

Comparative anatomy of male genital organs in the genus *Apis*.

ABSTRACT

Comparative morphological studies of male genitalia from 6 honey bee species revealed distinct qualitative differences in each species in both everted endophalli and endophalli in situ. The endophalli in situ can be studied in drones preserved in ethanol. The following characters are most suitable for classification in situ: 1) pattern of the ventral hairy field of the vestibulum; 2) number of folds and hairy patches of the ventral cervix; 3) form of the dorsal hairy field of the cervix; and 4) the form of its appendage (lobe). Three types of endophalli can be classified. One type is present in the cavity-nesting honeybees *A mellifera*, *A cerana* and *A koschevnikovi*, the second in the free-nesting dwarf honeybees *A andreniformis* and *A florea* and the third in the *A dorsata* complex.

Keyword: *Apis*; Morphology; Reproduction; Endophallus; Systematics.