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Short communication

The identity of some *Hippolais* specimens from Eritrea and the United Arab Emirates examined by mtDNA analysis: a record of Sykes's Warbler *H. rama* in Africa

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A confusing group of *Hippolais* and *Acrocephalus* warblers is found in coastal habitat in northeast Africa and the nearby area of the Red Sea, Gulf of Aden and Persian Gulf. The group includes migrant and resident forms, some of which bear great similarity to other species in the same habitat. They are difficult to identify in the field, and some also pose problems in the museum.

We recently examined specimens of a small, apparently resident *Hippolais* warbler from northern Somalia (Ash & Pearson 2002). While comparing these with other material at the Natural History Museum, Tring, our attention was drawn to three very similar birds, two from the United Arab Emirates (UAE) and one from coastal Eritrea, whose measurements and details are given in Table 1.

The UAE specimens, collected by M.D. Gallagher, were both worn. One, collected from Khor Khalba on 24 March 1971, Reg. no. 1977.18.27, was labelled as a Sykes's Warbler *H.* (*caligata*) *rama*; the other, collected from Ras el Khaimah on 16 June 1972, Reg. no. 1972.6.5, was labelled as an Olivaceous Warbler *H. pallida elaeica*. Both birds were much shorter- and rounder-winged than *elaeica*. Their measurements, wing formula details and tail/wing ratios agreed well with those given for *rama* by Svensson (2001), and we judged that both were of this form.

The Eritrean specimen, Reg. no. 1952. 4.7, collected by K.D. Smith at Arafale on 5 November 1951, was in fresh plumage. It was labelled *H. p. elaeica*, but was certainly not this form. It had a much shorter wing and its measurements fitted well with *H. rama*. The pattern on the outer tail-feathers, with whitish fringes near the tip merging into the dark centres, and the narrow, inconspicuous pale edges to the secondaries and tertials were also features consistent with *rama* rather than with *elaeica*. Wing formula details fitted with *rama*, but were not entirely typical of this species. The second primary (numbered ascendantly) was equal to the seventh (it is usually shorter in *rama*) and the sixth primary lacked emargination (it is emarginated in many *rama*). The small forms of *H. pallida* breeding in and south of the Sahara can show an identical wing structure. We were therefore unable at this stage to assign this specimen conclusively to *rama*. We have now been able to check the identity of all three specimens by reference to their mitochondrial DNA structure.

DNA was isolated from toe pads using standard methods, including proteinase K digestion and one step each of phenol and chloroform purification (Bensch & Pearson 2002). Because it is often difficult to amplify longer fragments from old specimens, presumably because of DNA degradation, we used the primers orinus1 and cyt 4 (Bensch & Pearson 2002). This protocol targets a 141-bp fragment located in the mitochondrial *cytochrome b* gene between the universal vertebrate primers L14841 and H15149 (Kocher *et al.* 1989). The PCR products were sequenced using the Big Dye terminator cyclic sequencing kit loaded on an ABI PRISM™ 310 (Perkin Elmer). The sequences were aligned using BioEdit (Hall 1999) and compared with published sequences retrieved from the GenBank International Nucleotide Sequence Database.

The mtDNA sequences of the three specimens were identical, and matched perfectly over the 141 bp investigated with the published sequence of *H. rama* (GenBank AJ004792, Krasnovodsk, Turkmenistan; Helbig & Seibold 1999). Comparison of this region with the published sequence for *H. caligata* (GenBank AJ004793, western Mongolia; Helbig & Seibold 1999) revealed 13 substitutions, with *H. pallida elaeica* (GenBank AJ004791, Tsavo, Kenya; Helbig & Seibold 1999) 11 substitutions, and with *H. p. pallida* (eight specimens, Egypt, S. Bensch unpubl. data) 12–13 substitutions. Hence, it is clear that these specimens are all representatives of *H. rama*.

The identity of the UAE specimens came as no surprise. However, confirmation that the Eritrean specimen was also *rama* was of considerable interest, as this appears to represent the first confirmed record for the species from Africa. There have been past claims of wintering *rama* in northeast Africa, and the species may well have been overlooked there, but none of these reports was accepted in reviews by Moreau (1972), Curry-Lindahl (1981) or Urban *et al.* (1997). Four specimens from Eritrea that Zedlitz thought were *rama* were later re-identified by him as *H. pallida* (Zedlitz 1910–1911, pp. 61 and 611), and we are informed by L. Svensson (*in litt.*) that these are in fact *H. p. elaeica*. Another specimen from Somalia, collected as *pallida* but re-identified by Meinertzhagen as *rama* (Archer & Godman 1961) appears to us to be *pallida*,

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Table 1. Details and measurements (in mm) of *Hippolais* specimens from Eritrea and the United Arab Emirates held by the Natural History Museum, Tring, UK. The primaries are numbered ascendantly.

Reg. no.	1977.18.27	1972.6.5	1952.4.7
Country	UAE	UAE	Eritrea
Locality	Khor Khalba	Ras el Khaimah	Arafale
	(25°01′N, 56°22′E)	(25°57′N, 56°03′E)	(15°05′N, 39°41′E)
Date	24.3.1971	16.6.1972	5.6.1951
Sex	M?	M	
Wing	59	61	59
Tail	52	52	49
Bill (to skull)	14.5	15.5	16
Tarsus	21.5	21	20
Longest primary	3–4	3–4	3–5
P2 equal to?	P8/9	P7/8	P7
P2 < wing tip	6.5	5.5	4.5
P6 < wing tip	1.5	2	2.5
P10 < wing tip	9	9.5	9
P1 > primary coverts	6.5	8	7
Emarginated primaries	3–6	3–6	3–5

probably of the race *elaeica*. Svensson (2001) has drawn attention to yet another specimen at Tring (Reg. no. 1934.1.1.5183), collected in southern Sudan on 7 April 1900, registered as *pallida* but later relabelled *rama*. We agree with him that this bird is difficult to assign with certainty. In conclusion, we would stress that particular care is required in the separation of *H. rama* from the races of *H. pallida* in Arabia and northeast Africa.

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