

ULTRASTRUCTURE OF ANTENNAL SENSORY ORGANS IN PRORHINOTERMES SIMPLEX (RHINOTERMITIDAE, ISOPTERA)

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Structure, distribution and number of surface sensilla on the antenna of *Prorhinotermes simplex* (Rhinotermitidae, Isoptera) were studied by scanning (SEM) and transmission electron microscopy (TEM).

Distribution and organization of sensilla on the antenna of pseudergates, presoldiers (=white soldiers) and soldier stages were compared also with other species of termites like *Neotermes castaneus* (Kalotermitidae), *Zootermopsis angusticelis* (Hodotermitidae) and *Reticulitermes santonensis* (Rhinotermitidae).

The antennae of all forms of *Prorhinotermes simplex* were of the moniliform type. The scape and pedicel form the basal segment followed by the flagellum. Several main types of sensilla were identified based on their cuticular morphology (length, shape, surface microstructure and cuticular socket). The sensilla were regularly arranged around the antennal annuli.

The most abundant sensilla on antennal surface were single-walled type with pores and thick-walled poreless type. Some of these sensilla were further subdivided on the basis of their dendritic morphology and number of associated sensory neurons. An attempt was made to ascribe the sensillar types to specific sensory modalities on the basis of both cuticular and dendritic arrangements.

No substantial differences between individual forms (pseudergates, white soldiers, soldiers) in term of sensilla structure, distribution and types were observed. In majority of sensilla described no specific features were discovered with respect to general sensillar organization (envelope cells, deep infolding of basal membrane surrounding the sensillar cavity, intercellular septate junctions among envelope cells etc.). Specific situations found in white soldiers could be correlated to moulting.

One sensillum which has not been yet described on termite antennae was found.