

# BIOLOGIA CENTRALI-AMERICANA.

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## ZOOLOGIA.

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### MOLLUSCA.

#### A. SPECIES TERRESTRES.

#### GASTROPODA PULMONATA DIOICA\*.

One pair of feelers, eyes at their base ; sexes separated ; operculum rarely wanting.

#### Fam. CYCLOPHORIDÆ.

Operculum circular, formed of numerous narrow whorls, which give it the appearance of concentric structure. Shell depressed or globular, widely umbilicated, generally of simple, somewhat coarse sculpture and brown (pale yellowish to chestnut) hue, concolorous or with a single darker band ; peristome straight or (in the American forms rarely) expanded. Size rather large. Regular Tænioglossata as regards the radula.

The Cyclophoridæ have two centres of geographical distribution—one in the East Indies extending to Polynesia (more rich in distinct genera, especially some with complicated structure of the peristome), and the other in Tropical America. In the latter their head-quarters is the tract of the Andes from Mexico to Ecuador ; some species are also found in Bolivia and on the east coast of Brazil and Guiana, and (a few) in the Caribbean Islands (about twenty, more especially in Jamaica), but there are none in the Nearctic Region. The two principal genera, *Cyclotus* and *Cyclophorus*, discriminated somewhat artificially by the structure of the operculum, are common to both hemispheres ; but there are natural groups or subgenera within each, which are also geographically circumscribed. The subgenus *Cyrtotoma* is confined to Mexico, *Amphicyclotus* to the continent of Central and South America.

\* In the arrangement of the letterpress I have tried an innovation by summing up the conchological differences of the species in a common table, instead of giving a separate diagnostical description of each at its place ; I believe the comparison and determination will thereby be rendered more easy, as by this method the common and the differential characters of the species are seen at a glance, without referring to different pages. In opposition to the "clavis"-like tables, which are usual in many handbooks, it has the advantage that the student may choose between five or six qualities in beginning the determination, and may take that which is the most striking or the least ambiguous in his specimen.—E. v. M.

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