

## NEW SPECIES OF THE GENUS *GYRODACTYLUS* (MONOGENOIDEA) FROM THE DANUBE BASIN

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**Abstract.** During investigations of the parasite fauna of fishes from the Danube basin, we found on *Chondrostoma nasus* (L.) and *Proterorhinus marmoratus* Pallas in addition to their common parasites two representatives of the genus *Gyrodactylus*, which we consider new species for science. In the following text their determining signs—the chitinous armament of the haptor—are described and figured.

*Gyrodactylus chondrostomi* sp. n.

Fig. 1a

**Holotype:** Overall length of anchors 0.040 mm, length of their basal part 0.030 mm, of the point 0.020 mm. The inner root of these anchors, extended at the base is 0.013 mm long. Principal connecting bar with rounded lateral margins is 0.005 mm long and 0.019 mm wide. Its posterior margin carries a membranous extension, its exact shape and dimensions could not be determined. Dimensions of auxiliary connecting bar 0.001 by 0.016 mm. Overall length of marginal hooks 0.022 mm, of the hook itself 0.005 mm.

**Paratype:** Overall length of anchors 0.038 mm, length of basal part 0.028 mm, of point 0.019 mm. Length of inner root anchor 0.012 mm, dimensions of principal connecting bar 0.004 by 0.018 mm, of auxiliary connecting bar 0.001 by 0.015 mm. Overall length of marginal hooks 0.022 mm, of the hook itself 0.005 mm.

**Host:** *Chondrostoma nasus*

**Location:** gills

**Locality:** River Tisa near Rákocziujfalu (Central Hungary).

*G. chondrostomi* n. sp. resembles in the shape of the anchors and the principal connecting bar any species of the morphological group of *G. elegans* Nordmann, 1832. Strikingly different is only the shape of the marginal hooks.

**Holotype:** Overall length of anchors 0.044 mm, of their basal part 0.035 mm, of their point 0.022 mm. Irregularly oval membranous bars of yet unknown function

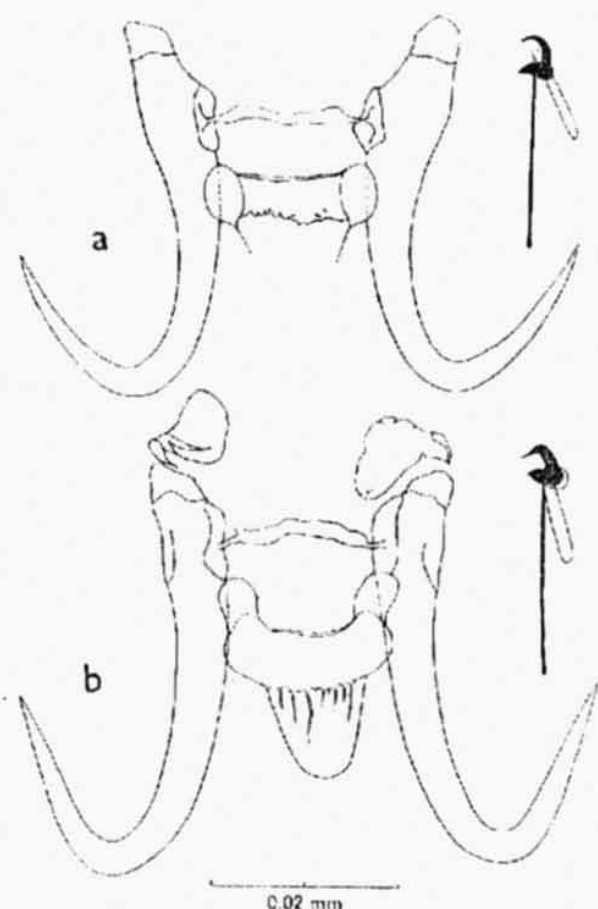


Fig. 1. Anchors and marginal hooks of the haptors. a — *Gyrodactylus chondrostomi* n. sp., b — *G. proterorhini* n. sp.

are situated in front of the very short (0.012 mm) internal root of these hooks (see drawing). Dimensions of the principal connecting bar, moderately arching and with a 0.012 mm long membranous extension, are 0.005—0.006 by 0.019 mm. Attached to the lateral margins of this bar are 0.005—0.006 mm long processes, extending in forward direction, which make the whole bar look like a widely opened letter U. The dimensions of the auxiliary bar are 0.002 by 0.018 mm. Overall length of the marginal hooks 0.024 mm, the hook with its typically curved point is 0.005 mm long.

**Paratypes:** Overall length of anchors 0.041—0.042 mm, of their basal part 0.031—0.035 mm, of the point 0.019—0.020 mm, of the internal root 0.01—0.011 mm. Dimensions of the principal connecting bar 0.004—0.006 by 0.018—0.019 mm, length of the lateral extensions of this bar 0.005—0.006 mm, of the membranous extension 0.01—0.011 mm. Dimensions of the auxiliary bar 0.001—0.002 by

0.016—0.017 mm. Overall length of marginal hooks 0.023—0.024 mm, the hook measures 0.004—0.005 mm.

Host: *Proterorhinus marmoratus*

Location: fins, gills, skin

Locality: Inundation pool of the river Danube near Komárno (southern Slovakia)

The principal connecting bar and partly the anchors of *G. proterorhini* n. sp. are very similar in shape to those of *G. arcuatus* Bychowsky, 1933, differing from it, however, in the shape of the marginal hooks.

*G. proterorhini*, found previously in our country (ERGENS 1962), has been taken erroneously for the species *G. arcuatus*.

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## BEETLES AS INTERMEDIATE HOSTS OF CESTODES OF THE FAMILY HYMENOLEPIDIDAE

During studies of beetles of the family Carabidae, assumed to be intermediate hosts of different cestode species, parasitizing terrestrial birds in southern Bohemia, several beetle species were experimentally infected with mature eggs of the species *Variolepis crenata* Goeze, 1782 and *V. farciminosa* Goeze, 1782, obtained from *Garrulus glandarius*. According to our results, only the beetle species *Pterostichus madidus* Fabr. and *Carabus hortensis* L. were positive.

15 days after the experimental invasion, the beetles were examined in post mortem. Cysticeroids of *V. crenata*, *V. farciminosa* and of another undetermined cestode species of the family Hymenolepididae were found in their body cavities. All three cysticeroid types are described and figured in the following text.

### 1. Cysticeroid of *Variolepis crenata* Goeze, 1782

Fig. 1

Description: Cysticeroid of oval shape, length 0.300—0.374 mm, width 0.237 mm. Width of scolex 0.195—0.202 mm, length of all four oval suckers 0.097 mm, width 0.078 mm; length of rostellum 0.095—0.105 mm, width 0.074 mm, armed with 10 hooks on one row, length 0.023 mm. Length of tail 0.84—0.89 mm, width 0.04—0.15 mm. Calcareous corpuscles distributed evenly around scolex. Location: body cavity of *Carabus hortensis* L.

Fig. 1. *Variolepis crenata* — a — cysticeroid; b — hooks.

### 2. Cysticeroid of *V. farciminosa* Goeze, 1782

Fig. 2

Description: Oval cysticeroid, length 0.39 to 0.40 mm, width 0.35 mm, covered with a wall 0.038—0.042 mm thick. Scolex 0.220—0.234 mm wide, 0.210—0.218 mm long, with four oval suckers measuring 0.085—0.105 mm in diameter. Rostellum 0.140—0.150 mm long, 0.090 wide, armed with 10 hooks in one row, length of hooks

