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Eggs of the 'lost' Slender-billed Curlew *Numenius tenuirostris*

by Alexander L. Bond & Graeme M. Buchanan

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Summary.—Slender-billed Curlew *Numenius tenuirostris* is Critically Endangered and may be extinct. Its breeding biology is known exclusively from early 20th-century accounts from central Russia and Kazakhstan, and the eggs were heretofore known from a single specimen in the Manchester Museum. Here, we provide details of five additional putative Slender-billed Curlew eggs held in public and private collections. The eggs show remarkable variation in size, with two being only 85% of the mean length and breadth. Notably, one of the putative clutches was from the European side of the Ural Mountains, far to the west of the established breeding range. Molecular identification would aid in identifying additional specimens, which would be easily confused with eggs of other *Numenius*.

Slender-billed Curlew *Numenius tenuirostris* is currently classified as Critically Endangered on the IUCN Red List (Birdlife International 2022), although the reasons for the species' decline are unclear (Gallo-Orsi & Boere 2001, Pearce-Higgins *et al*. 2017). Even by 1912 the species was increasingly rare (Ushakov 1912). The last undisputed record, with photographs, was in Morocco in 1995 (Buchanan *et al*. 2010, Corso *et al*. 2014). It is more commonly known from the wintering grounds in North Africa (Buchanan *et al*. 2010) and on migration through southern Europe (Gretton 1991) than its probable breeding grounds on the Kazakh steppe (Buchanan *et al*. 2018). Little is known of the species' breeding biology, though clutches of four eggs were said to have been taken in May and June (Ushakov 1909). Consequently, information on its breeding is scarce and the subject of much speculation (Belik 1994, Danilenko *et al*. 1996, Gretton *et al*. 2002).

The eggs were first described by Degland (1849) as 'd'un blanc laiteux ou d'un blanc nuancé de jaunâtre, marqués de points bruns et de taches irrégulières, les unes brunes, les autres cendrées, plus larges et plus nombreuses sur le gros bout; quelques-unes sont confluentes.' [= 'milky white, shaded with yellow marked with brown dots and irregular spots of brown and ash colour, larger and more numerous at the larger end. In some the spots are confluent' (Bree 1863)]. Degland must have seen some examples of eggs, as he provided measurements of 55–57 × 38–42 mm (Degland 1849, Olphe-Galliard 1889), although these dimensions are smaller than most putative Slender-billed Curlew eggs (see below).

Reportedly, just one egg survives in museum collections (McGhie 2002, 2005). Here, we report on a further five eggs attributed to Slender-billed Curlew and correct the historical record relating to other collections which purportedly held eggs of this species.

Chronological summary of specimens and records

Naturhistorisches Museum, Bern, Switzerland.—A single egg (NMBE 1039630; egg A) collected in July 1870 in 'Siberia' by a Mr Locke. It was donated to the Naturhistorisches Museum, Bern by Paul Henrici (1880–1971), a German physician and notable oologist (Hartert 1929), who likely purchased it from the natural history dealer A. Vaucher. This

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appears to be the earliest documented egg; it measures 64.8 × 44.1 mm (Fig. 1).

Western Foundation for Vertebrate Zoology, Camarillo, California, USA.—A set of three eggs (WFVZ 141526; eggs B–D) collected in May 1906, somewhere along the Volga River. Interestingly, this clutch is assigned to a broad location that is much further west than other breeding records of Slender-billed Curlew (Buchanan *et al*. 2018), and early records of the species nesting in this region (summarised by Gavrin *et al*. 1962) were considered doubtful (Gretton 1991). It is interesting that this clutch was not mentioned in previous discussions, given it was known in the mid 1980s (Kiff & Hough 1985). The eggs measure 62.6 × 43.8, 62.7 × 42.1 and 65.9 × 43.3 mm. Unfortunately, no further data are available (Fig. 2).

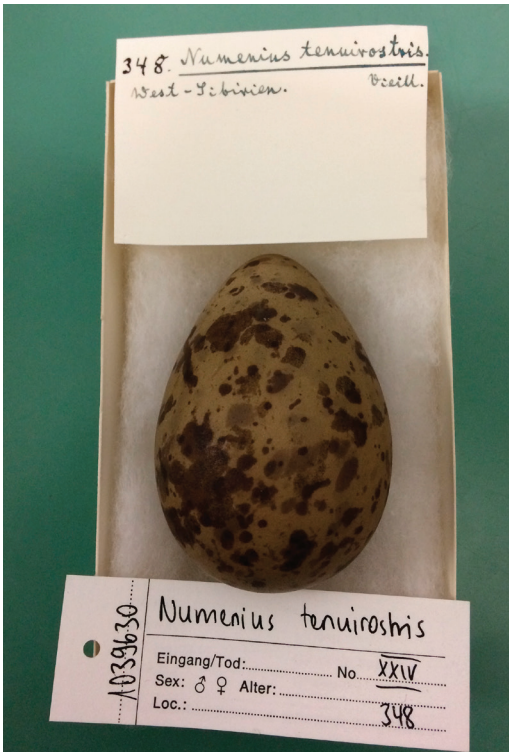

Figure 1. Egg of Slender-billed Curlew *Numenius tenuirostris* in the collection of Naturhistorisches Museum, Bern, Switzerland (NMBE 1039630; egg A) (M. Schweizer, Naturhistorisches Museum, Bern)

Schastovski's egg.—A single egg (egg E) collected at Lake Tschany [=Lake Chany, озеро Чаны] on 20 May 1909 was figured by Dresser (1905–10) on Pl. 224, pt. 21–22 (bottom right) alongside the Manchester egg (egg F; Fig. 3). It was collected by taxidermist P. A. Shastovski, who worked for Herman Johansen, curator at the Zoological Museum of Tomsk State University (Johansen 1905, 1908). Dresser (1905–10), repeated by McGhie (2002), stated that the egg was in 'Tomsk Museum'. However, this egg is not in the Zoological Museum of Tomsk State University (S. Moskvitin *in litt*. 2016), so its whereabouts and measurements are unknown.

Manchester Museum, Manchester, UK.—An egg (MANCH BB.5660.2539; egg F) collected on 2 June 1909 by Valentin E. Ushakov near Tara (Gretton *et al*. 2002), which was exchanged with Henry Dresser (1838–1915) (Ushakov 1925), was exhibited by Dresser at a meeting of the British Ornithologists' Club on 15 December 1909 (Dresser 1909). Sergei Alexandreevich Buturlin, one of Dresser's regular correspondents, may have acted as an intermediary (Ushakov 1925, McGhie 2002). Date of collection is given as 2 June 1909 (Gretton *et al*. 2002, McGhie 2002) or May 1909 (McGhie 2005). This had previously been reported as the only egg specimen of the species (McGhie 2002). It measures 54 × 38 mm (Fig. 4), which is considerably smaller than others.

Ushakov's 1909/10 clutch of four.—A clutch of four eggs (eggs G–J) collected by Ushakov in 1909 or 1910 was sold to a Mr Potter for 35 roubles (Ushakov 1925, Gretton *et al*. 2002). Their whereabouts is unknown.

Ushakov's 1914 clutch of four.—Breeding of Slender-billed Curlews was first detailed in a series of papers by Ushakov (Ushakov 1909, 1912, 1914, 1925) and included his collection of a clutch of four eggs (eggs K–N) on 16 May 1914 near Tara (Ushakov 1914, Jourdain 1918). Their whereabouts is unknown. One was rumoured to be in Helsinki, but there is no evidence that it is or was present in the Finnish Museum of Natural History (E.-S.

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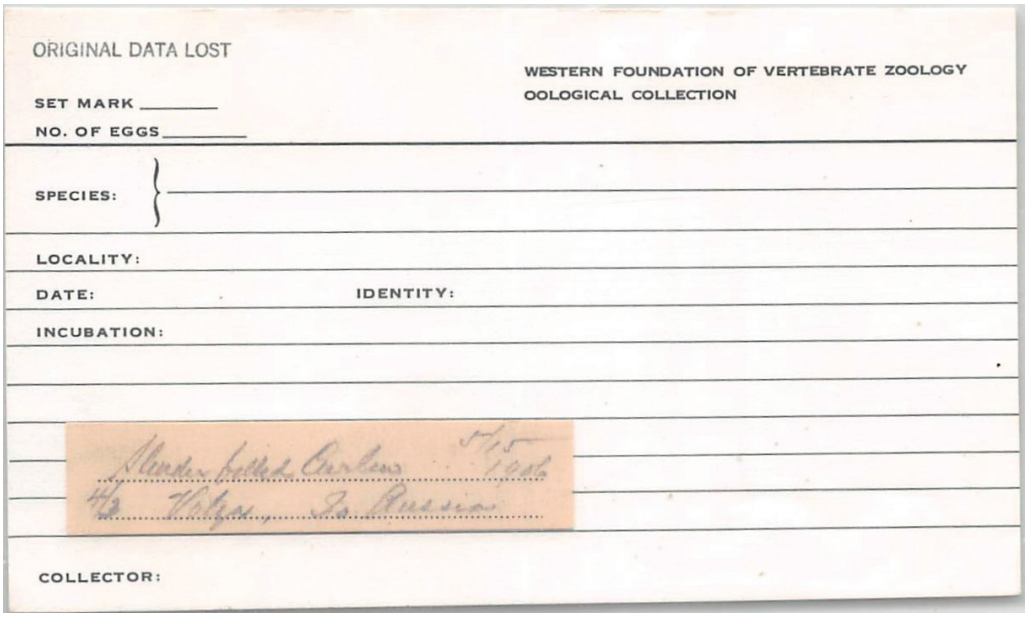

Figure 2. Data card and clutch of three Slender-billed Curlew *Numenius tenuirostris* eggs in the collection of the Western Foundation for Vertebrate Zoology, Camarillo (WFVZ 141526; eggs B–D) (R. Corado, Western Foundation for Vertebrate Zoology)

Hyytiäinen *in litt*. 2017). The eggs measured 64.9 × 46.9, 65.6 × 47.1, 64.5 × 46.0 and 64.0 × 45.0 mm. Schönwetter (1963) gave measurements as 64.0–65.6 × 45.0–47.1 mm, stating these are 'after Hartert (Ushakov Collection)', which were probably the same eggs given the ranges of measurements are identical.

Yekaterinburg, Russia (private collection).—One egg (egg O), possibly from Chelyabinsk or Kurgan, from the dispersed collection of amateur oologist K. V. Motylev is now held in a private collection in Yekaterinburg, Russia. It measures 53.8 × 37.4 mm, which is smaller than most other putative Slender-billed Curlew eggs for which measurements are available (eggs A–D, K–N), but similar to the Manchester egg (egg F) and to early measurements (Degland 1849; Fig. 5). The ground colour is paler, and the maculation pattern differs from other Slender-billed Curlew eggs.

Royal Belgian Institute of Natural Science, Brussels, Belgium.—A clutch of three eggs (RBINS 309453; eggs P–R) is listed in the catalogue of the Museum of Natural Sciences, but a note indicates there may be an error in locality or species. Details of its collection and measurements are not known.

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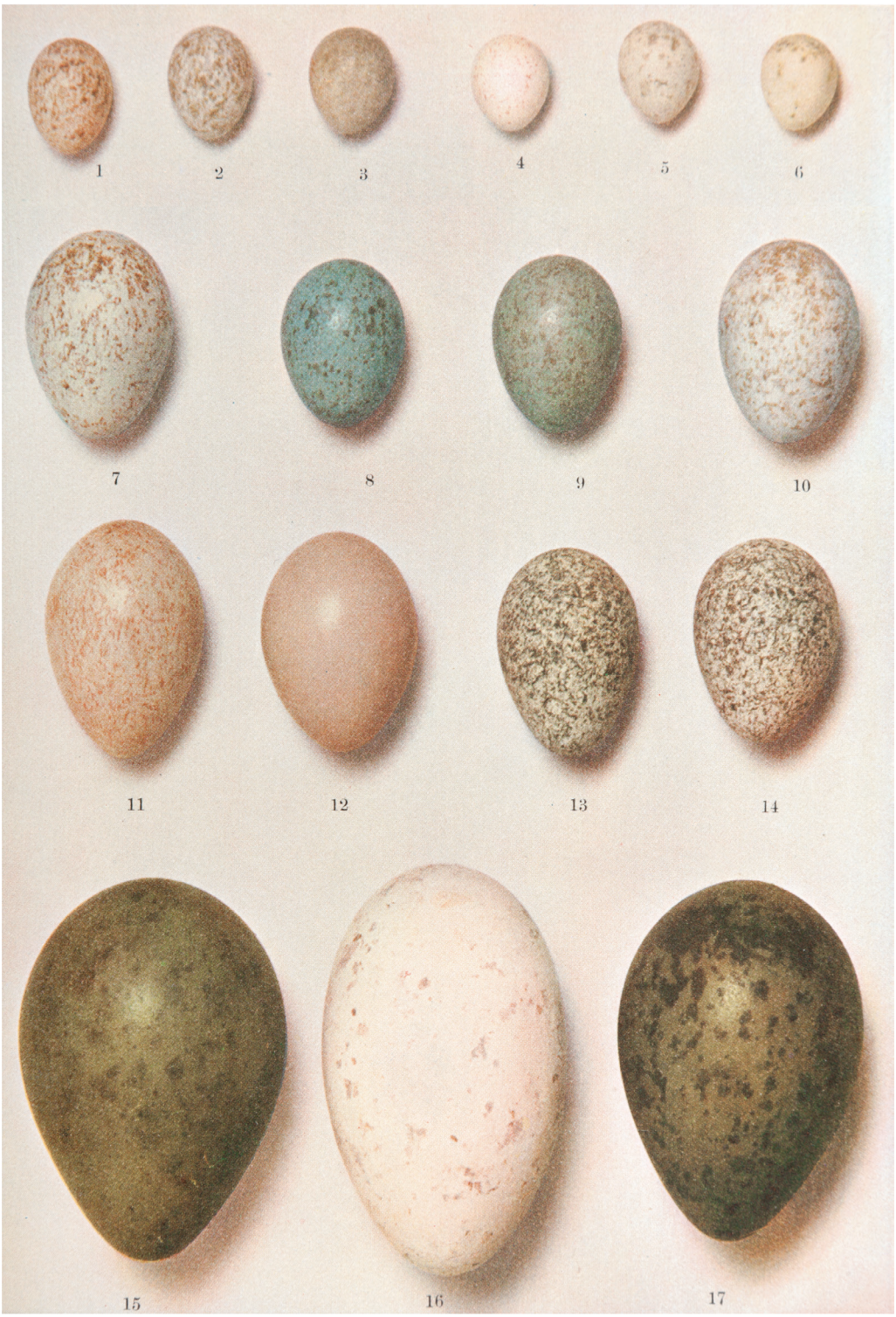

Figure 3. Pl. 224 from Dresser (1905–10) showing the Manchester egg (egg F, = no. 15) and the Shastovski egg (egg E, = no. 17) (H. Taylor, Natural History Museum, Tring)

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Figure 4 (left). Egg of Slender-billed Curlew *Numenius tenuirostris* from the Manchester Museum (MANCH BB.5660.2539; egg F) (R. Petts, Manchester Museum)

Figure 5 (right). Purported egg of Slender-billed Curlew *Numenius tenuirostris* from a private collection in Yekaterinburg, Russia; it is much smaller than other Slender-billed Curlew eggs, so its identity may be questionable (Photographer's name withheld on request)

Discussion

Together, there are five seemingly definite examples of Slender-billed Curlew eggs in museum collections globally—one in Manchester (egg F), three at the Western Foundation for Vertebrate Zoology (eggs B–D), and one in Bern (egg A). Eggs in Brussels and Yekaterinburg could be investigated to determine the species using molecular methods (Chilton & Sorenson 2007, Lee & Prŷs-Jones 2008). Others may be in collections and assumed to be eggs of Eurasian Curlew *Numenius arquata*, and yet others may have been lost.

Measurements (mean ± SD, min.–max.) of definite Slender-billed Curlew eggs (n = 8) are 63.1 ± 3.6 mm (54.0–65.9 mm) × 44.0 ± 2.8 mm (38.0–47.1 mm). The Manchester and Yekaterinburg eggs are *c*.85% the mean size, which would be quite exceptional if they were of the same taxon (although the possibility of 'runt' eggs cannot be discounted). To our eyes, the Yekaterinburg egg also looks different in colour, being paler. Early measurements (e.g., Degland 1849) are also notably smaller, potentially suggesting confusion with other taxa. For comparison, eggs of Whimbrel *Numenius phaeopus*, a species in which the adult is approximately the same size as Slender-billed Curlew, tend to be somewhat smaller, 52–65 × 36–45 mm (Cramp & Simmons 1983). The eggs of Eurasian Curlew are about the same size, having a mean of 67.6 × 47.9 mm (Harrison & Castell 2002). This is despite adult Eurasian Curlew being considerable larger than Slender-billed Curlew.

The record of a clutch of Slender-billed Curlew eggs from the Volga River is of note. These eggs are within the size range of Slender-billed Curlew, so there is no reason to believe them to belong to another species. There are no other reliable records or reports of the species breeding anywhere other than in south-central Siberia east of the Urals (Gretton 1991). An analysis of the potential breeding area of Slender-billed Curlews based on stable isotopes suggested that the main nesting grounds could have been further south than the area in which Ushakov reported nests (Buchanan *et al*. 2018). However, that analysis focused on an area east of the Urals, and so did not explore the potential for the species

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to have occurred further west. If these eggs did come from a nest in this region, it would extend the known breeding range by *c*.1,000 km.

Given the likelihood that Slender-billed Curlew is extinct (BirdLife International 2022), and the age of the existing eggs in collections (all more than 100 years old), efforts to identify eggs in other collections, and verify those of dubious origin should be prioritised. This will improve our knowledge of the species' breeding range and expand the body of material available to researchers. It is notable that the species was already suspected to be in decline by the early 20th century. However, if the record of eggs from the Volga River can be substantiated then it would indicate that, even though the species might have been declining, the range was nonetheless still extensive. This might appear to be an academic exercise for a species that has not been recorded with certainty for more than 25 years. However, expanding our knowledge could contribute to data on Slender-billed Curlew and to the conservation of other species, especially other *Numenius* (Pearce-Higgins *et al*. 2017).

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