

at least:

BIRD-IN-THE-HAND

SEXING THE JACKASS PENGUIN

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Data collected from autopsied corpses of the Jackass Penguin, Spheniscus demersus, from Dassen Island have shown that it is possible to sex adult birds with a high degree of accuracy.

As yet no certain method of sexing immature birds has been discovered. Males tend to be larger in all dimensions recorded. Measurements taken were culmen and bill depth, flipper length, foot plus central toe length and weight. The last measurement is very variable within an individual (moulting birds increase their weight by more than 50%) and cannot be taken as an accurate assessment of size. It is extremely difficult to obtain an accurate measurement of the flipper or foot on a live bird (especially without a fearless helper to hold it). For these reasons the sexing method used depends on culmen and bill depth.

Culmen is measured in the standard manner - from tip to the base of the upper mandible (see Fig. 1). Bill depth is recorded at the gonys (the ridge formed by the junction of the two halves of the lower mandible). This point is usually in the centre of the white subterminal bar on the beak. Measurements are made to the nearest half millimetre. The results obtained from 66 definitely sexed birds are given in the table.

| <u>TABLE</u> | <u>BILL SIZE</u> | | <u>JACKASS PENGUIN</u> |
|-------------------|------------------|-------------|------------------------|
| | 41 MALES | 25 FEMALES | |
| <u>Culmen</u> | (mm) | (mm) | |
| Average | 60.5 | 55.5 | |
| Range | 57 - 65 | 51.5 - 58.5 | |
| <u>Bill Depth</u> | | | |
| Average | 23.0 | 21 | |
| Range | 19.5 - 25 | 19 - 23.5 | |



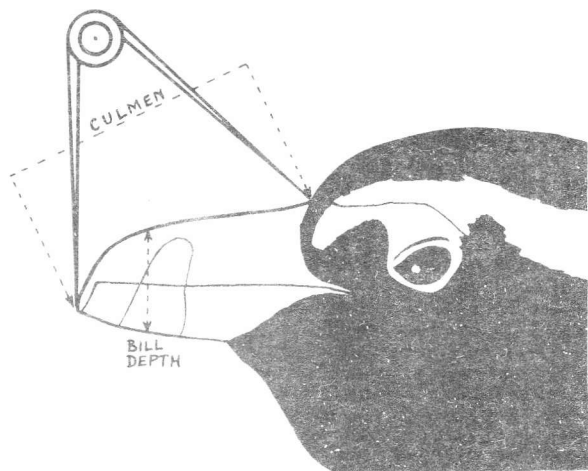
The female at the top has a culmen of 55 mm, her mate below has one 63 mm.

Photo by: Virginia Fifield

Males, on average, have larger bills than females although an overlap of 1.5 mm occurs in the range 57 to 58.5 mm. Within this range sex cannot be decided with any certainty on individual birds. However birds in this category can normally be sexed "by default" once their mates have been caught and measured.

Occasionally pairs will be encountered in which both birds fall within the range 57 to 58.5 mm. Under these circumstances I allocate sex on bill depth, the more massive bill assumed to belong to the male. Further checks can be made by observing mating or at the formation of a new pair.

Many penguin species are difficult to sex except on behavioural observations or by cloacal examination. We are fortunate that in southern Africa the local penguin can be easily sexed using the method described above.



Measurement points for the culmen of the Jackass Penguin.