

Abundance of warble fly larvae *Hypoderma tarandi* (L.) (Diptera: oestridae) in reindeer *Rangifer tarandus tarandus* (L.) and its relation to reindeer postcalving migration

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Abstract: Intensities of warble fly larvae *Hypoderma tarandi* (L.) were examined in slaughtered reindeer *Rangifer tarandus tarandus* (L.) from different summer grazing areas of Finnmark county, Northern Norway. To test the hypothesis that larval abundance decreases as post-calving migration distance increases (i.e. distance from calving- grounds), herds with differing migration lengths were sampled. The prevalence of infection in the total sample of 1232 animals was 99.9%. The study reveals significant differences in larval abundance between herds from different summer grazing areas. Herds with post-calving migrations have significantly lower larval abundances than herds remaining on the calving grounds the whole summer. The between herd variation in *H.tarandi* larval abundance was assumed to reflect differing densities of the infective stage on the herd's summer ranges. Larval abundance, in turn, is negatively correlated with the distance between the main larval shedding area (i.e. calving grounds) and the area of infection (i.e. summer pastures). This has led to the new hypothesis that the post-calving migration, common in wild reindeer, is a behavioural adaptation which reduces levels of warble fly infections.

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