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Brief Communication

Cephenemyia Ulrichii Brauer 1862, in Swedish Moose

Larvae of Cephenemyia (*Latreille* 1818), the moose bot fly (Diptera; Oestridae) are parasites of the nose and pharynx in cervidae.

In Europe 4 species of Cephenemyia are reported, C. trompe (*Modeer* 1786) in reindeer (Rangifer tarandus tarandus L), C. stimulator (*Clark* 1815) in roe deer (Capreolus capreolus L), C. auribarbis (*Meigen* 1824) in red deer (Cervus elaphus L) and fallow deer (Dama dama L), and C. ulrichii, Brauer 1862, in moose (Alces alces L) (*Zumpt* 1965, *Grunin* 1966). Of these, C. trompe is known from northern Scandinavia (*Zumpt* 1965, *Grunin* 1966), C. stimulator is reported from Denmark (*Christiansen* 1935), and C. ulrichii from Finland (*Frey* 1914, *Brander* 1963, *Mikkola et al.* 1982). This is the first report on C. ulrichii larvae found in Sweden.

During the years 1979–1986 the presence of Cephenemyia larvae in moose has been recorded 11 times at the National Veterinary Institute (NVI). The infected animals all emanated from northern Sweden (Fig. 1). Both sexes and different ages were represented.

The number of larvae found varied between 1–16 but must not be regarded as the number actually present in the living animals, as the material was transported long distances and was of a heterogeneous origin.

The larvae were killed in boiling water and preserved in 70 % alcohol according to *Zumpt* (1965). They were examined and identified using a stereomicroscope and keys of *Zumpt* (1965) and *Grunin* (1966). All were found to be third instar larvae of C. ulrichii (Fig. 2).

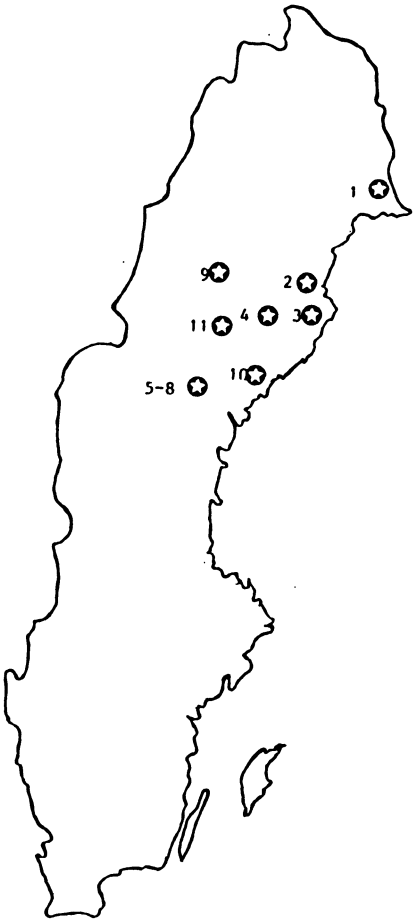

Figure 1. Localities of C. ulrichii infected moose in Sweden.
Case no. 1. Kullasjärvi (approx. 65.50°N 24.10°E); 2. Kusmark (approx. 64.46°N 20.57°E); 3. Hökmark (approx. 64.31°N 20.39°E); 4. Lycksele (64.36°N 18.40°E); 5–8. Näsåker (63.26°N 16.54°E); 9. Gargnäs (approx. 65.30°N 17.30°E); 10. Örnsköldsvik (63.18°N 18.43°E); 11. Åsele (64.10°N 17.20°E).

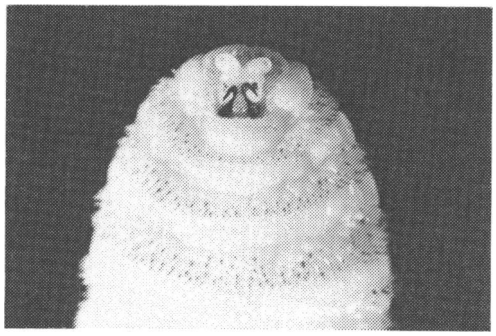

Figure 2. Cephenemyia ulrichii Brauer. Anterior ventral part of a third instar larva, viewing the antennal lobes and mouth hooks.

According to *Zumpt* (1965) the distribution area of this parasite in Scandinavia does not completely coincide with the distribution area of the host. Our report shows that C. ulrichii is distributed in a large area in northern Sweden which is, however, far from covering the total habitat area for moose in Sweden. Moose is found in the whole country except for the islands of Gotland and Öland.

The few reports on the parasite may depend on the fact that larvae of C. ulrichii are easily neglected during the hunting season (September-November) when they are about 3.5 mm long and most probably hidden in tonsil tissues as larvae of C. trompe in reindeer (*Rehbinder & Nordkvist* 1983). Hence, all of our findings are from moose accidently killed during spring. The length of the third instar larvae is then around 40 mm and easy to discover.

A further examination of Scandinavian moose is needed to clarify the accurate distribution of the parasite and its effects on the host.

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throat bot fly; Cephenemyia ulrichii; moose; Alces alces L; cervidae.

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