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Variability of Morphological Characters of
*Androctonus australis* (Linné, 1758) (Scorpiones, Buthidae)

Summary

The genus *Androctonus*, which is of considerable interest because of the highly effective toxins produced by its representatives, comprises seven species. The determination of species within the genus is not yet possible on a satisfactory basis, as there is a lack of information on the intraspecific variability of morphological characters which up to now were used to define the species.

Five samples of *Androctonus australis* comprising altogether 99 specimens from four separated localities in North-Africa were examined. 90 quantitative and qualitative characters were in large part redefined and precisely described. Approximately 40 ratios of the quantitative data were calculated to show additional constant proportions of size.

The results were analyzed with regard to sex and adult or juvenile state of maturity.

According to the variability of the characters in question their taxonomic value was assessed and they were arranged into groups:

a) characters independent of sex and state of maturity. These should be used in order to define a species.
b) characters exhibiting sexual dimorphism. These could be taken into consideration if the sex of a specimen is known.
c) characters varying with juvenile and adult moulting stages. These should only be referred to in case an adult specimen is considered, because the different moulting stages in scorpions are difficult to recognize.
d) characters varying with both sex and moulting stage. These may be used if sex and state of development of a specimen can be ascertained.
e) characters showing a high individual variability. These must be neglected for means of taxonomy.

f) characters independent of sex and moulting stage, but in addition stable within a taxon of higher category. In this study these characters could not always be distinguished from characters of the first type.
An example is given for every type of character.

Several characters showed a higher variability than was realized before, e.g. the tarsal spurs of the walking legs and the number of chaetae on the inner fulcra of the combs. In a key for the species of *Androctonus* the tarsal spurs and the number of chaetae were used to distinguish between *A. australis hector* and *A. hoggarensis* on the one hand and *A. amoreuxi* and *A. crassicauda gonneti* on the other hand.

The definition of several stable characters presented in this paper could constitute an improved basis for further comparative studies within the genus *Androctonus*.

Several results could become even more evident if the juvenile, subadult and adult specimens could be distinguished unequivocally.