

**PHILOMETRA KARUNENSIS SP. N. (NEMATODA:
PHILOMETRIDAE) FROM *BARBUS SHARPEYI* (PISCES)
IN FRESHWATERS OF SOUTHWEST IRAN**

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During a study on some *Barbus* species (Pisces: Cyprinidae) of the Mesopotamian fauna region (the south-western part of Iran) a new nematode species, *Philometra karunensis* sp. n., was found in the swimbladder (under the serosa cover) and abdominal cavity of *Barbus sharpeyi* (Günther). Males distinctly differ from the known species in the length of the spicules and gubernaculum, while subgravid females are very similar to those of *Philometra* spp. known from the abdominal cavity of cyprinid fishes.

Key words: Nematoda, *Philometra*, *Barbus sharpeyi*, Iran

During a survey on the nematode fauna of Iranian fishes, large numbers of worm species were collected and identified. Among the nematodes recovered, a new *Philometra* species was studied in detail.

Papers on the occurrence of philometrid nematodes in Iran were first published by Ebrahimzadeh and Nabawi (1975) and Moghainemi and Abasi (1992). These authors identified the *Philometra* specimens found in freshwater fishes only to the genus level, but gave no data on their morphology and seasonality. Molnár and Pazooki (1995), who studied *Philometra* infection in Iranian barbels (*Barbus* spp.) from the Mesopotamian region, found these parasites in *Barbus sharpeyi* (Günther, 1874) and *B. luteus* (Heckel, 1843). They could not specifically identify the specimens but supposed that these worms represented a new species. However, having obtained the male and subgravid female specimens from different species of fish, they abstained from formally establishing one.

More data are available on the occurrence of philometrid nematodes from the Iraqi side of the Tigris River system. Herzog (1969) was the first to find female specimens of a *Philometra* sp. in the abdominal cavity of *Barbus luteus*, then Ali et al. (1987) reported the occurrence of a *Philometra* sp. in the abdomi-

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nal cavity of *Barbus grypus* (Heckel, 1843), which they identified as *P. abdominalis* Nybelin, 1928.

Philometrid nematodes are common parasites of freshwater and marine fishes. Their systematics is mainly based on the morphological characteristics of female worms, because only gravid females have been described for most of the known species. On this basis, Moravec and Shaharom-Harrison (1989) distinguished 11 genera in the family Philometridae, of which species of the genus *Philometra* are the most numerous and widespread.

The purpose of this paper, partly based on data by Molnár and Pazooki (1995), is to describe a new *Philometra* species from *Barbus sharpeyi*.

Materials and methods

Philometra specimens were collected during parasitological surveys involving fish species of the Karun River, Shadegan Marsh and Hoor-Elazim Marsh (Tigris River region, Persian Gulf system) between 1993 and 1996. A total of 62 *Barbus sharpeyi* (Günther, 1874), 2–4 years old, were dissected for parasites. A general parasitological dissection was performed. In order to detect *Philometra* specimens, the abdominal cavity and the swimbladder were checked with meticulous care. Organs of the abdominal cavity were examined in 0.65% saline and the cavity was rinsed with this solution. The occurrence of *Philometra* stages in this washing fluid was checked in a Petri dish. Males and retarded females were looked for in the serous membrane of the second sac of the swimbladder, which was peeled off the sac wall.

Nematodes found were placed into 4% formalin in physiological saline and preserved until their detailed study. The isolated *Philometra* specimens were cleared in lactophenol to examine their surface and inner structure. The structure of the cephalic papillae and the buccal region was studied in *en face* view after decapitating the subgravid females with a sharp blade (Moravec, 1994). Measurements and drawings were taken using an Olympus microscope.

Results

During the survey conducted between 1993 and 1996, 13 out of 62 *B. sharpeyi* specimens (21%) proved to be infected by different *Philometra* stages. Three of the infected *B. sharpeyi* harboured 5 subgravid females in the abdominal cavity and 10 of them were infected by 9 males and 13 mature non-gravid females under the serosa of the swimbladder. The males and the non-gravid females were found in *B. sharpeyi* from July to mid-September. Subgravid females occurred from the

