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ASPECTS OF PHALLIC
MORPHOLOGY OF THE BUSH
SQUIRREL, *PARAXERUS*
CEPAPI CEPAPI

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During a two-year study of the bush squirrel, *Paraxerus cepapi cepapi*, 26 phalli were processed according to the method described by Lidicker

(1968) and sketches and measurements were made through a stereo microscope (Viljoen 1975). The bony elements of the penis are divided into three distinct parts (Figure 1):

Crest

A crest surrounds the greater part of the baculum. This crest is not continuous but consists of two halves, each half starting antero-ventrally of the anterior tip of the baculum, proceeding immediately to the dorsal surface, and then down three-quarters of the length of the everted part of the penis. Then it curves towards the dorsal mid-line to almost meet the other half. In the youngest animals (Class I of Viljoen 1976) the crest is without any bone

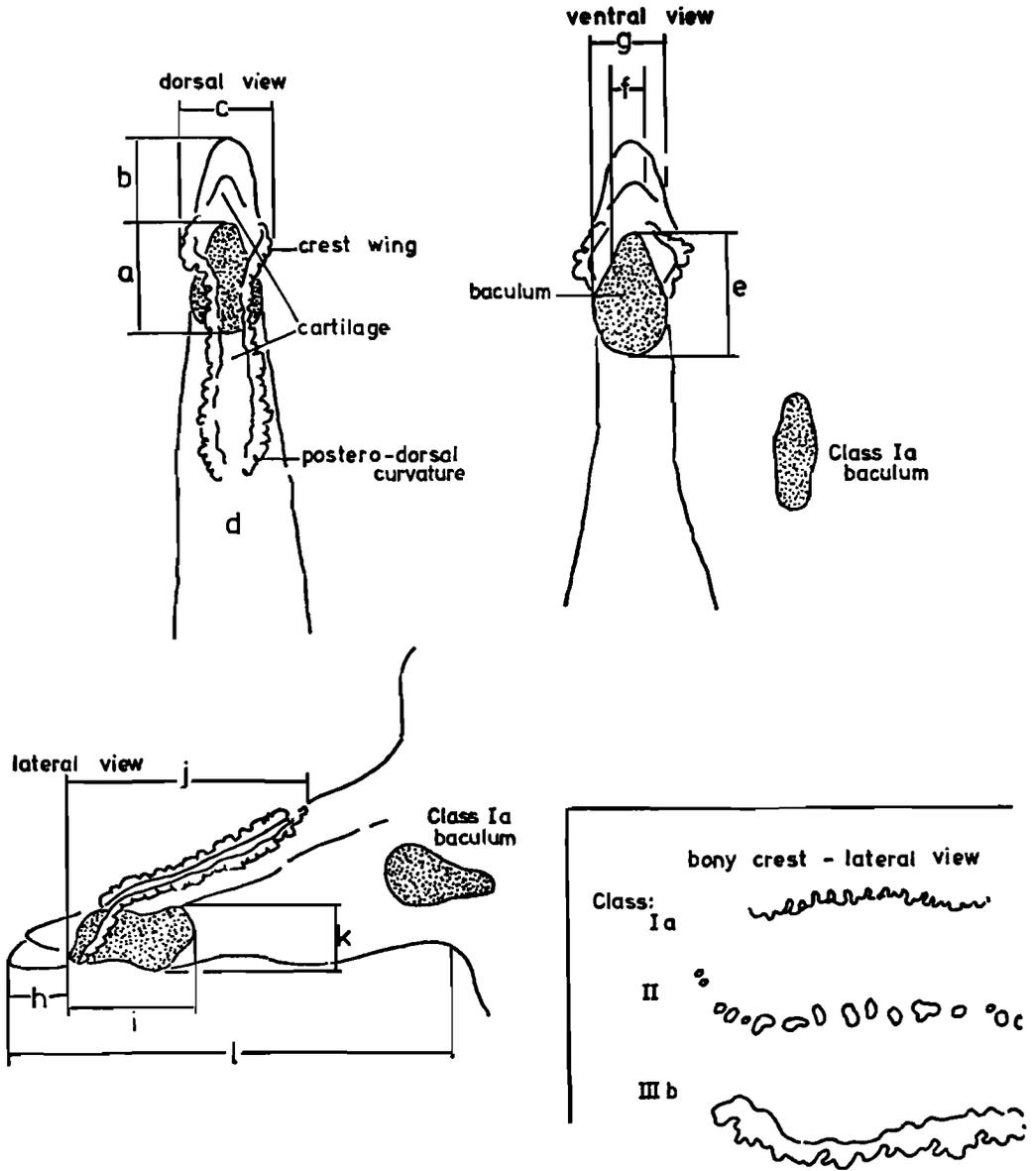


FIGURE 1

Dorsal, ventral and lateral views of the phallus to show the baculum, bony crest and cartilage in *Paraxerus c. cepapi*. The inset on the lower right shows bony development of the crest in three of the age classes as described in Viljoen (1976).

development. As the animal gets older, bones start developing along the crest, at first separate from one another and gradually fusing to form one long jagged bony crest.

Baculum

The baculum is pear-shaped ventrally with the narrower apex pointing distally to the tip of the penis. Laterally, it has an irregular shape, the narrowest part being in the middle. Viewed from the dorsal aspect, the crest obscures vision of the baculum although the pear shape can be distinguished. Bacula of the youngest animals are also included in Figure 1 (inset).

Cartilage

Cartilage is present in adults in the form of an apex at the tip of the everted portion of the penis distal to the baculum. Another cartilaginous element is present in the form of a plate enclosed by the above-described crest. This plate is slightly less developed in the region immediately dorsal to the baculum. Cartilage was unfortunately only stained in one adult animal.

The following adult measurements were taken (bracketed letters refer to Figure 1 and the same letters are used in Viljoen 1976; N = 12):

Dorsal:

length of the baculum (a) – 1,276 mm;
length of the tip of the everted portion, *i.e.* the tip anterior to the baculum (b) – 0,376 mm;
distances between the crest exterior margins both at the broadest distal portion, (c) – 1,112

mm, and at the broadest proximal part, (d) – 1,008 mm;

Ventral:

length of the baculum (e) – 1,328 mm;
breadth of the baculum both at the distal narrowest part, (f) – 0,368 mm, and at the proximal broadest part, (g) – 0,732 mm;

Lateral:

length of the tip of the everted portion which lies distal to the baculum, *i.e.* lateral measurement of (b) above, (h) – 0,780 mm;
length of the baculum (i) – 1,324 mm;
length of the crest as projected in a horizontal plane (j) – 2,930 mm;
breadth of the proximal broadest part of the baculum (k) – 0,728 mm;
total length on ventral aspect of the everted portion of the penis as projected horizontally (l) – 4,660 mm.

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