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Titolo	Insect Mouthparts [[electronic resource]] : Form, Function, Development and Performance // edited by Harald W. Krenn
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Descrizione fisica	1 online resource (688 pages)
Collana	Zoological Monographs, , 2523-3904 ; ; 5
Disciplina	595.7
Soggetti	Entomology Animal anatomy Animal physiology Animal ecology Invertebrates Evolutionary biology Animal Anatomy / Morphology / Histology Animal Physiology Animal Ecology Evolutionary Biology Insectes Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction: Ecological Importance of Insect Feeding -- Form and Function of Insect Mouthparts -- Fluid-Feeding Mouthparts -- Suspension and Filter Feeding in Aquatic Insects -- Theme and Variation in the Development of Insect Mouthparts -- The Early Evolution of Biting-Chewing Performance in Hexapoda -- The Generalized Feeding Apparatus of Cockroaches: A Model for Biting and Chewing Insects -- Physical Determinants of Fluid-Feeding in Insects -- Hierarchical Microstructures and Functions of the Lepidopteran Proboscis Cuticle -- Comparative Functional Morphology of Ant Mouthparts and Significance for Liquid Food Intake -- From Chewing to

Sucking via Phylogeny – from Sucking to Chewing via Ontogeny:
Mouthparts of Neuroptera -- Structure and Evolution of Mouthparts in
Coleoptera -- What's on the Menu: Floral Tissue, Pollen or Nectar?
Mouthpart Adaptations of Anthophilous Beetles to Floral Food Sources
-- Evolution of the Multifunctional Mouthparts of Adult Vespidae --
Superlong Proboscises as Co-Adaptations to Flowers -- Morphogenesis
of Piercing Stylets in Hemiptera -- The Fossil Record of Insect
Mouthparts: Innovation, Functional Convergence and Association with
Other Organisms.

Sommario/riassunto

This is the first comprehensive book focusing on the form and function of insect mouthparts. Written by leading experts, it reviews the current knowledge on feeding types and the evolution of mouthparts and presents new research approaches. The richly illustrated articles cover topics ranging from functional morphology, biomechanics of biting and chewing, and the biophysics of fluid-feeding to the morphogenesis and genetics of mouthpart development, ecomorphology in flower-visiting insects as well as the evolution of mouthparts, including fossil records. Intended for entomologists and scientists interested in interdisciplinary approaches, the book provides a solid basis for future scientific work. Chapter 6 of this book is available open access under a CC BY 4.0 license at link.springer.com.
