

DOKTORSKÝ STUDIJNÍ PROGRAM/*DOCTORAL STUDY PROGRAM*

VYPSÁNÍ TÉMATU/*LISTING OF TOPIC*

Studijní program/*Study Program*: **Applied Zoology**

Studijní obor/*Branch of Study*: **program without field**

Katedra/*Department of*: **Zoology and Fisheries**

Školitel, email/*Supervisor, email*: **doc. Ing. Jaroslav Vadlejch, Ph.D., vadlejch@af.czu.cz**

Konzultant/*Co-supervisor, email*:

Forma studia/*Form of Study*: **Full_time**

Typ tématu/*Type of Theme*: **framework**

Téma/Topic: Biology and development of an invasive nematode *Ashworthius sidemi* in non-specific hosts

Hypotézy/Hypotheses: A nematode *Ashworthius sidemi* is able to infect ruminant livestock; however, basic patterns of ashworthiosis differs from those in wild ruminants

Anotace/Summary: *Ashworthius sidemi* is a blood-feeding nematode which primarily infect abomasum of Asiatic deer. A nematode *A. sidemi* has been introduced into many European countries with sika deer in the late 19th and early 20th centuries. This alien parasite adapted to the local climatic conditions, infected the native species of wild ruminants, and subsequently began to spread spontaneously among them. Currently, *A. sidemi* dominates the abomasal nematode community of cervid hosts in the Czech Republic. This parasite is pathogenic in wild ruminants. Severe health issues with negative impact on a health status, condition as well as on venison production may be detected in infected animals. *A. sidemi* is capable of infecting a wide range of hosts; this parasite has already been identified in almost all the native wild ruminant species in the CR. There is also a real risk of transmission of this parasite to domestic ruminants; however, there is still a lack of information to this issue. The aim of this PhD thesis is as follows: i) to define basic developmental patterns of *Ashworthius* infection (both prepatent and patent period) in non-specific hosts, ii) to describe morphology developmental stages of this alien parasite and iii) define immunological response of non-specific hosts (especially sheep and goat) to *Ashworthius* infection as well as histological alterations in infected tissue.

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V/In Prague

dne/*Date*: 31.10.2022

Podpis/*Signature*: