NEW DATA ON PARASITES OF MOLE *TALPA EUROPAEA* (MAMMALIA: INSECTIVORA) IN NORTHERN POLAND

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The knowledge of parasitic fauna of *Talpa europaea* is very incomplete. Although studies on various parasites of small mammals involved also a few moles, they were indeed very few because of their inaccessibility resulting from their mode of life and because of legal protection extended on those animals. Best known among mole parasites are fleas, of which 14 species were identified; most data were collected during studies on mole nests (e.g., Niewiadomska 1953; Skuratowicz 1954, 1966, 1972; Zwolski 1960; Bartkowska 1973, 1981; Haitlinger 1978). In addition, one record of a louse *Hoplopleura acanthopus*, most probably an accidental presence (Wegner 1956) and a number of Acari taxa, including *Ixodes ricinus*, *I. trianguliceps*, *Hirstionyssus talpae*, *H. carnifex*, *Eulaelaps stabularis*, *Eadiea brevihamata*, *Neotrombicula talmiensis*, *Labidophorus talpae* are known (Micherdzińska 1959; Zwolski 1960; Haitlinger 1976, 1981, 1983, 1988, 1989; Siuda 1993). Among the helminths, the trematode *Ityogonimus talpae*, the cestodes *Choanotaenia filametosa* and *Staphylocystis bacillaris* as well as 4 nematode species have been recorded (Serafiński 1928, Łukasiak 1939, Żarnowski 1955, Furmaga 1959).

The present study involved 11 moles collected from northern Poland: 7 from the Tricity area and single specimens from Pszczółki (near Tczew) and the vicinity of Zelewo (near Reda), Wyskok (near Kętrzyn), and Olsztyn-Kortowo. The materials, dead mole specimens found during field drips, were collected in 2000–2002.

The moles examined showed the presence of a total of 10 parasitic species. Their list includes insects belonging to the Aphaniptera – *Histrichopsylla talpae*, *Ctenophthalmus bisoctodentatus*, *Paleopsylla kohauti*, as well as the Acari – *Ixodes trianguliceps*, *I. ricinus*, *Hirstionyssus carnifex*, *Eadiea brevihamata*, *Demodex talpae*. Internal parasites were represented by the nematode *Spirura talpae* and an eimerid protozoan.

Demodex talpae was recorded in Poland for the first time. This is a specific mole parasite, described in 1921 by Hirst and basically not mentioned later on, except in reviews (Lombardini 1941; Bukva 1993, 1995). This is most probably related to a poor knowledge both on the mole parasitic fauna and on follicle mites in wild mammals. It seems that the species should be redescribed according to the modern standards used for demodecid taxonomic descriptions. In the present study, the parasite was found in skin sections of 4 hosts and averaged 7 individuals per host. *H. carnifex* (*Echinonyssus carnifex*) was found to be abundant (76 individuals) on a single host; *E. brevihamata* was recorded in two specimens (2 and 3 individuals). Of ticks, an *I. triangulicepsnymph* and an *I. ricinus* larva were found. Relatively few fleas were found, due to the collection method (examination of dead moles) that was likely to result in their underrepresentation. *H. talpae* was found in two specimens (1 and 2 individuals); this largest European flea, although common, is never very abundant on a host. *C. bisoctodentatus* was represented by 5 individuals found in 3 hosts, while *P. kohauti* (1 individuals) occurred in only one.

Stomachs of 2 hosts were found to house 43 nematodes belonging to *Spirura talpae*, a species occurring primarily in the Insectivora; one host harboured 38, while the other 5 individuals. In addition, the Eimeridae protozoans, not recorded earlier in Poland, were found in the liver of a single host.

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