THE FINDING OF THE CESTODE PROTEOCEPHALUS NEGLICTUS LA RUE, 1911 FROM BROWN TROUT FROM CZECHOSLOVAKIA

During studies on the helminth parasites of fishes of the river Kamenci near Hrncisko (a tributary of the R. Elbe, northern Bohemia), also 10 specimens of brown trout, Salmo trutta m. fario L., were examined in November 1978 and July 1979; four of them (40%) harboured the cestode Proteocephalus neglectus La Rue, 1911 in their intestines, the intensity of infection being 1–5 (range 2) specimens per fish. While all cysticerci found in November were immature, the specimen obtained in July was fully mature, with posterior segments filled with eggs.

Brief description of adult specimen (Fig. 1):

Length of body 32.04 mm, maximum width 1.10 mm. Outside of anterior part of body covered by fine spines. Scolex anteriorly rounded, distinctly separated from remaining part of strobila; its width 0.21 mm. Scolex provided with four almost spherical suckers, size 0.060–0.072 mm by 0.072–0.078 mm; apical sucker well developed, 0.000 mm in diameter. Body segmentation starting some 0.8 mm from anterior extremity. Mature segments measuring 0.136–0.251 mm by 0.274–0.916 mm, being much wider than long. Size of ovary 0.544–0.854 × 0.084 to 0.82 mm. Vitellaria forming two longitudinal lateral bands. Testes mostly oval-shaped, size 0.019–0.024 × 0.000 mm, 43–46 in number. Length of cirrus 0.240–0.330 mm, representing approximately 0.25 of segment length. Gravid segments measuring 0.008–0.016 × 0.837–1.29 mm, being wider than long. Uterus forms 5–7 lateral bands on each side. Eggs spherical, 0.009–0.009 mm in diameter. Oocyste 0.021–0.024 mm in diameter.

By its morphology, P. neglectus is most indistinguishable from the cestogenus species P. percos (Müller, 1760) — a widespread parasite of perch and some other fishes in Europe. The cross infection experiments performed recently by Priemer (Angew. Parasit. 21: 125–133, 1980), who fed the infective larvae (excysted) and preyed forms of P. neglectus to perches, Perca fluviatilis L., were, however, unsuccessful; this confirms a considerable degree of host specificity in Proteocephalus members, indicating P. neglectus to be a distinct valid species.

In the literature, Proteocephalus neglectus has been reported as a specific parasite of salmonids of the genus Salmo, species from the territory of Switzerland, the USSR and Poland (e.g. Říha G. R., Zool. Anz. 38: 473–482, 1911; Freie V. L., Ösormy tyroldologi 5, Moscow, 1965; Grabda J., Katalog fauny pasztynowej Polski 2, Warszawa, 1971). It has recently been found in Salmo gairdneri as well in GDR by Priemer (op. cit.), who also studied its life cycle. As experimental intermediate hosts were found cestode larvae of the Cyelocephalus group and C. areor in which the larvae develop up to the cercoid stage; the latter is infective for trout.

P. neglectus has not hitherto been reported from Czechoslovakia, although it was as early as several years ago this parasite was found in pond reared trout, Salmo gairdneri Richardson, in western Bohemia, where it caused dying of highly infected fishes; as far as the author knows, these data have not been published. The present finding of P. neglectus from brown trout indicates distribution of this parasite also in natural waters and the possibility of its bringing in from these waters into the broodings of brown trout and possibly of other salmonids. Under fish farm conditions this parasite may be the cause of considerable economic losses.

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This volume is the last of a series of keys for the identification of Polish insects devoted to Molluspha. It deals with the members of 7 families mentioned in the title and includes 36 genera and 105 species. The first chapter presents a survey of individual taxa and synonyms. The most comprehensive chapter 2, covering more than 100 pages, contains the keys and descriptions. Its arrangement is similar as in the previous volumes. The keys concern genera and species, while the subgenera are differentiated only after the hosts. Most numerous are the subgenera of Aniselmorhais antarktika and A. desayi with 28 and 18 respectively, possible members on the territory of Poland. The third chapter covering 8 pages contains corrections and supplements to the previous parts. The following chapter is a list of hosts, birds and mammals, and Molluspha species recorded on them, with indication of species already recorded in Poland. The list of references comprises 55 selected citations, mostly monographs and more comprehensive papers, and their characterization. The volume concludes with a common index of Latin names of hosts and biting flies.

The six volumes of this monograph represent a unique work in the literature dealing with Molluspha and can be used for the determination of these insects even outside the country to which it is devoted. The work of the author should be highly appreciated. The arrangement of all volumes is unified, easy to survey and supplemented with a large number of beautiful figures. Of great value for young authors the comprehensive list of hosts and Molluspha parasites on them. Also the list of the book should be highly appreciated, though some taxonomists might disagree with the author's nomenclature of some taxa.

Prof. J. Zlotoryczka presented to the scientific public an excellent monograph in six volumes for the edition of which she was sincerely congratulated.

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