Ageing and sexing the Blacksmith Plover in the hand

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The Blacksmith Plover *Vanellus armatus* is, on plumage, a monomorphic species and, once juvenile dress is lost, it is a difficult species to age or sex successfully. Juvenile plumage moult is completed by the fourth month after fledging, apart from a few lingering feathers on the scapulars. Thereafter the bird appears similar to an adult. Further, as breeding may take place in any month of the year, somewhere within the species' southern African range, annual moult is not a good indicator of age either. However, there is a method of ageing this species up to two years of age, and also of sexing late immature or adult birds, namely, the size and colour of the spur found on the carpal joint of the wing.

When the bird fledges the spur is just emerging and feels like a small rounded bump on the carpal joint. As the bird passes through its juvenile plumage into its post-juvenile stage the spur emerges further in a well-rounded, grey-coloured form.

Growth is slow and, at about one year, the spur is still grey-coloured and the tip still rounded. At this stage the bird should be well into its first full moult.

During the course of the second year the spur changes from grey to black and gradually becomes sharper, but **not** needle-sharp. The differential growth rate of the male and female spurs becomes more obvious; that of the female is shorter and that of the male is longer.

Once the bird is fully adult, probably during its third year, the tip of the spur becomes ivory-coloured whilst the rest of the spur remains black; the tip is now needle-sharp. The shorter spur of the female is easily separated from the longer one of the male, although a slight area of overlap may occur. The growth rate of the spur is slow and it appears, from recaptures of ringed birds, that growth may continue slowly for some time, particularly in males. Certainly known-age birds have shown continued growth up to three or four years of age (pers. obs.).

MEASURING SPUR LENGTH

The method used to measure the spur is important. A pair of either dividers or, preferably, callipers should be used for greater accuracy. Measurement should be taken from the notch at the distal base of the spur where it joins the wing, to the tip.

Data for adult birds shown in Table 1 was derived initially from captured breeding pairs or individual adults caught whilst incubating in either Zimbabwe or the Eastern Cape Province of South Africa. Post-laying/incubating females have widely parted pelvic bones. The preponderance of adult males was due to

Table 1. Approximate ranges of spur length in Blacksmith Plover.

	Range	Mean	SD	n	spur
Adult males*	13.0–18.0	14.25	1.14	43	Black with ivory tip, very sharp
Adult females*	7.5–12.0	9.86	1.29	21	Black with ivory tip, very sharp
2nd year (both sexes)	5.0–12.0	–	–	69	Grey, rounded (late wing moult) to black, fairly sharp
1st year (both sexes)	< 7.5	–	–	54	Grey, rounded

* Data on adult birds based on measurements of known-sex birds.

(a) the tendency of adult males to stay closer to young *pulli*, and hence easier to capture at night with the aid of a torch and handnet and (b) a late summer non-breeding population composed almost entirely of adult males found at a site in Zimbabwe.

Only one known adult female has had a spur length exceeding 11.0 mm (it measured 12.0 mm). The known lowest figure for males is 13.0 mm, thus measurements of between 12.0–13.0 mm may be taken as an overlap zone. However, care must be taken to ensure that birds with, say, a spur length of 12.5 mm are definitely adults. A spur measuring over 11.0 mm, with no ivory tip, would suggest that the bird is a sub-adult male and that further spur growth is still to come.

When the approximate age of second-year birds can be gauged, e.g. a retrapped bird ringed as a *pullus* or juvenile, then the longer spur would indicate a male bird and the shorter spur a female, within the limitations of the figures shown in Table 1. Measurement of the spur should always be retaken on recapture. Be aware that breeding can occur within the second year of a bird's life; such birds will have a black spur with no ivory on a tip that is not needle-sharp.

The above method can also be applied to both Wattled Plover *V. senegallus* and White-crowned Plover *V. albiceps*. My own data is too limited with no breeding White-crowned caught and few breeding Wattled pairs handled. The few breeding pairs of the latter do, however, indicate a clear disparity in the size of the spur between the two sexes.

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