

# The first record of *Molineus patens* (Dujardin, 1845) (Nematoda, Molineidae) in the ermine (*Mustela erminea* L.) in Poland<sup>1</sup>

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**ABSTRACT.** A single specimen of the nematode *Molineus patens* (Dujardin, 1845) was isolated from the intestine of the ermine (*Mustela erminea* L.) found dead on a road in Lubuskie voivodeship (Western Poland) in July 2008. Since this is the first record of the parasite in the ermine from Poland, description, biometrical data and figures are given.

**Key words:** *Molineus patens*, ermine, *Mustela erminea*, Nematoda, Poland

## Introduction

The knowledge of the helminth fauna of native mustelids (Mustelidae) is insufficient, and the few existing studies are of a fragmentary and „insular” character [1]. The ermine (*Mustela erminea* L.) is among the least studied species in this respect. In the last few decades the species is very rare in Poland. The ermine was more often encountered in the Białowieża Primeval Forest and its boundaries, Roztocze, West and East Beskid. It was relative frequently observed in the Tatras [2]. Ermine inhabits forest edges, parks, river valleys and ruins. Its diet includes mainly small rodents, birds and their eggs, reptiles, frogs, molluscs and insects [3]. The ermine is legally protected.

Information on the native helminths of the ermine dates from the first half of the 20th Century, and includes only two records, one from the Mazovian Lowland [4], another from the Lublin Upland [5]. The list of ermine endoparasites recorded from Poland comprises two species: a trematode *Isthmiophora melis* and a nematode *Filaroides martis* [1].

## Material and methods

One adult male ermine, found dead on a road near

Boryszyn (Międzyrzecz district, Lubuskie voivodeship, Western Poland) in July 2008 was subject to standard parasitological dissection. The alimentary tract was divided into anatomical parts and each was dissected separately. Each fragment was cut longitudinally and macroscopically examined for parasites. The contents was rinsed in 0.9% solution of physiological salt, decanted and examined under the microscope. Internal organs (lungs, liver, heart, kidneys, urinary bladder and gall bladder) were cut along blood vessels to the maximum narrowing of their lumen, and the contents were decanted. The isolated nematode was preserved in 70% ethyl alcohol, cleared in glycerol, measured, drawn and photographed.

## Results and discussion

As a result of the dissection, one male specimen of nematode was obtained from the intestine and identified as *Molineus patens* Dujardin, 1845. Since no information on the morphology and biometrics of the species could be found in the pertinent Polish literature, they are presented below.

**Description.** Body length 6.7 mm, maximum width 0.138 mm (at the level of tail base). Oesophagus length 0.308 mm. Ribs of bursa copulatrix (Fig. 1) arranged in a

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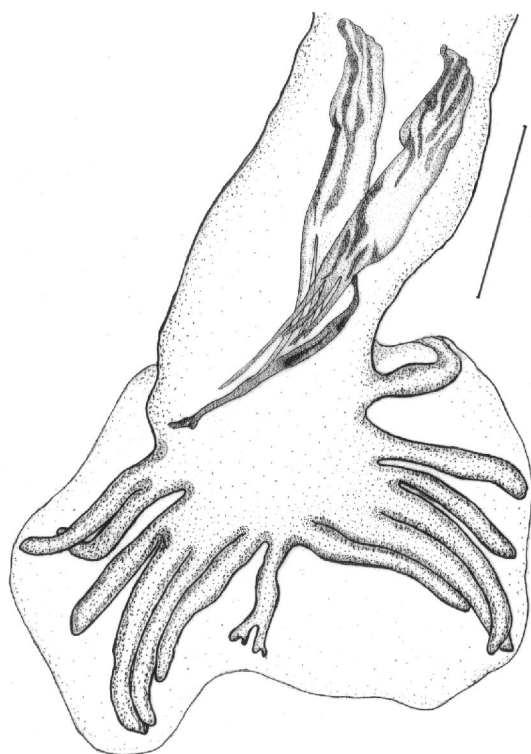


Fig. 1. *Molineus patens* (Dujardin, 1845), posterior end of male. Scale bar: 100  $\mu$ m.

2–3 pattern [6]. Ventral ribs originate as a common trunk, initially run parallelly and then diverge distally. Rib length: ventro-ventral 0.096 mm, latero-ventral 0.086 mm. Lateral ribs originate as a common trunk; externo-lateral rib slightly shorter, separates as the first – length 0.094 mm; medio-lateral ribs – length 0.126 mm and postero-lateral ribs – length 0.128 mm run close to each other, in their distal part they depart from the externo-lateral rib and touch the externo-dorsal rib. Externo-dorsal rib, length 0.100 mm, departs from the basis of dorsal rib – length 0.065 mm, which bifurcates in its distal part. Length of spicules: 0.192 mm and 0.201 mm. Distal end of spicules divided in three branches one of which is longer than the remaining two (Fig. 2). Gubernaculum narrow and elongate, its measurements: length 0.114 mm, width 0.007 mm (Fig. 2). Both the morphology and measurements of the specimen conform to the descriptions contained in monographs of Skryabin [7] or Kozlov [8], the only slight differences pertaining to the length of oesophagus and spicules.

It follows from the publication of Pojmańska et al. [1] that *Molineus patens* had been earlier recorded from Poland. At the beginning of the 20th century Łukasiak [4] recorded the nematode from the weasel *Mustella nivalis* in the environs of Warsaw. The next closest record from the ermine comes from Belarus [9]. The list of hosts of the parasite is long and includes, among other species, polecat, weasel, racoon dog, fox and badger, and records come from many countries of Palaearctic and Nearctic. In

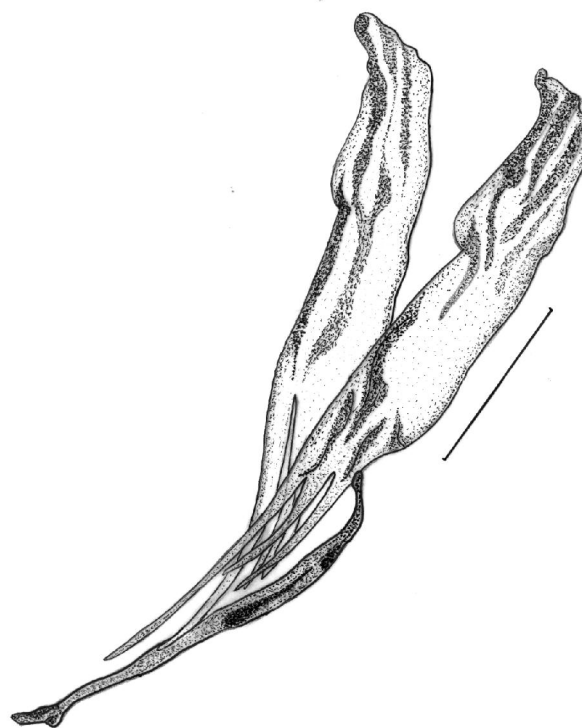


Fig. 2. *Molineus patens* (Dujardin, 1845), details of spicules and gubernaculum. Scale bar: 50  $\mu$ m.

the light of the cited data the ermine is a new native host of this parasite.

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