

## Prevalence of monogenean species in *Oreochromis niloticus* from southern Brazil

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Due to its species richness, ubiquity and epizootic potential, monogenean parasites are considered one of the most important in captive fish breeding, including Nile tilapia *Oreochromis niloticus* whose association, not rarely, results in significant economic losses due to high mortality rates. Among the studies necessary for the elaboration of control strategies for the group, there is a highlight for parasitology. Therefore, the knowledge of their indices and forms of distribution are fundamental. The aim of this study was to report the prevalence of monogenean species in the gills and stomach of *O. niloticus* collected in the southern Brazil. A total of 55 fish (weight of  $21.65 \pm 12.62$  g, total length of  $10.97 \pm 1.92$  cm) were collected from a fish farm in earthen pond and transported alive to the Aquatic Organisms Health Laboratory (AQUOS) of the Federal University of Santa Catarina (UFSC). 24 h after acclimation period, the fish were anesthetized with eugenol (75 mg / L) and euthanized by cerebral commotion. The gill arches were removed, bathed in hot water (55°C) and fixed in 70% ethanol for further quantification and identification. With the help of a stereomicroscope, all Monogenea specimens were mounted in Hoyer's and identified according to specialized literature. Prevalence indices were calculated according to Bush et al. (1997). A total of 93 parasites specimens were found, with the highest prevalence reported for *Cichlidogyrus sclerosus* Prince and Kirk, 1967 (61%), followed by *C. tilapiae* Paperna, 1960 (16%), *C. dossoui* Döuellou, 1993 (10%) *Enterogyrus cichlidarum* Paperna, 1963 (8%), *C. halli* Prince and Kirk, 1967 (4%) and *Scutogyrus longicornis* Paperna and Thurston, 1969 (1%). Parasitism by monogenean is common in fish farms around the world. Therefore, in order to contain economic losses caused by massive mortalities, cultivation environments must provide adequate water quality conditions in order to avoid eutrophic water with excess of organic matter and favorable to the proliferation and spread of these parasites. In a study conducted by Lerssutthichawal Theerawoot in Thailand with *O. niloticus* a total of seven species of monogenean were identified from cyprinid and clariid fish. In the state of Santa Catarina, southern region of Brazil, *E. cichlidarum* was reported parasitizing the stomach of cultured tilapia for the first time in 2007. In the same region and culture conditions, specimens of *C. sclerosus*, *C. halli*, *C. thurstonae* Ergens, 1981, *C. tilapiae* and *S. longicornis* were found parasitizing the gills of *O. niloticus*. Parasitic surveys already carried out in fish farms in this region have shown that *C. sclerosus* is commonly the most prevalent species of the genus, corroborating with the results obtained here. In the present study, nine specimens of *C. dossoui* were found parasitizing the gills of *O. niloticus* grown in earthen ponds. *C. dossoui* has a wide geographic distribution and host specificity, and has been reported so far in nine different cichlid species and six countries, none of them in South America. Therefore, this work is the first record of this species in Brazil and, consequently, in the South American continent.