

## Errata:

In the paper by W. OL. Pruitt in Rangifer No. 1, 1992 on page 31 *the captions to figures 2 and 3 are transposed*. On page 29 the reference (Pruitt 1985) shall be: (Pruitt 1989). On page 31, in the reference list, *Pruitt 1985* shall be Pruitt 1989 and the figures 15–22 shall be corrected to 13–20.

## Dissertations



Margareta Stéen defended her PhD thesis *Elaphostrongylosis. A clinical, pathological and taxonomical study with special emphasis on the infection in moose* at the Swedish University of Agriculture, Uppsala, Sweden on December 13, 1991.

She was born in 1949, grew up in the countryside and, from an early age, developed a keen interest in natural history and hunting. After a basic education in agricultural sciences she studied biology at The University of Uppsala and graduated from The Swedish University of Agricultural Sciences (SLU), Faculty of Veterinary Medicine in 1983.

After the veterinary education, she was engaged at The National Veterinary Institute, mainly working with game animals until she started the research work for her doctorate in 1990.

She is currently engaged on a project entitled "Infection in moose", the aim of which is to determine whether a disease responsible for widespread death of moose in southwest Sweden is caused by a virus.

*Abstract:* Parasitic infections of moose (*Alces alces*) by nematodes in the genus *Elaphostrongylus* (Protostrongylidae: Elaphostrongylinae), were investigated. The studies focused primarily on the clinical parasitology, pathology and taxonomic relationships of a previously undescribed species, *Elaphostrongylus alces*. This parasite was distinguished from *Elaphostrongylus cervi* and *Elaphostrongylus rangiferi* on the basis of host preference, localization sites within hosts, and morphological characters.

Histological examinations of dead moose from wild populations in Sweden revealed a high incidence of elaphostrongylosis. Adult *Elaphostrongylus alces* were usually found in the epidurum of the spinal cord, but also occurred in muscle fasciae. Adult parasites provoked little or no inflammatory response in the surrounding tissue but parasite eggs, usually located in granuloma formations, elicited pronounced inflammatory reactions in the central nervous system and the epineurium, perineurium and endoneurium of the spinal nerves.

Female *Elaphostrongylus alces* were longer, wider, with a characteristic bottle-shaped esophagus diverging from females of other *Elaphostrongylus* species. Male *Elaphostrongylus alces* has long, slender dorsal ribs in their genital bursae in contrast with the short, broad ribs found in congeners.

Cross-infection studies of reindeer infected with *Elaphostrongylus alces* from moose and moose infected with *Elaphostrongylus rangiferi* from reindeer demonstrated that these parasites were able to mature and produce larvae in alternative hosts. However, species-specific morphological and behavioural traits (e.g. shape of bursal ribs and migratory pathways within host neural tissues) were independent of the host species in which parasites developed. The prepatent period of *Elaphostrongylus alces* in moose were shorter than those reported previously for *Elaphostrongylus rangiferi* in reindeer and *Elaphostrongylus panticola* in maral deer.

Thin-layer electrophoresis was used to differentiate protostrongylid genera and species on the basis of separation of nematode body proteins. This technique provided a biochemical means for identifying *Elaphostrongylus alces*, and *Elaphostrongylus rangiferi* and proved to be a useful diagnostic tool for distinguishing immature *Elaphostrongylus* larvae from those of other protostrongylids.

These studies provided support for the designation of these parasites as distinct species and suggest that further studies are necessary to determine whether *Elaphostrongylus* spp. are an important factor regulating cervid populations.

## **NOR-~~INFORMATION~~**

### NORDIC COUNCIL FOR REINDEER RESEARCH

Grants and support for research

*Deadline for next application 1. September 1992.*

## **IMPORTANT MESSAGE!**

The 7th Nordic Workshop on Reindeer Research

as announced in Rangifer No. 1-92

is cancelled.

The next Workshop will be in Finland, 1993.