

On the morphology of *Lamproglena monodi* Capart, a parasitic Copepod on the gills of Tilapia in Egypt

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Abstract: A parasitic copepod, *Lamproglena monodi* Capart, 1944, is re-described on the basis of specimens collected on the gill filaments of three species of Tilapia freshwater fish (Cichlidae) obtained at El-Minia, Nile river system, Egypt. Infection rate was 20% in *Oreochromis niloticus niloticus*, 16% in *Sarotherodon galilaeus galilaeus* and 20% in *Tilapia zilli*. Histological and SEM observations showed that the maxillae act as the primary grasping organ and that the maxillipeds scrape off the host tissue for food. The bilobed oral apparatus is considered to be homologous with the labrum.

Kurzfassung: Der parasitäre Copepode *Lamproglena monodi* Capart, 1944, wird anhand von Exemplaren, die an den Kiemenfäden von drei Arten von Tilapia-Barschen (Cichlidae) im ägyptischen El-Minia, das zum Einzugsgebiet des Nil gehört, neu beschrieben. Die Infektionsrate betrug bei *Oreochromis niloticus niloticus* 20%, bei *Sarotherodon galilaeus galilaeus* 16% und bei *Tilapia zilli* 20%. Histologische und rasterelektronenmikroskopische Beobachtungen zeigen, dass die Maxillen die wichtigsten Greiforgane darstellen, und dass den Maxillipeden die Funktion zukommt, vom Wirtsgewebe Nahrung abzulesen. Der doppelt gelappte Oralapparat wird mit dem Labrum als homolog angesehen.

Keywords: *Lamproglena monodi*, parasitic Copepoda, *Tilapia*, Lernaecidae, Egypt, Middle East.

Introduction

The genus *Lamproglena* von Nordmann, 1832 of the family Lernaecidae comprises gill parasites of freshwater fish in Europe, Asia and Africa. So far, a total of 41 taxa of the genus have been described. Five of them are known from fishes from the Nile river: *Lamproglena angusta* (WILSON 1928, MONOD 1932), *L. werneri* (ZIMMERMANN 1923), *L. hemprichii* (VON NORDMANN 1832, ZIMMERMANN 1923), *L. cleopatra* (HUMES 1957) and *L. barbicola* (FRYER 1961). Of these, *Lamproglena cleopatra* was originally described from Egypt.

Lamproglena monodi was described for the first time by CAPART (1944) in the Congo, from *Haplochromis nobilis* (Boulenger), *H. macrops* (Boulenger), *H. eduardii* Regan, *H. moffati* (Gastelnau), *H. serridens* Regan, and *Hemichromis fasciatus* Peters. Although the parasitic copepod fauna of African freshwater fish has been relatively well studied (AVENANT & VAN AS 1985, CAPART 1944, CUNNINGTON 1914, FRYER 1956, 1961, 1963, 1964, 1968, HUMES 1957), there is relatively little information on *L. monodi*. It has apparently not been reported from Egypt before.

In all species of Lernaecidae belonging to the genus *Lamproglena*, only the females infect their host fishes, and the males live free throughout life. In this study, the female of *L. monodi* is re-described, and the manner of attachment and feeding are clarified using light and scanning electron microscopy.