Annals of Parasitology 2023, 69, Supplement 1, s24

X[th] International Workshop on Cestode Systematics and Phylogeny, 4–10 August 2023, Warsaw, Poland

Checklist of Swiss cestodes

Jean Mariaux

Muséum d'histoire naturelle de Genève, C.P. 6434, 1211 Geneva 6, Switzerland

National checklists for biological organisms may serve various purposes and become references in domains like systematics or conservation biology. Such checklists are frequent for well-known or charismatic organisms but much less so for more discrete and less popular taxa, to whom cestodes obviously belong.

In Switzerland, a checklist of Cestoda has been published by Fuhrmann, almost exactly one century ago in 1926 and an update, compiling all the progress achieved since this date was necessary. This work is now completed and in press (Mariaux, J. in press. Checklist of the Cestoda (Platyhelminthes) of Switzerland. Revue Suisse de Zoologie).

The current checklist lists over 250 species in 190 vertebrate and 24 invertebrate hosts, which represents a very significant increase over Fuhrmann's compilation and places Switzerland among the European countries with the richest known cestode faunas. This expansion is mostly due to a higher attention paid to the parasitofaunas of wild mammals and birds, as ancient research was on domestic or game animals and fish. Given the landlocked nature of the country, the Swiss cestode fauna is largely (87%) constituted of Cyclophyllidea taxa, with Hymenolepididae, followed by the Dilepididae as the most represented families.

In this work all taxa ever recorded in the country (mentioned in the literature and/or represented by collection material with a clear Swiss origin) are listed, as far as possible under their present correct scientific name and together with a list of synonyms used for Swiss specimens. In addition, a simplified distribution in the country, available dates of collection and selected references are associated to each taxon. Additionally, a list of known specimens kept in collections is also provided. Interestingly, over 80% of the species collected in Switzerland have specimens preserved in academic institutions, mostly at the Natural History Museum of Geneva. Thus, any researcher interested in a specific taxon should have access to a comprehensive information on species recorded in Switzerland.

It should be noted that although precise determinations are relatively easy for most taxa, a major problem persists with certain groups of fish parasites, especially among the Proteocephalidae. These were abundantly reported at the turn of the XXth Century in a variety of hosts, including many coregonids. However, the systematics of both these parasites and their hosts remains unclear even today and many reports are debatable.

Globally, new reports were numerous in the second half of last century but have become scarce in recent decades. Today, tapeworms have been identified in no more than one third of Swiss vertebrate species and despite one century of progress, the true extent of their diversity in the country remains to be determined. Unfortunately, a lack of trained taxonomists linked to the ever-increasing difficulty to obtain vertebrates sampling permits make any further progress in this field quite hypothetical.