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## Research note

### First report of *Syphacia vanderbrueli* Bernard, 1961 (Oxyuridae) from *Micromys minutus* in Poland

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#### Summary

During the parasitological examination of wild rodents from Wrocław vicinity 11 female nematodes were isolated from the harvest mouse (*Micromys minutus*). The helminths were determined as *Syphacia vanderbrueli*. This is the first report of this parasite in Poland. Complete descriptions of the female individuals are given.

Key words: *Syphacia vanderbrueli*; rodents; Poland

#### Introduction

Nematodes belonging to the genus *Syphacia* are typical parasites colonizing large and small intestine of wild rodents. According to Fauna Europaea data, 12 species were described so far in Europe, however in Poland only 7 of them were confirmed: *S. agraria*, *S. frederici*, *S. nigeriana*, *S. stroma*, *S. petrusewiczi* from Lower Silesia (Hildebrand *et al.*, 2004; Popiolek *et al.*, 2004); *S. frederici*, *S. montana*, *S. stroma* from Warszawa area (Guerero, 1979) and *S. petrusewiczi* from the Mazury Lake District (Bernard, 1966; Behnke, 2001). *S. obvelata* was recorded from different regions of Poland (Pojmańska, 1998) but in accordance with papers by Quentin (1971) and Hugot (1988), the assertion of *S. obvelata* in other hosts than *Mus musculus* still needs a revision.

#### Material and Methods

During the parasitological study of wild rodents from Wrocław vicinity one individual of harvest mouse (*Micromys minutus*) was obtained and subjected to standard helminthological section. As a result of the section 11 female nematodes belonging to the genus *Syphacia* were found in caecum. Material was maintained in 70 % ethanol, fixed and cleared for examination with lactophenol.

#### Results and Discussion

According to Bernard (1966a), Quentin (1971), Tenora and Mészáros (1975), Ryzhikov *et al.* (1979) and Genov (1984) specimens were determined as *Syphacia vanderbrueli*, as well as the harvest mouse (*M. minutus*) is confirmed to be the specific host for this oxyurid so far. Simultaneously this is the first record of this parasite in Poland. The adult female parasites were examined to determine species composition with regard to their morphologic and morphometric characteristics, previously described by Tenora and Mészáros (1975). Length of the female body and tail size, in comparison with another species of genus *Syphacia* described in rodents, are relatively bigger. Head end is elongated laterally and similar to structure of *S. frederici* head. Lateral alae well developed intruding into cephalic vesicle and extending to tail end. Anterior part of inner surface of esophagus serrated (Fig. 1A, B). The measurements expressed in millimeters (minimum-maximum) of the most representative structures of *S. vanderbrueli* are

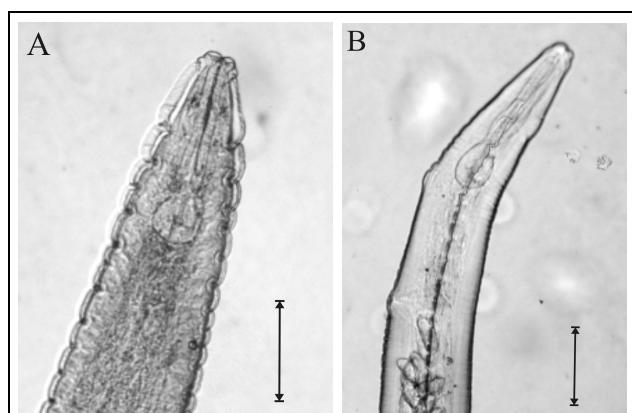


Fig. 1. *Syphacia vanderbrueli* (Bernard, 1966) from Poland, (scale bar = 0,2 mm),  
A – anterior part of female, dorsal; B – anterior part of female, lateral

Table 1. Comparison of morphometric data (expressed in mm) of *Syphacia vanderbrueli* (Bernard, 1961) from *Micromys minutus* in Europe

	Bernard, 1966a	Tenora and Mészáros, 1975	Genov, 1984	Ryzhikov, 1979	Material from Poland
Lenght of body	4.41 – 6.41	4.80 – 5.80	4.12 – 5.78	4.51 – 5.62	4.57 – 5.46
Max width of body	0.228 – 0.312	0.21 – 0.29	0.212 – 0.331	0.22 – 0.28	0.28 – 0.39
Lenght of esophagus	0.32 – 0.39	0.30 – 0.37	0.335 – 0.391	0.32 – 0.35	0.38 – 0.49
Nerve ring	–	0.15 – 0.16	0.138 – 0.157	0.14 – 0.19	0.13 – 0.14
Excretory pore from anterior extremity	0.39 – 0.61	0.43 – 0.55	0.146 – 0.544	0.41 – 0.65	0.43 – 0.48
Vulva from anterior extremity	0.76 – 1.22	0.87 – 1.04	0.732 – 0.970	0.78 – 0.95	0.74 – 0.92
Lenght of tail	0.83 – 0.95	0.64 – 0.97	0.74 – 1.02	0.8 – 1.0	0.62 – 1.06
Eggs	0.082 – 0.103 x 0.026 – 0.041	0.112 – 0.123 x 0.031 – 0.041	0.107 – 0.124 x 0.035 – 0.047	0.100 – 0.123 x 0.031 – 0.041	0.123 – 0.133 x 0.031 – 0.051

given in Table 1. Our results were compared with available data described *S. vanderbrueli* in details (Tab. 1). Based on the comparison of the metrical data from Belgium (Bernard, 1966a), Bulgaria (Genov, 1984), Hungary (Tenora & Mészáros, 1975) and Ukraine (Ryzhikov *et al.*, 1979) material from Poland corresponds to the previous descriptions of this species. So far *Syphacia vanderbrueli* has been recorded in eight countries in Europe. Faunistic researches carried out in our country contribute to complete the list of European species.

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