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Type specimens of *Anthus berthelotii* Bolle, 1862 (Aves: Motacillidae)

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Berthelot's Pipit *Anthus berthelotii* Bolle, 1862a, an endemic to Macaronesia (see e.g. García-Talavera Casañas 1999 for this term), is closely related to the widespread Palearctic *Anthus campestris* (Linnaeus, 1758) (Alström & Mild 1993; Arctander *et al.* 1996; Illera *et al.* 2007; Voelker 1999a,b). Carl August Bolle (1821–1909), German traveler and naturalist, visited Macaronesia in 1851–1853 and again in 1856–1857 (Salinger & Strehlow 1891; see also Bolle 1854a,b, 1857, 1858a,b, 1862a,b). He described *Anthus berthelotii* in two papers (Bolle 1862a,b), providing a morphological description of the species and referring to several authors who, he believed, recorded the same species under different names. However, he did not mention specific specimen(s) or collection(s) at which he had studied *Anthus* specimens. Thus, we restudied the original description of *Anthus berthelotii* to identify its type series.

Material and methods. Current nomenclature and taxonomy follows Dickinson (2003), but see below for comments. The Gregorian calendar is used throughout this paper (Mlíkovský 2010).

Museum acronyms are as follows: AMNH = American Museum of Natural History, New York, USA; ZIN = Zoologičeskij Institut Rossijskoj Akademii Nauk [Zoological Institute of the Russian Academy of Sciences], St. Petersburg, Russia; ZMB = Museum für Naturkunde, Leibniz-Institute for Research on Evolution and Biodiversity at the Humboldt University Berlin, Germany; ZSM = Zoologische Staatssammlung München, Germany.

The original description. Bolle (1862a,b) described the species *Anthus berthelotii* twice under the same name and apparently on the basis of the same type series. The first paper, written in German, was signed by Bolle in Berlin on 26 June 1862 and appeared in the September 1862 issue of the *Journal für Ornithologie* (Bolle 1862a). The other paper, written in French, was signed by Bolle a few days later, on 1 July 1862, and appeared in the October 1862 issue of the *Ibis* (Bolle 1862b). A comparison of the German and French texts shows that the French text is an abbreviated translation of the German text. This conclusion is supported by the fact that Bolle finished the German text on 26 June and the French text on 1 July. Nevertheless, neither the German nor the French text includes any mention of the other version and both must be regarded as independent papers in the sense of the International Code of Zoological Nomenclature (ICZN 1999; hereafter the 'Code').

The September issue of the *Journal für Ornithologie* includes data from 7 August 1862 (Schauer 1862: 398) and advertises two German ornithological meetings to be held on 29 September and 30 September 1862, respectively (Anonymous 1862: 399). This indicates that this issue was published after 7 August and before 29 September 1862. There is no indication that the October issue of the *Ibis* was published before October 1862. Hence, the description of *Anthus berthelotii* in the *Journal für Ornithologie* has precedence. Consequently, *Anthus berthelotii* Bolle, 1862b is a junior homonym and a junior objective synonym of *Anthus berthelotii* Bolle, 1862a.

The type series. Bolle (1862a) did not specify which specimen(s) of his new *Anthus berthelotii* he had examined, although he provided a detailed morphological description and gave some measurements (presumably taken from a single specimen). The size and extent of the type series of *Anthus berthelotii* is thus *a priori* unknown. We analyzed Bolle's (1862a,b) texts and searched museum collections for potential syntypes with the following results.

Bolle's specimens from 1851–1853: It is unknown how many *A. berthelotii* specimens Bolle collected during his visit to the Canary Islands in 1851–1852 (he mentioned that they were very common; Bolle 1854a: 455), but only one has survived: ZMB 16427 (collected on Gran Canaria; other data unknown). This is undoubtedly a syntype of *Anthus berthelotii*.