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JOINT SPRING SYMPOSIUM 2018

Danish Society for Parasitology and Danish Society for Tropical Medicine &
International Health

Theme: "*Parasites shape the host*"

Time: Friday 6 April 2018

Venue: Festauditoriet (the Main Lecture Hall), building1-01, Bülowsvej 17, 1870 Frederiksberg C

Prevalence of *Onchocerca* in Danish wild deer

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Hunters and game processing units in Denmark have the last few years recorded an increasing prevalence of subcutaneous nodules on red deer (*Cervus elaphus*) carcasses at meat inspection. The nodules host the filarial worm *Onchocerca*, a genus comprising of >30 species with a worldwide distribution mainly associated with wild and domestic ungulates. In Europe, four species of *Onchocerca* are represented in red deer; *O. flexuosa*, *O. jakutensis*, *O. skrjabini* and *O. garmsi*. Adult worms are located within the subcutaneous connective tissue, while the microfilariae are present in the skin. Both adults and microfilariae have species specific locations on their host. E.g. in red deer, nodules of *O. flexuosa* are situated on the dorsal areas of back and flank, while the microfilariae are located in the skin on the ventral abdomen. The geographical distribution of *Onchocerca* in the Danish deer population has not previously been studied. In the present study *Onchocerca* microfilaria in skin samples from the abdomen was analysed from 121 red deer (*Cervus elaphus*), 51 roe deer (*Capreolus capreolus*) and 119 fallow deer (*Dama dama*) sampled from 18 locations during October-January 2017/2018. Solely, red deer were found positive for *Onchocerca* microfilaria with a prevalence of 21.5%. Prevalence were associated with age where mature animals have a higher infection rate (38.3%) compared to yearlings (10.8%). *Onchocerca* were observed from 54.5% (6/11) of the sampled red deer locations indicating that Denmark has favourable conditions for the vectors (simuliids and ceratopogonids) and the abundance of the deer provide optimal environment for the maintenance of the parasite. To our knowledge, this is the first systematic study of *Onchocerca* in Denmark.