

# A review of the identification criteria and variability of the Slender-billed Curlew

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**Abstract** This paper presents a complete review of all proposed identification characters for the Slender-billed Curlew *Numenius tenuirostris*. The review is based primarily on examination of museum specimens, but also on photographs of live birds. All characters were examined from scratch, so the analysis provides a revalidation of some criteria while challenging others. The most useful features for the identification of Slender-billed Curlew were found to be: the colour and pattern of the underside of the outer primaries; pattern and extent of the tibial feathering and length of exposed tibia; leg colour; pattern of the tail feathers; and shape of the dark flank markings. All other proposed features were found to overlap to some extent with some Eurasian Curlews *N. arquata*. Since the mid 1990s, when the species was seen on the last-known regular wintering grounds, in Morocco, curlews showing characters associated with Slender-billed Curlew have been reported from several countries, including England, Greece, Hungary, Italy and Spain. These reports have generated considerable and ongoing debate and this paper should provide a key baseline for any future reviews.

## Introduction

Sightings of the Slender-billed Curlew *Numenius tenuirostris*, which migrated from its Siberian breeding grounds to wintering areas in the Mediterranean basin, have become increasingly infrequent since the 1970s (Gretton 1991, 1994; Gretton *et al.* 2002). Following the demise of the last-known wintering population, at Merja Zerga, Morocco, where the last reliable sighting occurred on 23rd February 1995 (van den Berg 1995; Anon. 1996), no known breeding, passage or wintering sites remain. The species is on the verge of extinction, if it still survives, and the number of individuals remaining must be tiny (Gretton *et al.* 2002; Chandler 2009; Delaney *et al.* 2009).

For a species that wintered in Europe, surprisingly little is known about its historical distribution, although it has occurred in

many Western Palearctic countries (BWP; Gretton 1991; Gretton *et al.* 2002). It was described in 1817 by Vieillot, based on a specimen collected in Egypt prior to 1797, which is preserved in the Musée National d'Histoire Naturelle, Paris (accession number MNHN 13469). The only known former breeding site lies close to Tara, in the valley of the Irtysh River in western Siberia, where nesting pairs were observed between 1914 and 1924 (Ushakov 1909, 1912, 1916, 1925; Gretton 1991; Danilenko *et al.* 1996; Gretton *et al.* 2002). Just a single egg is known, collected on 2nd June 1909 by Ushakov (McGhie 2002).

In this paper we analyse and attempt to validate each character associated with the identification of Slender-billed Curlew. The work is based on personal studies over more than 20 years, particularly by AC. What has

emerged is that both Slender-billed Curlew and Eurasian Curlew *N. arquata* show greater plumage variation than is generally appreciated and, since the latter is the most likely pitfall, elimination of Eurasian (particularly the eastern race *N. a. orientalis*) is critical to the successful identification of Slender-billed.

Within the text, where a particular subspecies is referred to, the trinomial is used. Nominate Eurasian Curlew is referred to as *arquata*, the eastern *N. a. orientalis* as *orientalis*, central Asian *N. a. suschkini* as *suschkini*, nominate Whimbrel *N. phaeopus* as *phaeopus* and central Asian *N. p. alboaxillaris* as *alboaxillaris*. We have excluded discussion of *N. p. variegatus*, breeding in northeast Asia, since it has heavily barred underwings and restricted white on the back, mostly confined to the rump, while the race *N. p. rogachevae* (Tomkovich 2008) is also excluded since its taxonomic status remains unclear. The curlew species breeding in North America are excluded as they lack the white rump and lower back, show heavily barred underwings, and are thus quite different in appearance.

## Methods

From the literature we distilled features that have been proposed for identifying Slender-billed Curlew. Three references in English are particularly comprehensive: van den Berg (1988), Gretton (1991) and Steele & Vangeluwe (2002). Gretton collated all the information known about Slender-billed Curlew, while van den Berg published notes on birds observed in Morocco in the winter of 1987/88. Steele & Vangeluwe discussed criteria leading to the acceptance of the sole British record, from Druridge Bay, Northumberland, in May 1998; a record that has subsequently been reassessed and found to be not proven (*Brit. Birds* in press). An extensive review of the identification criteria of Slender-billed Curlew and an appraisal of the variability of other curlews in Europe was published in Italian by AC (Corso 1995, 2000).

Understanding plumage and the extent of its variation lies at the heart of this review. Since field observations of Slender-billed Curlews are no longer possible, we have had to rely entirely on museum material, photographs and video footage to assess the purported characters. Specimens of Slender-billed Curlew

from more than 60 collections were examined, mostly in Europe, but also in Asia and North America (see acknowledgments). Information was gathered mostly by direct personal visits but in a minority of cases via requests and online studies. Additional material was received from the international Slender-billed Curlew Working Group (SBCWG).

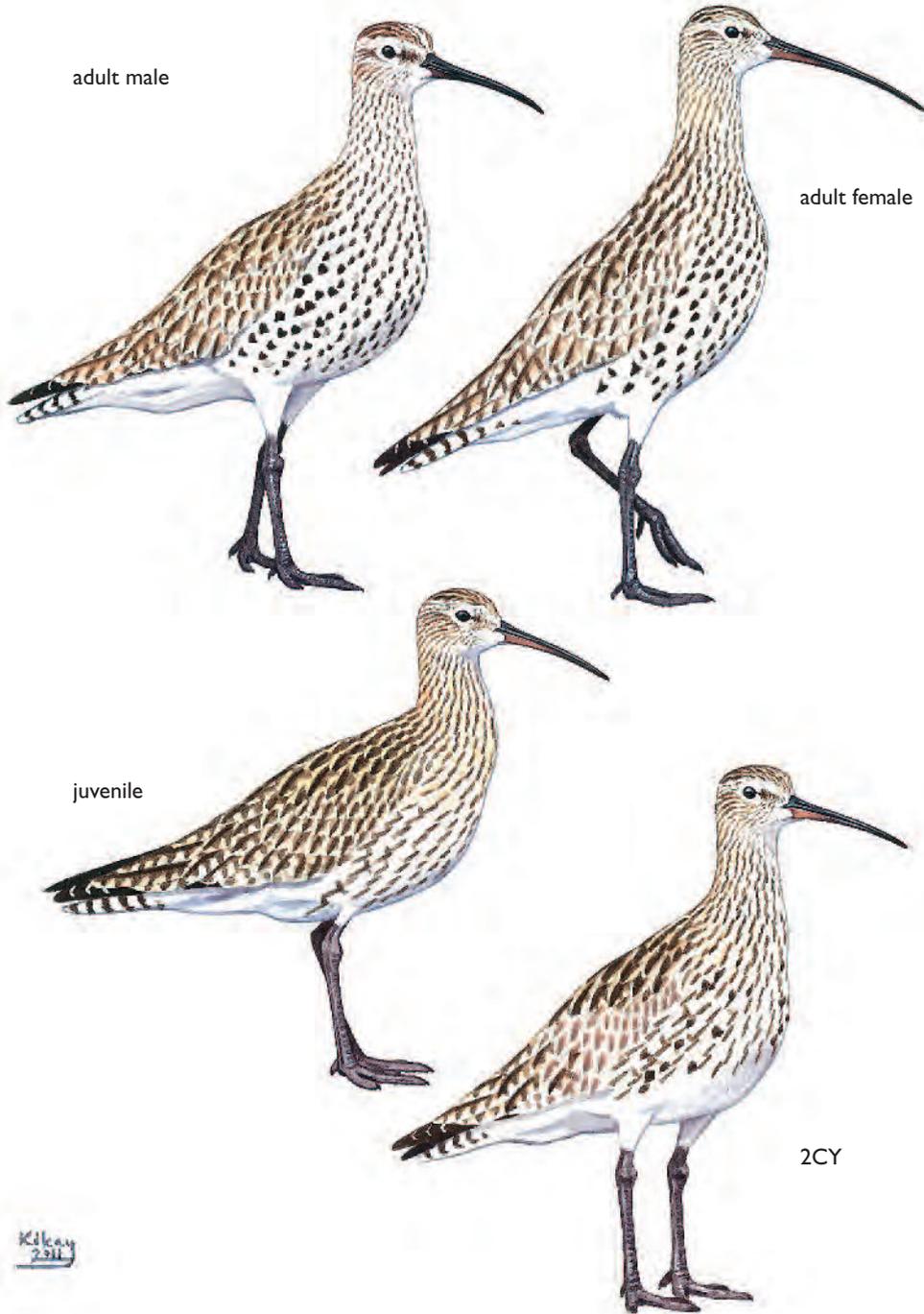
Photographs of live Slender-billed Curlews from France (Brosselin 1968; Duquet 2008), Morocco (van den Berg 1988) and Yemen (Porter 1984, 2004) were studied. In addition, a video of the Moroccan birds, filmed by Andy Butler in January 1994, proved to be highly informative. Images of controversial birds, of unproven or contested identity – including those in Serra *et al.* (1995), Corso (1996), Cleaves (2002), Oláh & Pigniczki (2009), *Dutch Birding* 17: 80 and 18: 140, *Birding World* 8: 90, and video by Yoshio Ebihara – were examined, but data from those birds are excluded from this study.

For other *Numenius* species, approximately 2,000 specimens were studied in museums throughout Europe, supported by observations of several thousand individuals in the field in Europe, North Africa, the Middle East and Asia.

The following terms have been used within the text to indicate how frequently characters are shown: ‘commonly’ (found in >100 birds seen/studied as skins); ‘occasionally’ or ‘by some’/‘sometimes’ (found in 50–100 birds); ‘rarely’ or ‘by few’ (found in <50 birds seen/studied skins). If referring to peculiar features found only in a limited number of individuals, the exact number involved is quoted.

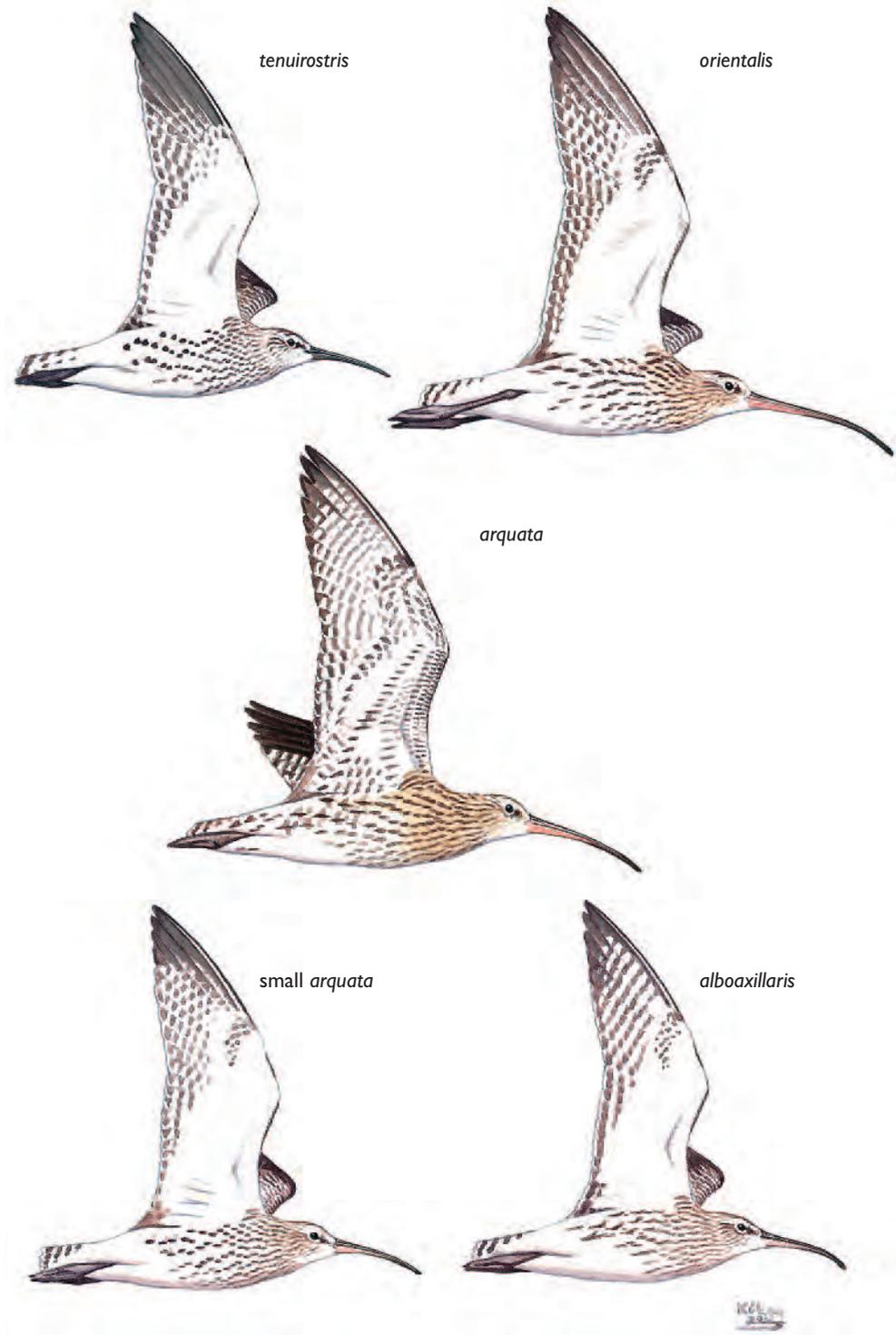
## Moult, age and sex

Establishing the age of a suspected Slender-billed Curlew is an essential first step. Three age classes are recognised here: juvenile, adult and a transitional first-summer plumage, attained in the second calendar-year (2CY). Understanding the timing and extent of moult is key to establishing the age class. Of the Slender-billed Curlew specimens examined in this study, 14 were in juvenile plumage, 40 were 2CY birds in various stages of transitional plumage and 98 were adults (3CY or older). In addition, a further 20+ unsexed/unaged/undated specimens were examined. Among the sexed adults, about 70% were males.



**Fig. 1.** Slender-billed Curlew. Top left, typical adult male; top right, adult female; bottom left, juvenile; bottom right 2CY. Adults show round spots on the underparts, particularly pronounced on the male. The head pattern (see text), dark legs and bill, long thigh feathering with only a short exposed tibia, long primary projection and wings projecting beyond the tail-tip are characteristic of Slender-billed Curlew. The juvenile shows streaked rather than spotted underparts, with indistinct, sparse barring on the flanks. In the 2CY, recently moulted fresh mantle feathers contrast with retained and abraded juvenile wing-coverts, with a mix of retained juvenile and fresh, adult-like spotted feathers on the underparts. Differences in tertial pattern are useful for ageing (see text).

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**Fig. 2.** Western Palearctic curlews in flight showing differences in the pattern and coloration of the outer primaries (see text). Top left, Slender-billed Curlew, top right *orientalis* Eurasian Curlew; centre, *arquata* Eurasian; bottom left, small *arquata* Eurasian; bottom right, *alboaxillaris* Whimbrel. Note that the small *arquata* Eurasian Curlew (lower left) is based on birds observed in Sicily and elsewhere in Italy (see plates 180–181 & 185 and text).