MORPHOLOGY AND ULTRASTRUCTURE OF ANTENNAL SENSILLAE IN THE COLORADO POTATO BEETLE LARVAE, LEPITOINOSA DECIMINATA SAY (COLEOPTERA: CHYSOMELIDAE)

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The Colorado potato beetle, Lepinotus decimicincta Say, is the most serious insect pest of the cultivated potato and the major pest worldwide. Also the Colorado potato beetle has been extensively studied as a model of the plant-insect relationships. The distribution, external morphology and ultrastructure of various types of sensilla on the antennae of larvae are described based on scanning and transmission electron microscopy. On the antennae are placed sensilla of 4 basic morphological types: trichoid, basiconic, styloconic and conical sensilla. The antennae of the larvae has 11 sensilla: 3 trichoid, 2 basiconic and 1 styloconic sensilla on the apex of the third segment and 2 trichoid, 2 basiconic and 1 conical sensillum on the distal part of the second segment. It was shown that sensory organs are equipped with 2-6 neurons. Trichoid sensillae innervated 2-4 receptor cells and the dendrite branches of receptor cells approach of the pores, it testifies to olfactory sensitivity. Styloconic sensillae is equipped with 6 receptor cells and have function of gustatory. The sensilla basiconica are innervated 4-5 neurons and have of chemoreceptor function. Also conical sensillae are equipped 2 receptor cells and have function of olfactory. In other word, on the antennae of larvae the olfactory and gustatory sensilla are detected. The work was supported by RFBR (grant N 04-04-48779).