THE FINDING OF THE CARYOPHYLLAELID CESTODE ARCHIGETES SIEBOLDI LEUCKART, 1878 IN CARP IN CZECHOSLOVAKIA

During a helminthological examination of the fish sample from the pond Rolniberk near Jindrichova Hradec in South Bohemia, Czechoslovakia (basin of the R. Elbe), taken on 11 October 1984, a small-sized caryophyllaelid cestode, later determined as Archigetes sieboldi Leuckart, 1878, was found in the middle part of the intestine of one out of four specimens of carp (Cyprinus carpio L.). Body length 26 cm examined. Since this is only the second record of this parasite from fishes in Czechoslovakia and because it has not been recorded previously in carp, I consider it useful to publish this finding.

Description (according to a stained specimen mounted in Canada balsam) (Fig. 1): Body elongate-oval, head round; length of body 2.69 mm, maximum width 0.834 mm. Bothridia (one dorsal and one ventral) almost indistinct. Anterior border of epitelliculin and testes at same level, 0.816 mm from anterior end of body. Videolarium extending posteriorly along both sides of body, being interrupted in ovary region; small group of postvariant follicles present. Some 50 small, round testes distributed in middle part of body between lateral bands of videolarium. Size of almost spherical cirrus 0.190 × 0.132 mm. Ovary in form of two wide lateral lobes interconnected by a narrow medial commissure. Uterus with many coils, anteriorly extending far in front of cirrus sac. Size of eggs 0.067 to 0.083 × 0.023 to 0.039 mm.

This species was usually reported under a synonym Bistocobolus appeniculatus (Stieda, 1927) in the European ichthyoparasitological literature, being considered conspecific with the larval form at a procercoid stage that had been described as Archigetes appeniculatus Rostel from the body cavity of tubificids by Mührk (1916) and Mührk (1917). In view of the compiled taxonomic history of the genus Archigetes, I am accepting here the conclusions of Calentine G. (Parasitol. 31: 243–248, 1965) who distinguished the genera Archigetes and Bistocobolus on the basis of differences in definitive and intermediate hosts, larval development and adult morphology (see also Chubb J. C., Advances in Parasitology 20: 1–129, 1983). According to Kennedy (Parasitology 58: 430–431, 1968), Archigetes appeniculatus is a synonym of A. sieboldi.

The life cycle of A. sieboldi can be completed in the oligochoe host (see Chubb 1982); according to Kulakovskiy (A. parasitol. 11: 177–183, 1964), in the western Ukraine two generations of this parasite can mature in oligochoe in a year, one about May, and the other about September–October. A. sieboldi has only a temporary survival in the fish intestine (Nybelin O., Zoologiska Bidrag Uppsala 35: 205–396, 1926).

In natural conditions this species was recorded for the first time from fishes by Stieda (Z. Parasitenk. 9: 771–786, 1907) who found it in tench in Germany. Later A. sieboldi was recorded from various cyprinids (Tinca tinca, Abramis brama, A. rogi, Blicca bjoerkna, Barbus barbus, Cyprinus carpio, Leuciscus leuciscus, Aspius aspius, Gobio gobio) in the rivers, lakes and ponds also in Poland (Janiszewska J., Zool. Polon. 5: 67–72, 1950).


Up to now, four species of caryophyllaelid cestodes have been reported from carp (C. carpio) in Czechoslovakia, of which Caryophyllaela filosa and Klassius scintius were found to be the causative agents of serious diseases of pond-reared carp here. Consequently, A. sieboldi is the fifth species of these cestodes occurring in carp in this country.

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Fig. 1. Archigetes sieboldi Leuckart, 1878 from the intestine of carp.