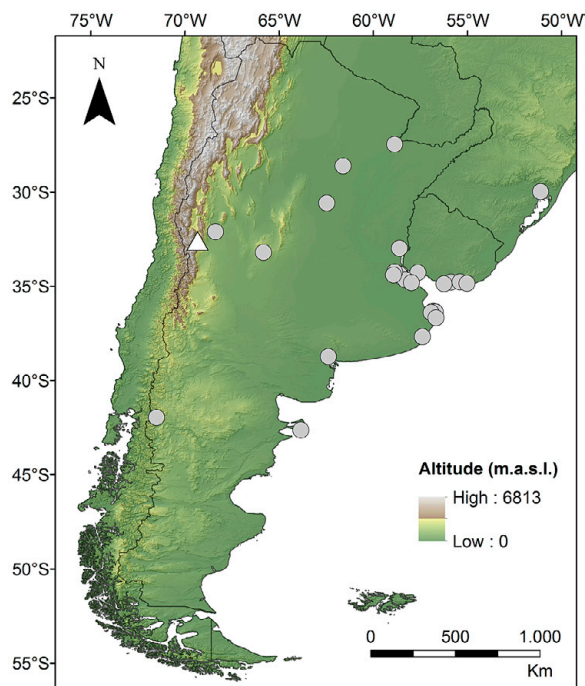


Figure 1. Geographic distribution of *Porzana spiloptera*. White triangle denotes present record. Light grey circles denote previous records from the literature.

(Junk 1993, Krapovickas and Di Giacomo 1998), reports on distribution and habit requirements are needed to evaluate the species' vulnerability. Here, we report a new population and the highest record for *P. spiloptera* in the Uspallata Valley, Argentina.

Methods

During January and February 2013, we localized and monitored a small population of *P. spiloptera* in an inundated grassland 70 m from the Uspallata Stream (32.582° S, 069.341° W, Fig. 1) at an elevation of 1903 m. The area was approximately 9200 m², dominated by grasses of the genus *Scirpus*, located 1.5 km from the Uspallata Village. During January and February the grasses were approximately 80 cm high and the ground was under 20 cm of freshwater. The grassland was isolated from the surrounding pastures by a wire fence which prevented the cattle from trampling and grazing the vegetation.

The Uspallata Valley has components of three biogeographic regions: High Andes, Monte, and Patagonia (Burkart et al. 1999). The annual precipitation in the area is 136.3 mm (53% during summer), and the annual mean temperature is 12.4 °C. (Martínez Carretero 2000). The valley is the only cultivated sector in the area, irrigated by channels derived from the San Alberto and Uspallata streams, which have associated swampy vegetation (Martínez Carretero 2000). During the study period we intensively searched for *P. spiloptera* along Uspallata Stream but failed to locate other populations.

We visited the inundated grassland every 7 or 8 days to confirm the presence of *P. spiloptera* by direct observation or by listening to vocalizations. We used playback

to evaluate the presence of a minimal number of individuals. We walked across the area broadcasting calls of *Laterallus jamaicensis* (Black Rail) or *P. spiloptera* and counted the number of individuals answering simultaneously from different territories.

Porzana spiloptera were highly territorial, responding to playback of both broadcasted species but staying within their territories. In every visit we localized between 2 to 5 birds. On January 13, we recorded vocalizations of one individual between 1930 and 2030 hrs CST. For recording, we used a Marantz PMD-661 portable recorder with a Sennheiser ME-66 shotgun microphone capsule and K6 power module. We digitalized the calls and songs (Fig. 2) using Praat 5.3.41 (<http://www.fon.hum.uva.nl/praat/>). Sounds were deposited in the Colección Ornitológica of the Instituto Argentino de Investigaciones de las Zonas Áridas (IADIZA_COI_006948).

Results

On February 14, we photographed an individual of *P. spiloptera* (Fig. 3) for documentation of diagnostic characters. The crakes observed in Uspallata did not have white dots in the upper tail covers and rump, and the dorsal neck and nape had black stripes; both of these characters are diagnostic and distinguish *P. spiloptera* from the sympatric *L. jamaicensis* (Canevari et al. 1991, Taylor 1996, Taylor and van Perlo 1998).

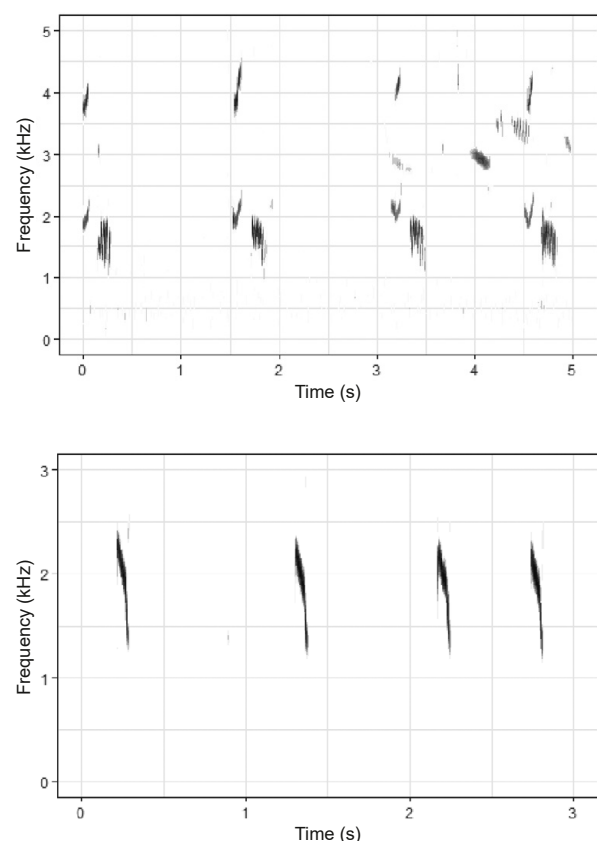


Figure 2. Vocalizations of *Porzana spiloptera* on Uspallata (upper: song; lower: calls).



Figure 3. *Porzana spiloptera* in Uspallata.

Discussion

The population of *P. spiloptera* reported here is the first for the Andes and the highest population recorded (Fig. 1). This population is 100 km from the nearest known report and 1000 m higher. *Porzana spiloptera* has been considered a lowland species (Taylor and van Perlo 1998) but, as this report suggests, the species distribution may be less constrained by altitude, annual mean temperature, and precipitation than previously thought. Despite the broad distribution of *P. spiloptera*, there are few records from the midwest of Argentina (Fig. 1). This is probably due to the small amount of bird watchers in the region, the cryptic behavior of the species, or the morphologic and acoustic resemblances to *L. jamaicensis*, with which it is usually confused (Navas 1991, Chebez 2009, López-Lanús et al. 2012). Still, due to the distribution of wetlands in Argentina, the distribution of *P. spiloptera* is likely patchy. Further research on habit requirements and distribution are urgently needed for proper evaluation of the species' status and to develop conservation actions.

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Authors' Contributions

AZ, PFC and PEL collected the data, wrote the text, and obtained information from literature.

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