

#### DRAGONFLIES IN THE DIET OF THE TELEOSTEAN FISH IN THE COMOE RIVER, UPPER VOLTA, WEST AFRICA

The stomach contents of 10 species of entomophagous teleostean fish from the Lower Comoe River, pertaining to the orders Mormyriformes (1), Cypriniformes (1), Siluriformes (5) and Perciformes (3) were examined in March, 1978, in the framework of a project on the side-effects of the insecticides used against the tsetse, and carried out by the Department of Toxicology, Agricultural

University, Wageningen, the Netherlands, in cooperation with the World Health Organization. The fish were classed into six size-classes, ranging from 11 to 40 cm. The dragonfly specimens recovered from the stomachs were all in larval stage, hence they could not be further identified. Adults of *Pseudagrion sjöstedti* Foerster, *P. whellani* Pinhey, *Orthe-trum chrysostigma* (Burm.), *O. monardi* Schmidt, *Trithemis annulata* (P. de Beauv.) and *T. arteriosa* (Burm.), however, were common on the observation site.

Dragonflies were completely lacking in all 36 specimens of the three perch-like species examined, referable to three families of two suborders, viz. *Ctenopoma kingsleyae* (18; Anabantidae, Anabantoidei), *Lates niloticus* (6; Serranidae) and *Palmatochromis guntheri* (12; Cichlidae, both Percoidei), though these contained some trichopteran and chironomid material and, in the case of *Ctenopoma*, also some crustacean remains.

In the stomachs of the single cyprinid, *Alestes rutilus* (17), and in those of the five catfishes, *Chrysichthys velifer* (84), *Synodontis eburneensis*, *S. punctifer*, *S. schall* (together 84; all Bagridae) and *Europius mentalis* (17; Schilbeidae) larval dragonflies were regularly present, though in relatively low percentages, viz. *A. rutilus*: 6.0%, *C. velifer*: 9.0%, *Synodontis* spp.: 5.5%, and *E. mentalis*: in 8.0% of the fish examined. These values are much lower than those given by S.A. MITCHELL (1976, *Kariba Stud.* 8: 109-162) for *S. zambezensis* (12.0%) and *E. depressirostris* (29.5%) from the Kariba Lake, Rhodesia. Save for *Eutropius*, and to a lesser extent for *Alestes*, the chironomids represent (at least in March) the main item in the diet of the Comoe River cyprinid and silurine fish; the other items are, next to dragonflies, the crustaceans, plecopterans, coleopterans and the heteropterans.

In the mormyrid, *Gnathonemus pictus* (34

specimens examined, ranging in length from 16 to 40 cm), in all full stomachs (81.0%) dragonflies were present along with Ephemeroptera, Plecoptera, Chironomidae and Trichoptera, regardless of the size of the fish. They represent by far the largest volume in the food of this fish (50.0%), though in the number of specimens consumed the chironomids are more numerous.

From these observations it is apparent that larval dragonflies represent a fairly important item in the diet of the mormyrids, cyprinids and silurids of western Africa, while they hardly play any role in the food of the perch-like fish examined.

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