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BAILLON'S CRAKE *Zapornia pusilla* Pallas, 1776 (AVES: GRUIFORMES: RALLIDAE), A NEW BIRD SPECIES FOR SERBIA

Jozef Dozsai[1], Otto Szekeres[1], Draženko Z. Rajković[2,3]*

[1] *"Riparia" Association of Environmentalists, Matije Korvina 9, 24000 Subotica, Serbia*
[2] *Department of Biology and Inland Waters Protection, Institute for Multidisciplinary Research, University of Belgrade, Kneza Višeslava 1a, 11030 Belgrade, Serbia*
[3] *Center for Biodiversity Research, Maksima Gorkog 40/3, 21000 Novi Sad, Serbia*
*Corresponding author; E-mail: drazenko.rajkovic@imsi.bg.ac.rs

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ABSTRACT. During the long-term effort of the bird migration study, a single adult male Baillon's Crake *Zapornia pusilla* Pallas, 1776 was captured and ringed on August 8, 2018, at Ludaš Lake, near Hajdukovo village (Subotica municipality, Northern Serbia). This record represents the first confirmed occurrence of this water-dwelling species for Serbia.

Keywords: bird ringing, Baillon's Crake, first record, Ludaš Lake, migration

Baillon's Crake, also known as the Marsh or Tiny Crake *Zapornia pusilla* (Pallas, 1176) is the smallest and least studied member of the rail family (Rallidae) on the European continent. Secretive in nature, this species predominantly exhibits crepuscular behaviour and typically maintains a preference for aquatic habitats. Morphologically, it is characterised by a body length ranging between 17 and 19 cm and a highly variable body mass spanning from 17 to 55 g (DEL HOYO *et al.*, 1996; TAYLOR and VAN PERLO, 1998).

Baillon's Crake is widely but patchily distributed in the eastern hemisphere, encompassing the Palaearctic, Ethiopian, Oriental, and Australian zoogeographical realms. It is polytypic, with six recognised subspecies, of which *Z. pusilla intermedia* and *Z. pusilla pusilla* inhabit Europe (TAYLOR and VAN PERLO, 1998). In the Eurasia's northern and temperate regions, Baillon's Crake represents a migratory species. It moves southward from breeding grounds to subtropical and tropical Africa and South Asia from August to October. However, the precise winter distribution remains poorly understood due to their secretive behaviour and lack of research. In other parts of the distribution range, it is primarily resident with some local movements and dispersions. In terms of diet, Baillon's Crake is an omnivorous generalist, feeding primarily on small fish, molluscs, segmented worms, aquatic insects, and their larvae. Occasionally, they also consume seeds, buds, and various parts of plants (DEL HOYO *et al*., 1996; TAYLOR and VAN PERLO, 1998).

The species occupies similar habitats throughout its range and seasons. However, its breeding grounds are generally characterised by low, dense, tussocky, or continuous

ORCID ID:
D.Z. Rajković - 0000-0002-2626-0076.

vegetation, including sodden and flooded sedges and grasses (e.g., *Eleocharis sp*., *Carex sp*., *Juncus sp*., *Cyperus sp*., *Scirpus sp*., *Cladium sp*., *Schoenus sp*), and shallow water levels (TAYLOR and VAN PERLO, 1998; SCHNEIDER-JACOBY *et al*., 2006). It inhabits permanent and temporary freshwater, brackish or saline marshy wetlands, and inundated grasslands with dense, abundant, floating vegetation. In general, dense, and tall reed stands are avoided. Throughout the reproductive period, like most other rallids, Baillon's Crake is monogamous and territorial. In contrast, during the non-breeding period, it can be encountered in pairs or small louse groups. In Europe, this species breeds from late May to July. The nest is a shallow cup or platform of vegetation placed close to the water on a grass tussock or soft grass, typically containing 4 to 11 eggs (DEL HOYO *et al*., 1996; TAYLOR and VAN PERLO, 1998; BIRDLIFE INTERNATIONAL, 2021). According to the IUCN Red List, the worldwide and European populations of Baillon's Crake are stable and designated as "Least Concern". The European breeding population is estimated to comprise 1000–2400 calling males (2000–4800 mature individuals), however, the population trend is unknown (BIRDLIFE INTERNATIONAL, 2021).

In this short note, we report the first occurrence of Baillon's Crake in Serbia.

During a long-term ongoing monitoring project of passerine autumn migration phenology, on August 8, 2018, at approximately 6 a.m. CEST, one specimen of Baillon's Crake was caught on the northern part of Ludaš Lake near the village of Hajdukovo (Subotica municipality, Northern Serbia). The exact GPS coordinates of the capture locations were N46.105371 and E19.830403, respectively. The individual was caught in the lowest section of an ornithological mist net designed for capturing migrating passerines. The mist net (250 cm high, 16×16 mm mesh size) was positioned in a tiny remnant of young, scattered reed *Phragmites communis* (Cav.) Trin. ex Steud. interspaced with occasionally flooded renewed meadow. The bird was caught precisely at the junction of the dishevelled reed and the flooded grassland.

Considering the extensive experience of three present ringers and the unique morphological characteristics commonly found in birds from the Rallidae family, it was evident that the captured specimen belonged to the *Zapornia* or *Porzana* genus. The bill's short and robust nature definitively excludes the possibility of it being a Water Rail *Rallus aquaticus* Linnaeus, 1758. Furthermore, the captured individual expressed relatively long scapulars, a remarkably short primary projection, and the upper parts displayed a chestnut-brown hue, with dark grey-bluish tones of the forehead, throat, and chest. The flanks, vent, and undertail coverts exhibited striking black and white barring, respectively. These colourations of the chest, flanks and undertail coverts ruled out the Spotted Crake *Porzana porzana* Linnaeus, 1766, as it predominantly displays a plain yellowish-buff undertail and finely scattered chest markings. Additionally, the deep red iris of the captured bird contrasted sharply with the brown iris, characteristic of the Spotted Crake (BECKER and SCHMIDT, 1990; CHRISTIE *et al*., 1996; VAN DUIVENDIJK, 2011).

A more detailed examination revealed that the heavy black-and-white barring extended well along the leg line, and red colour was absent at the base of the bill; it was uniformly greenish. These details strongly suggest that the captured bird was indeed a Baillon's Crake (BECKER and SCHMIDT, 1990; CHRISTIE *et al.*, 1996; VAN DUIVENDIJK, 2011). Also, scapulars and tertials show broader blackish centres with narrow and warmer brown fringes than Little Crake *Zapornia parva* (Scopoli, 1769). Further, wing coverts shows quite distinctive white speckling on wing coverts, unlike Little Crake (BECKER and SCHMIDT, 1990; CHRISTIE *et al.*, 1996; VAN DUIVENDIJK, 2011). Lastly, the wing length measurement of 84 mm, a diagnostic morphological character between Baillon's (< 100 mm) and Little Crakes (> 98 mm) when handled (BAKER, 2016; DEMONGIN, 2016), undoubtedly verified identification. The individual had a body mass of 36.4 g and was determined to be an adult male based on the consistent grey-bluish colour tones of the chin and chest (BAKER, 2016).

Following identification, ringing (leg ring code: NHM Belgrade G002951; ringer: Nenad Spremo; permit No 353-01-1432/2017-04 from Ministry of Environmental Protection), and photographic documentation (see Figure 1), the individual was released near the capture location.

Figure 1. Baillon's Crake *Zapornia pusilla* Pallas, 1776 captured and ringed on Ludaš Lake, Hajdukovo village, Northern Serbia, 8 August 2018 (photo by AE "Riparia")

Historically, it has been possible to find a wealth of data on the records of Baillon's Crake in Serbia. However, upon closer scrutiny, these reports have primarily exhibited an anecdotal nature (ŠĆIBAN *et al.*, 2015), a relatively common scenario when addressing the presence of rare and elusive species (MCKELVEY *et al.*, 2008). In our case, the lack of any conclusive physical evidence and credible witnesses, alongside evident misidentification and confusion with closely related species, even in cases involving live specimens and museum skins, have collectively contributed that all previous findings of Baillon's Crake in Serbia being critically rejected (ŠĆIBAN *et al.*, 2015). Consequently, Baillon's Crake was not considered a member of Serbia's avifauna (ŠĆIBAN *et al.*, 2015). Thus, the described record represents the first documented sighting of Baillon's Crake in the country. When combined with other recently discovered species (e.g., MAREŠ and RAJKOVIĆ, 2021; RAJKOVIĆ *et al.*, 2022), this sighting constitutes the 363rd bird species formally reported in Serbia.

Looking at a broader context, the finding of this species is not completely unexpected given its status in the surrounding countries and time of year. Although uncommon, a scarce and locally distributed species, Baillon's Crake has been recorded in small numbers during breeding and migration in all neighbouring countries except Albania (GÉROUDET, 1965; SZABÓ, 1970; RADU, 1979; OBRATIL, 1985; SACKL *et al.*, 2003; SCHNEIDER-JACOBY *et al.*, 2006; DELOV and GRAMATIKOV, 2007; HADARICS and ZALAI, 2008; ERNST, 2011; TUTIŠ and ĆIKOVIĆ, 2013; VELEVSKI and VASIĆ, 2017; MARINOV *et al.*, 2023).

In conjunction with post-breeding movements, the presence of a suitable, nutrient-rich habitat stands out as one of the essential ecological factors that can elucidate the abrupt appearance of certain species in novel geographical regions (NEWTON, 2008). Although the

northern littoral part of Ludaš Lake has been characterised by extensive eutrophication and a notable decline in habitat diversity over the last 40-50 years, the last decade has witnessed significant improvements in habitat conditions, courtesy of restoration initiatives facilitated by herds of large ungulates – Hungarian Gray Cattle *Bos primigenius taurus* (Bojanus, 1825) and Water Buffalo *Bubalus bubalis* (Linnaeus, 1758). The ongoing restoration project has removed reeds and other dense vegetation, opened the landscape, and enhanced the habitat variety. Currently, the lakeshore is dominated by sod meadows with low fine-stemmed vegetation, most of which are partially flooded seasonally. Hence, although somewhat speculative, it is possible to establish a relationship between habitat restoration and the appearance of Baillon's Crake. This potential correlation is particularly intriguing considering the recent research conducted during non-breeding periods, which suggests a preference of Baillon's Crake for edge structures, like the trampling paths of people and large animals, and transitional zones between distinct vegetation types flooded by shallow water level (SZABÓ, 1970; SEIFERT *et al.*, 2018; SCHUCK and SEIFERT, 2020). Due to the migratory nature of the species and the absence of prior data, we can provisionally classify the Baillon's Crake as a rare passage migrant in Serbia. Nonetheless, comprehensive research concerning the Baillon's Crake presence, abundance and distribution are imperative to establish its ultimate status in the country in the future period. This search could be especially essential in internationally important wetland sites (e.g., ephemeral ponds, saline lakes) situated across northern Serbia.

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