

POSTER PRESENTATION

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Sylvatic *Trichinella* reservoir not found among voles in Finland

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Background

Sylvatic *Trichinella* infection has been found to be very common in Finnish wild carnivores [1], especially locally in Southern and partly Central Finland. Cannibalism and carrion feeding have been regarded as the major source of infection to red foxes and raccoon dogs. Voles have been found the major food items of red foxes [2]. They are regarded as herbivorous, but many herbivores consume animal tissues occasionally. Therefore, voles might be assumed potentially to take part in *Trichinella* life cycle in the wild. *Microtus* spp and *Myodes* spp have been found to be infected with *Trichinella*, e.g. [3]. In Finland, refuse tip rats have been found to be rather commonly infected with *Trichinella spiralis* [4].

Material

A total of 1761 bank voles *Myodes glareolus*, and 138 field voles *Microtus agrestis*, trapped on 30 transect sampling locations in Finland. In addition, also 60 shrews, *Sorex* spp. accidentally found succumbed in the traps, were also included in the study. After killing, during dissection, the right hind leg of each animal was removed and frozen until thawed at laboratory. Left hind legs were spared for confirmation analyses. Following thawing, the legs were treated as meat inspection samples according to Commission Regulation (EC) No 2075/2005 utilizing pepsin-HCl digestion.

Results and discussion

No *Trichinella* spp larva was found in any of the samples. Therefore, microtid rodents in Finland cannot be confirmed to take part of the *Trichinella* spp life cycle. The opposite cannot be confirmed, either, as absence of

evidence is not equal to evidence of absence. The predilection sites of *Trichinella* muscle larvae in microtid rodents are not well-known. Perhaps the right hind leg is not a good matrix for *Trichinella* larvae. In addition, even though the material consisting of 1899 small mammals may appear large at topical inspection, the potential impact of microtid rodents on *Trichinella* transmission biology is based on the high numbers of animals. The Finnish vole population fluctuates all the time, but during the peaks there are estimated to be about 200 000 000 voles in the country.

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