

Separating Radde's and Dusky Warblers



Colin Bradshaw,
on behalf of the Rarities Committee

In the last few years, there seems to have been a general change of view on the ease of separation of Radde's Warbler *Phylloscopus schwarzi* and Dusky Warbler *P. fuscatus*. The first easily accessible text for field separation of these two species was the paper by Johns & Wallace (1972), but there was still considerable confusion until Madge (1987) refined the criteria. Since then, there seems to have been the feeling that 'It's all sorted out', and the standard of some descriptions of both of these species received by the Rarities Committee has often suggested that there is little chance of confusion in the field. This is not always the case, and some preconceived ideas about how 'easy' the classic features are have been challenged in recent birding literature (Bradshaw 1992a,b; Leader 1992).

Leader (1992) showed photographs of Dusky Warblers with strikingly rich buff undertail-coverts contrasting with the rest of the underparts, a feature regarded as 'classic' for Radde's. He also noted the variability of the rear supercilium, but suggested that this occurs in only a minority of individuals. Bradshaw (1992b) described a Dusky Warbler with 'shadowing' above the supercilium and bright fringes to the primaries—other 'classic' features for identifying Radde's Warbler in the field.

Radde's and Dusky Warblers also regularly get identified using the biometrics of individuals trapped for ringing. Differences in bill width between the two species were mentioned by Williamson (1962), but it was Svensson (1970) who set out, in clearly understandable terms, the differing specific ranges of both width and depth of the bill at the proximal end of the nostril. This has become the 'gold standard' for separating the two species in the hand.

The Rarities Committee has on file details of 44 Radde's Warblers and 40 Dusky Warblers trapped in Britain during 1960-92 and, for this paper, these were examined to see how closely they matched up with Svensson's figures and how other 'classic' features varied. This review is not intended to cover comprehensively all of the identification features of these two species, but sets out to expand the published biometrics and to explore areas where mistakes



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may be made. Those readers interested in a more general overview of the identification criteria should read the articles by Madge (1987, 1990).

Biometrics

Perhaps the two most important points to state are:

(1) Unlike the figures quoted by Svensson (which were obtained in museum or laboratory conditions), these biometrics are measured in varying field conditions, by different observers, using different equipment, and so introduce three other variables.

(2) Very disappointingly, 42% of Dusky Warblers and 20% of Radde's Warblers had neither bill width nor bill depth measured, whilst a further 16% and 25% respectively had only one of these two important measurements recorded. In addition, four birds had measurements taken at the distal (wrong) end of the nostrils. Unfortunately, it appears that this fairly lackadaisical approach is still occurring, with half of the measurements missing in descriptions of birds submitted during the last ten years. Obviously, circumstances sometimes dictate that full biometrics cannot be recorded, but this should be the exception rather than the rule, particularly at bird observatories, where there should be competent recorders, and all necessary literature and equipment should be to hand.

The identification of some birds was fortunately made acceptable by photographic evidence, in the absence of a detailed description and measurements other than wing length; without the photographs the descriptions alone would have been inadequate for confident acceptance.

Bill width (see fig. 1)

Only 28 of the Radde's Warblers had bill width measured. All were equal to or above the range given by Svensson (3.5-4.4 mm), with 83% within that range.

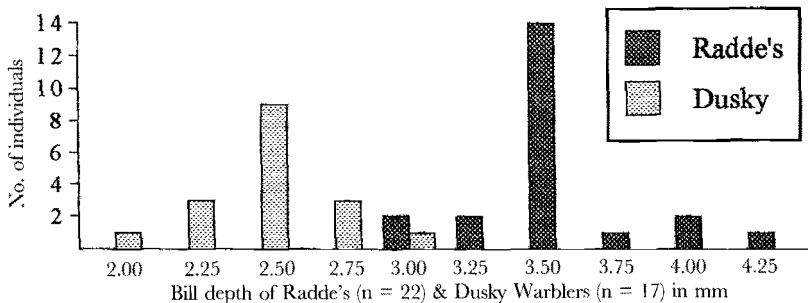
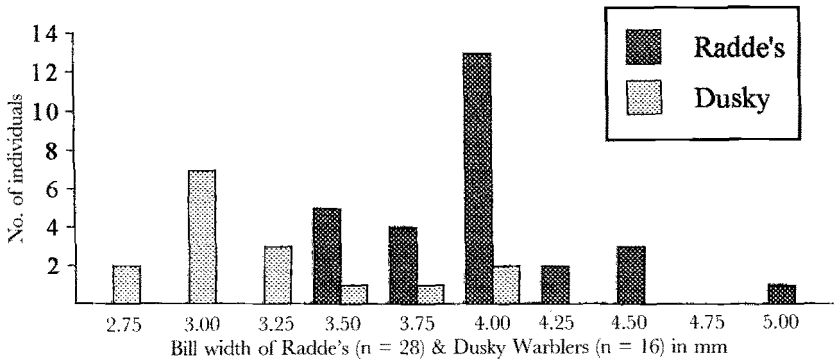


Fig. 1. Diagnostic biometrics (in mm) of Radde's *Phylloscopus schwarzi* and Dusky Warblers *P. fuscatus* trapped in Britain during 1960-92



113 & 114. Radde's Warblers *Phylloscopus schwarzi*, China, May 1990 (Colin Bradshaw). Above, showing characteristic supercilium, wider but less clearcut in front of the eye, forming a 'blob'; below, individual showing dull upperparts, dull undertail-coverts and relatively dull facial pattern



115. Below, Dusky Warbler *Phylloscopus fuscatus*, China, May 1990 (Colin Bradshaw), showing dark coronal band and bright edges to primaries and secondaries, both usually regarded as 'classic' features of Radde's Warbler *P. schwarzi*



Only 16 Dusky Warblers had their bill width taken. Four were outside the range given by Svensson for Dusky Warbler (2.5-3.4 mm). Two (both at 3.7 mm wide) had bill-depth measurements of 2.5 mm, well inside the range for Dusky. Two had width measurements of 4.0 mm, but with no accompanying bill depth. Photographs of one of these individuals show that the bird was definitely a Dusky Warbler, and it appears to have a normal bill, but there is no further information on the other individual.

Bill depth (see fig. 1)

Only 22 Radde's Warblers had a record of the appropriate bill depth. Of these, 19 (86%) were within, one (4%) above and two (9%) below the range given by Svensson (3.2-3.9 mm). In the last group, one with a bill depth of 3.0 mm had a bill width of 4.0 mm, well within the range for Radde's Warbler. The other, with a bill depth of 2.9 mm and width of 3.5 mm was intermediate. This individual subsequently died, however, and examination of the skin confirms the identification.

Of 17 Dusky Warblers which had bill depth taken, none was above the range quoted by Svensson (2.3-2.9 mm), with five just below.

Bill length (see table 1)

There was complete overlap between the two species, but Radde's Warbler was the more variable, with bills shorter than and longer than on any Dusky Warbler.

Weight (see table 1)

Radde's Warblers were heavier, ranging from 9.0 g to 15.9 g, with 77% between 10.0-12.9 g, although one from Shetland weighed only 5 g.

Dusky Warblers were lighter, ranging from 7.0 g to 12.5 g, with 90% between 8.0-10.7 g.

Wing length (see table 1)

There was considerable overlap between the two species, with 48% of Radde's Warblers within the range 58-62 mm and a further 25% over 65 mm, and 84% of Dusky Warblers between 53 and 62 mm and none over 65 mm. Note that none of the Radde's Warblers had a wing length under 57 mm and none of the Dusky Warblers had a wing length over 65 mm.

Wing point

There was little difference in wing point between the two species, although Radde's had a considerable spread, with all sequential possibilities from 3rd to 5th, and another bird with 4th to 6th primaries all equal. All Dusky Warblers had either 4th, 4th = 5th or 5th primary longest.



Table 1. Biometrics of Radde's *Phylloscopus schwarzi* and Dusky Warblers *P. fuscatus* trapped in Britain during 1960-92

Measurements	Radde's	Dusky
BILL LENGTH		
<i>BWP</i> range	11.6-13.7 mm	10.9-13.0 mm
BBRC range	10.7-15.0 mm	10.9-14.3 mm
BBRC mean	12.4 mm	12.45 mm
BBRC number	32	28
No. > <i>BWP</i> range	2	4
No. < <i>BWP</i> range	8	0
WEIGHT		
<i>BWP</i> (migrants and vagrants)	9.3-13.5 g	6.0-12.5 g
BBRC range	9.0-15.9 g (1 at 5 g)	7.0-12.5 g
BBRC mean	11.56 g	9.18 g
BBRC number	35	27
No. > <i>BWP</i> range	3	1
No. < <i>BWP</i> range	1	0
WING LENGTH		
Svensson's range	56-67 mm	54-66 mm
BBRC range	57-67.5 mm	53-65 mm
BBRC mean	61.14 mm	59.79 mm
BBRC number	42	37
No. > Svensson range	1	0
No. < Svensson range	0	3

Plumage and bare parts

Undertail-coverts

Dusky Warblers were recorded as having undertail-coverts ranging in colour from grey-buff (1) to buff (14), warm buff (7) and rusty, rufous or orange (i.e. the classic colour for Radde's Warbler) on 15. No undertail-covert colour was recorded for three individuals. Thus, 40% of Dusky Warblers which had colour recorded had undertail-coverts confusable with Radde's Warbler.

For all of those Dusky Warblers with bright undertail-coverts, there was a statement that these contrasted with the rest of the underparts, again like Radde's Warbler.

Bare parts

Another 'classic feature' of Radde's Warbler is its pale yellow or flesh-coloured legs and strikingly yellow feet. Examining the descriptions of trapped Dusky Warblers showed that 12% had completely yellow legs, 22% had pink legs and 48% had yellow on the rear of the legs. Not all descriptions included the colour of the feet. Of those that did, 80% were yellow.

Seasonal variation

Radde's and Dusky Warblers become more similar in spring plumage (Bradshaw 1992a). In spring, the obvious separation features that fade are:

1) supercilium on Radde's Warbler fades and becomes more like that of Dusky Warbler in colour and prominence;

- (2) upperparts coloration of Radde's Warbler becomes much duller and less 'oily', more closely resembling that of Dusky Warbler;
- (3) undertail-coverts of Radde's Warbler are frequently 'watered down' to a dull yellowy-buff, similar to those of Dusky Warbler.

Examples of both species in spring are shown in plates 113-115.

Call

There is some overlap in the call of the two species. The typical call of Radde's Warbler is a subdued 'tuc'. When the bird is alarmed, however, this can become a much louder and sharper 'tak', almost the same as the typical call of Dusky Warbler.

Conclusions

There are several important conclusions from this review of Radde's and Dusky descriptions. These are:

- (1) The biometrics given by Svensson hold true for separating the vast majority of individuals. It is important, however, that both bill depth and bill width at the proximal end of the nostril are measured, as one or the other alone may not be sufficient to identify some individuals.
- (2) As stated by Svensson, there is no other reliable way of differentiating the two species on biometrics.
- (3) A significant proportion of Dusky Warblers show bright rusty or orange undertail-coverts contrasting with the rest of the underparts and, therefore, superficially resemble Radde's Warblers.
- (4) About 60% of Dusky Warblers show at least some yellow on the legs and 34% have either all-yellow or pinkish legs, again superficially resembling Radde's Warbler.
- (5) Most Dusky Warblers show prominent yellow feet.
- (6) Spring Radde's Warblers can look quite like Dusky Warblers.
- (7) Some autumn Dusky Warblers can look quite like Radde's Warblers.
- (8) Some ringers and bird observatories are not, even now, taking adequate descriptions, including appropriate measurements, of the rare birds that they catch.
- (9) Field descriptions of Radde's and Dusky Warblers need to be detailed and precise to exclude the significant proportion of intermediate individuals that resemble the other species. All should be identifiable on a *combination* of carefully described features.

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