CHIRONOMID LARVAE AS THE MAIN ELEMENT IN ENERGY FLOW THROUGH FRESHWATER ECOSYSTEMS

Summary

Circulation of energy much depends on biological transformations of organic matter, of both allochthonous and autochthonous origin. Microorganisms (bacteria and fungi) and macroinvertebrates exploiting available local environmental resources play an especially important role in this flow. Because among macroinvertebrates, chironomids (Chironomidae, Diptera) dominate in freshwater ecosystems these insects are very important. Energy flow is affected to the highest degree by detritivores feeding on small particles of organic matter: either suspended in water (filtering collectors, such as *Odontomesa fulva* and *Micropsectra*) or occurring on/in river bottom (gathering collectors or deposit feeders, *Prodiamesa olivacea, Glyptotendipes*). In turn periphyton feeders, such as *Cricotopus*, scrape periphyton from surfaces of various substrate objects, including epiphyton developing on vascular plants. Predators, e.g. *Conchapelopia melanops* and *Cryptochironomus*, constitute from 10 to 20% of total benthos density along the longitudinal river profile. Each of this group shows a morphological adaptation to the kind of food resources used.

Photos of chironomidae head capsules were made by scanning electron microscope Vega 5135 Tescan in low vacuum operation's mod.