Notes by R. W. Edwards on a translation by A. Murphy.

LUFEROV V. P. : SOME DATA ON THE PREDACIOUS BEHAVIOUR OF TENDIPEDIDAE LARVAE.

O. R. Acad. Sci. U. R. S. S. 111, pp 466-469 1956

A study has been made primarily of the food of Procladius nigriventris; this includes Alona affinis, Bosmina coregoni, Camptocercus, Eucyclops serrulatus, Paracyclops fimbriatus, Acanthocyclops viridis, Harpacticoida, Disptomus gracilcides, Ostracoda, Chironomus sp, Polypedilum sp and Tanytarsus sp.

Chironomus larvae usually found in the gut are in their 1st or 2nd instars, though occasional 3rd instars are present. Oligochaeta comprise 20 - 48% of the diet.

In the Volga area none of the Procladius larvae contained chironomid larvae presumably because the latter were all large at this time. The guts of the Procladius larvae were less full than at other times of year. Diatoms were found in the gut in the springtime; these were associated with algal blooms. At this time of year the guts often contained nothing but algae. In June the chironomid index (measure of filling = index) was high with a preponderance of Tanytarsus sp. In July the food was principally Procladius sp and Tanytarsus sp with small amounts of Alona affinis and ostracods.

Similar observations were carried out in the neighbourhood of the White Sea. In June 1955 young chironomids were found in the gut. Entomostracans and oligochaetes are less important than in the Rabinsky area (Volga).

Procladius nigriventris tends to swallow its catch whole; chironomid larvae being usually whole in the gut. Oligochaetes are generally broken up.

It is of interest that "cannibalism" occurs in this species, especially in the White Sea area in July, when large numbers of other chironomids are present. Cannibalism in apparently not associated with unfavourable feeding conditions.

Ablesmyia monilis in the Rabinsky area live principally among weeds and feed principally on Sida crystallina, Acroperus harpae, Chydorus sphaericus, Cyclops sternuus, Hydracarina, Cricotopus sylvestris, Paectrocladius psilopterus, Thienemanniella sp and Stylaria sp. Stylaria chaetae were found in most individuals. Though chironomid larvae were not frequently taken they were of some importance because of their heavy weight.

Anatopynia plumipes fed almost entirely on young chironomids. This species was found in the temporary ponds of the Rabinsky area.

Cryptochironomus defectus also shows signs of predatory behaviour. Larvae were taken from various biotopes. Guts were full of detritus containing oligochaete chaetae. In two cases Ostracods were present in the gut contents. The larvae do not build tubes but wander. The author considers this species a facultative predator.

It has been suggested by certain authors (1, 2, 4, and 5) that certain members of the genus Cricotopus are facultative predators. Larvae of Cricotopus sylvestris gathered from the Rabinsky area feed exclusively on algae, not a single representative of the invertebrates was discovered in the gut of this species. Diatoms formed the major element of the food.

Laboratory experiments with Cricotopus sylvestris suggests that when epiphytic algae are present no other food is taken. (Abramis spp (Pisces) eggs, 4th instar larvae of Polypedilium and 1st instar of Chironomus sp were offered). This species could be induced to eat Paectrocladius and Glyptotendipes larvae and Eurycercus lamellatus when no algal growths were present. In another series of experiments 20 larvae were placed in petridishes with no algal growth and starved for 24 hours; when 3 days old Chironomus larvae were introduced these were eaten. In 1 hour some larvae had eaten 21 Chironomus larvae. This predatory habit was

maintained until the 3rd day when algae were introduced. The Cricotopus larvae reverted to algal feeding even though young Chironomus larvae were offered as an alternative.

Similar experiments were conducted with mature Chironomus plumosus larvae. When starved for one day these larvae ate 1st and 2nd instars of the same species, but this cannibalism ceased when mud was introduced.

Notice

Please note that these translations were produced to assist the scientific staff of the FBA (Freshwater Biological Association) in their research. These translations were done by scientific staff with relevant language skills and not by professional translators.