

Emergence and epidemiological observation of canine thelaziosis in Slovakia

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Canine thelaziosis caused by *Thelazia callipaeda* (Spirurida, Thelaziidae) was described in Slovakia for the first time only recently – in September 2016. The first four cases of thelaziosis were diagnosed in dogs from south-eastern part of the country and subsequent surveillance program of red foxes (*Vulpes vulpes*), reservoir hosts of the nematode, confirmed endemicity of the infection in this region. Based on that finding, in August 2018, more than 300 veterinarians from all Slovak regions were provided with an information leaflet on canine thelaziosis and requested to report all cases of the disease (Figure 1, black marks). In addition, veterinarians were asked to send extracted worms together with information on the infected dogs to the Institute of Parasitology, Slovak Academy of Sciences, in Košice for species confirmation and further analysis. Also, in cooperation with regional Veterinary and Food Institutes, ocular examination of necropsied red foxes continued.

Summarily, between 2016 and 2018, a total of 37 clinical cases of canine thelaziosis were reported in veterinary practices from two Slovak regions. Eight of infected dogs originated in Košice region in south-eastern Slovakia, and majority of cases were diagnosed in Bratislava region, south-western part of the country (Figure 1, purple marks). The animals were referred to veterinarian practitioners mostly for unilateral or bilateral conjunctivitis and epiphora. The majority of the cases were unambiguously evaluated as autochthonous. From epidemiological point of view, the accumulation of the cases of canine thelaziosis in Rača municipality, one of the urban neighbourhoods of Bratislava capital city, is worthy of mention. It appears that this locality, characterised mostly by its viticulture and vineyard landscape, provides a highly suitable environment for the life-cycle and development of *Phortica variegata* (Drosophilidae: Steganinae), the vector of *T. callipaeda* nematode.

During the whole study period, *T. callipaeda* was found in 13 out of more than 800 red foxes examined. Majority of infected foxes (eleven) were hunted down in the territory of Košice region, one infested animal came directly from Bratislava city and one fox originated in Trenčín region near Czech Republic-Slovakia border (Figure 1, red marks).

DNA analyses confirmed exclusive circulation of *T. callipaeda* haplotype 1, in both dog and fox populations in Slovakia.

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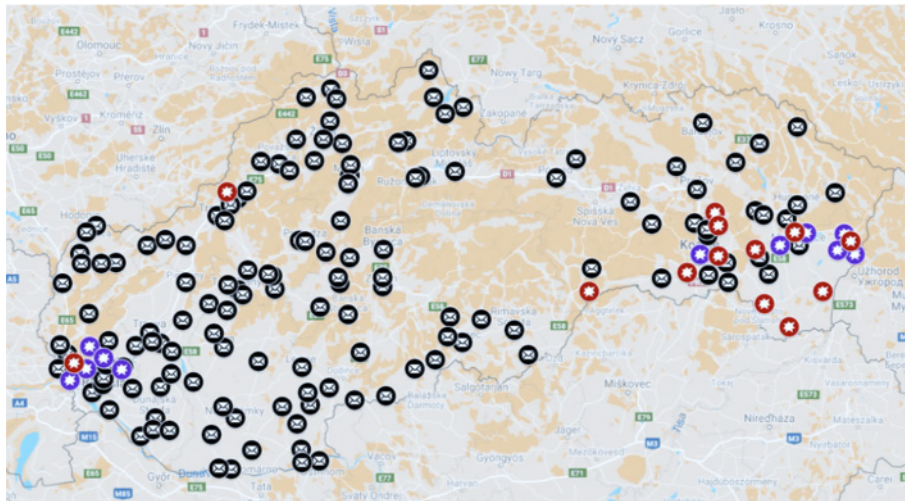


Figure 1. Monitoring of *Thelazia callipaeda* distribution in Slovakia (black marks – veterinary practices / VP/ included to the study, purple marks – VP reported cases of the infection in dogs, red marks – localities where infected red foxes were found).



Figure 2. *Thelazia callipaeda* worms in dog (left) and red fox (right).