

Presumed hybrid Blyth's Reed *Acrocephalus dumetorum* × Marsh Warbler *A. palustris* trapped at Ngulia, Kenya, in December 2009

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On 17 December 2009 an unusual-looking *Acrocephalus* was trapped at Ngulia Lodge in Tsavo West National Park, south-east Kenya. It was one of several hundred Palearctic passerines mist-netted at dawn, mainly Marsh Warblers *A. palustris*, grounded after being attracted to lights during the previous misty night. Being freshly moulted it immediately stood out from the unmoulted Marsh Warblers with which it was directly compared. Its uniform, rather dark olive-brown upperparts also appeared to eliminate Eurasian Reed Warbler *A. scirpaceus* which can occur (race *fuscus*) fully moulted at Ngulia in December. A quick check of the wing formula eliminated both species, for p2 (numbered ascendently) was short, falling between pp5–6, whilst pp3–4 had an emarginated outer web. A wing length of 68 mm eliminated any race of the much smaller African Reed Warbler *A. baeticatus* but also seemed long for Blyth's Reed Warbler *A. dumetorum*. The bird was, however, tentatively identified by DP, IK & BA as a Blyth's Reed Warbler, a view supported by its leg and iris colours, which differed from those typical of either Marsh or Eurasian Reed Warblers. The chestnut-brown eye indicated that it was an adult. Photographs, measurements and a detailed description were taken, and a small blood sample was collected for DNA analysis. The bird was ringed and released at the site of capture.

Measurements

Measurements of the Ngulia bird are shown in Table 1 together with data for adult Marsh Warbler and Blyth's Reed Warbler, and also for a Blyth's Reed × Marsh Warbler hybrid trapped on the breeding ground in Finland (Lindholm *et al.* 2007).

Wing length was clearly beyond the normal range of Blyth's Reed Warbler, although values up to and above 68 mm have been recorded occasionally in Kazakhstan (A. Gavrillov *in litt.* 2009). The primary projection of c.75% (as percentage of length of the exposed tertials) also appeared high for Blyth's Reed Warbler but was distinctly less than in Marsh Warbler. Tail and tarsus measurements fitted both species, but the bill, although similar in shape to that of Marsh Warbler, was distinctly long for that species. Wing formula details differed markedly from those of Marsh Warbler, but were a very good match with Blyth's Reed. Measurements and wing formula of the Ngulia bird matched those of the Espoo hybrid closely, except that p2 was evidently shorter, and the longest tertial fell short of the tips of the secondaries (a Blyth's Reed Warbler character).

Plumage and bare parts

Figs. 1–4 depict the Ngulia bird. The upperparts were rather uniform brown with an olive tinge, only slightly greyer on the crown and paler on the rump and uppertail-coverts. They were somewhat darker than those of more worn Marsh Warblers and lacked their typical greenish tint. They were darker than in freshly moulted *fuscus* Eurasian Reed Warbler (not available for direct comparison) and lacked the contrastingly warmer rump and uppertail-coverts typical of that form (Kennerley & Pearson 2010). The underparts

TABLE 1
Measurements (mm) and wing formula details (primaries numbered ascendently) of a presumed Blyth's Reed *Acrocephalus dumetorum* × Marsh Warbler *A. palustris* hybrid trapped at Ngulia, Kenya, compared with those of adults of the parent species and of a hybrid trapped at Espoo, Finland (Lindholm *et al.* 2007).

	Ngulia bird	Blyth's Reed Warbler*	Marsh Warbler*	Espoo bird
Wing	68	59–66 (131)	64–73 (86)	66.5
Tail	51	46–54 (128)	47–55 (60)	54
Bill (to skull)	17.5	15.5–18.5 (123)	14.5–17 (88)	17.5
Tarsus	22.5	20.5–23.5 (56)	21–24 (79)	22.5
p1 ²	–4	–3–3	–4–1	
p2 ³	4	3–6	0–2	2
p3 ³	0 (wing tip)	0	0	0
p4 ³	0.5	0.0–0.5	1.5–3.5	1
p5 ³	3	0.5–2.5	3.5–6.0	3.5
p6 ³	5.5	2–6	6.5–9.0	6
p10 ³	13	10–14	14–19	
Notch on p2 (depth)	13	12–14	7.5–11.5	10
Emargination on p3	Yes (16)	Yes	Yes	Yes (14.5)
Emargination on p4	Yes (11)	Yes	No	Yes (7)
Primary projection	c.75%	50–60%	80–90%	c.70%
Outer tertial < inner secondary	Yes	Yes	No	No

*Data from museum specimens (Kennerley & Pearson 2010)
² projection (mm) beyond longest primary-covert; ³ distance from primary tip to wingtip.

were washed lightly with buff, paler, more whitish on the throat and undertail-coverts. They lacked the yellow-buff tone of freshly moulted Marsh Warbler. The face pattern was well marked, with a pale buff supercilium more distinct than is usual in Marsh Warbler (Kennerley & Pearson 2010), and quite broad in front of the eye above a narrow dark loreal line. The smaller wing-coverts and the fringes of the remiges and alula matched the olive-brown upperparts. The fresh tertial fringes contrasted well with the dark centres but appeared broader than Marsh Warbler would show.

The bill was blackish on the maxilla, entirely pale flesh on the mandible. The mouth was ochre-yellow, differing from the brighter yellow of Marsh Warbler. The iris was dark chestnut-brown. The tarsi were dull medium brown with a reddish tint, the soles pale ochre-brown and the claws grey-brown. The colours of the iris, tarsi and soles were atypical for a Marsh Warbler of any age.

DNA analysis

An analysis of mtDNA was undertaken by SB. A few µl of blood were used to extract DNA following the protocol of Laird *et al.* (1991). A partial cytochrome-*b* sequence (140 bp excluding primers) was amplified and sequenced using the primers orinus1 and cyt4 as described in Bensch & Pearson (2002). The mtDNA sequence obtained was compared with cytochrome-*b* sequences from all of the species discussed above and it showed a perfect match with that of Marsh Warbler (GenBank AJ004774). This demonstrated that the Ngulia bird was a Marsh Warbler on its maternal side and excluded the possibility that it was a pure Blyth's Reed Warbler.



Figures 1–4. Presumed hybrid Blyth's Reed *Acrocephalus dumetorum* × Marsh Warbler *A. palustris* hybrid trapped at Ngulia, south-east Kenya, 17 December 2009 (Figs. 1–3, David Pearson; Fig. 4, © Martha Mutiso)

Discussion

The Ngulia bird possessed the plumage, wing formula, leg colour and moult schedule of a Blyth's Reed Warbler, and not of a Marsh Warbler, and was at first tentatively identified as the former species. However its long wing, with a primary projection apparently intermediate between the two, suggested the possibility that it was a Blyth's Reed × Marsh Warbler hybrid. The discovery that it was a Marsh Warbler on its maternal side supported this.

Hybridisation between Blyth's Reed and Marsh Warblers has been described in Finland and may regularly occur there in the south-east (e.g. Koskimies 1980, 1984, Kosonen 1983). It has also been reported in the Netherlands (Poot *et al.* 1999). In mixed pairs studied the Blyth's Reed Warbler has usually been the male. Hybrids with mixed characters and mixed songs have been known to return after migration and to have bred. Definite records of such hybrids are rather few however, and there are few published descriptions. The bird ringed at Espoo, which proved to be a Blyth's Reed Warbler on its maternal side, showed morphology and song intermediate between the two species (Lindholm *et al.* 1997). In plumage colour and minor details of its wing structure it was evidently more Marsh Warbler-like than the Ngulia bird.

It has been uncertain whether these hybrids migrate to southern Asia like Blyth's Reed Warblers or to Africa like Marsh Warblers, but imitations in the song of the Espoo bird suggested an African wintering area. The Ngulia bird had clearly followed the migration

route of its Marsh Warbler mother rather than its presumed Blyth's Reed Warbler father. Apart from wing length this individual had structural and plumage characters entirely consistent with identification as a Blyth's Reed Warbler. This surely has implications for any claimed record of this species seen or trapped out of range in Africa, the Middle East or even Western Europe.

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