

Poster

Competence of wolf (*Canis lupus*) as host of *Thelazia callipaeda* (Spirurida, Thelaziidae) eyeworms

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Otranto D. 1, Cantacessi C. 1, Mallia E. 2, Lia R.P. 1

1 Department of Animal Health and Welfare, Faculty of Veterinary Medicine, Strada Provinciale per Casamassima Km. 3, 70010 - Valenzano, Bari, Italy. Tel./ fax: +39 080 4679839, E-mail: d.otranto@veterinaria.uniba.it

2 Regional Park of Gallipoli Cognato, Basilicata, Italy

Abstract

Introduction: *Thelazia callipaeda* infects the eyes of humans, rabbits as well of domestic and wild carnivores. In the present work the first three cases of thelaziosis by *T. callipaeda* in wolves have been reported and the competence of this species of animal as a definitive host is discussed. **Materials and methods:** From March to October 2006, three male adult grey wolves (*Canis lupus*) were retrieved dead in the National Park of Gallipoli Cognato and of Pollino, Basilicata region, Southern Italy. Wolves were necropsized and adult nematodes were retrieved at the inspection of conjunctival sacs. All nematodes were collected and morphologically identified. All specimens were then molecularly processed to amplify and analyse a partial sequence of the mitochondrial cytochrome *c* oxidase subunit 1 gene (*cox1*). **Results:** A total number of 114 nematodes were collected from the eyes of the three wolves and morphologically and molecularly identified as *T. callipaeda* haplotype 1 (h1). **Conclusion:** The host competence of wolf was demonstrated by retrieving for the first time adult worms in the eyes of three specimens of *Canis lupus* living in an endemic area for *T. callipaeda* infection. This finding indicate that the spectrum of competent definitive hosts of *T. callipaeda* is much wider than for other species affecting cattle and horses (e.g. *Thelazia gulosa*, *Thelazia rhodesi* and *Thelazia lacrymalis*). Sequence analysis of the partial *cox1* confirmed that only one haplotype of *T. callipaeda* is present in that area. The competence of wolves as a definitive host for *T. callipaeda* must be considered in view of the relevance of wild fauna in maintaining and spreading the eyeworm infection in humans and domestic animals.