

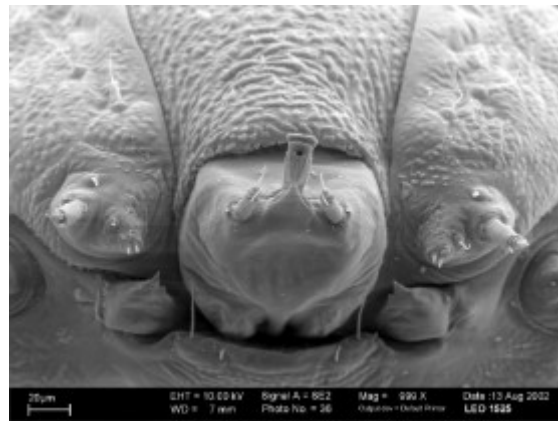
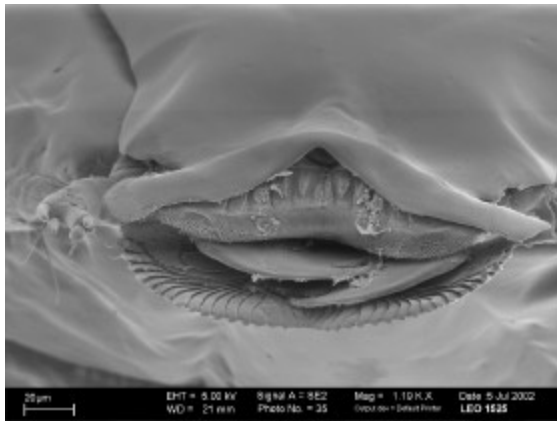
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## The Feeding Behaviour, Biology and Morphology of the horse-chestnut leaf- miner *Cameraria ohridella* in Hamburg, D: HAM-CAM-Project 2003.

The HAM-CAM-Project was initiated in the city of Hamburg in 2001 to investigate the horse-chestnut leaf-miner, *Cameraria ohridella* (HAM-CAM-Project), Internet: [www.stadtgruen.hamburg.de](http://www.stadtgruen.hamburg.de), [www.galk.de](http://www.galk.de), [www.dreamwater.com/biz/mactode](http://www.dreamwater.com/biz/mactode), which occurred in large numbers in the city, starting in 2001. The research focused on new aspects of the biology, morphology and especially the feeding behaviour (host-parasite relationship) using digital film and microscopic techniques. Also, the occurrence, distribution and population dynamics of the three generations of *C. ohridella* were documented and analysed. The morphology of all stages (egg, L1-L4/5 sap-feeding larval stages, 2 spinning larval stages, pupae and adult moths) were investigated by different microscopic methods, including scanning electron microscopy, and the results will be presented and discussed. The possibilities for the control of *C. ohridella* using insecticides, mechanical methods or biological control will be described. Investigations of the natural insect antagonists of *C. ohridella* in the area of the city of Hamburg show low densities of these insects (1). The application of insecticides within the city of Hamburg is prohibited, so the collection and destruction of the leaves that fall in autumn and earlier is the main defence against *C. ohridella*. More research is needed to establish effective mechanical and biological control systems for *C. ohridella*.



*C. ohridella*: Sap-feeding larval stages have a progranthous head capsule (left), and well developed mandibles, which articulate during feeding with hundreds of moveable teeth of the integument. In comparison spinning larval stages (right) show reduced mandibles and maxillae, and a well-developed spinneret with labial palps - see film,(1).

All results are presented on film: DVD/VHS, ca. 40 min.(English/German): Zunke, U. und Doobe, G. (2003) : HAM-CAM-Projekt: Biologie von *Cameraria ohridella*, Mactode Publications,, Hamburg,D und Blacksburg,USA; ISBN 1-893961-26-5). Orders: mactode2@aol.com.

Literature (1) Zunke, U., Doobe, G. 2003. Neue Erkenntnisse zur Rosskastanien-Miniermotte durch das Hamburger *Cameraria*-Projekt. In: Jahr der Baumpflege 2003, Thalacker Medien Braunschweig, Germany; (Eds.: Dujesiefken,D.,und Kockerbeck,P.) ; Chapter 3 : Baumkontrolle und Verkehrssicherheit, S. 176-193.