

## Föreläsningar i sammandrag

Observations of mites on moths, esp. Noctuidae, in central Sweden –  
a summary of an ongoing project

[Observationer av kvalster på uppländska storfjärilar, särskilt hos fam. Noctuidae]

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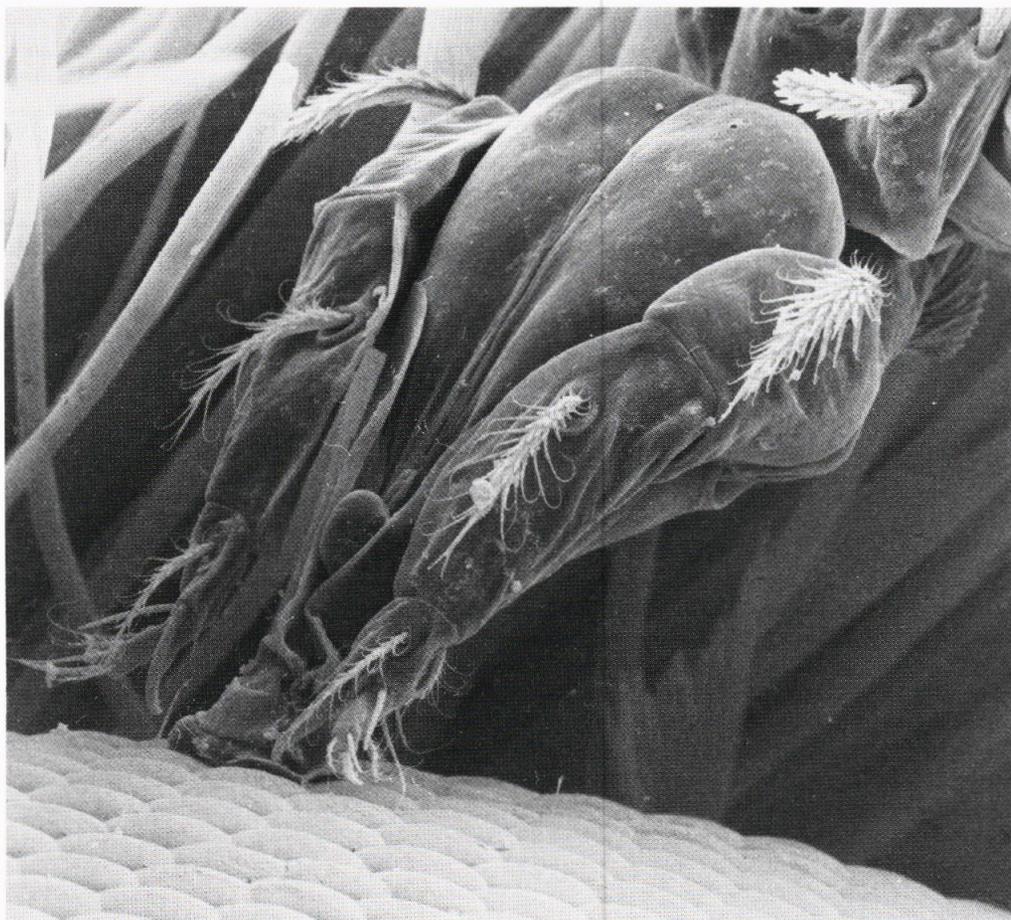


Fig. 1. A detailed study of the mouthparts (gnathosoma) of a *Leptus* larva attached to the eye of an *Apamea lateritia* Hfn. Photo: Gary Wife/Eric Danell.

Detaljstudie av mundelarna hos en *Leptus*-larv som angripit ögat på en *Apamea lateritia* Hfn.



Fig. 2. Two *Leptus* larvae engorged with haemolymph below the eye of a *Pyrrhia umbra* Hfn. Photo: Eric Danell.

Två *Leptus*-larver uppsvällda av hämolymfa under ögat på en *Pyrrhia umbra* Hfn.

During the warm seasons of 1983 and 1984, 3257 macrolepidopterans were examined with regard to the occurrence of Acarina. Between 27.vii. and 2.ix., 126 mite larvae were found. All of them were ectoparasitic, possibly also phoretic.

Taxonomically these larvae belong to the order Acariformes, suborder Prostigmata, family Erythraeidae, subfamilies Leptinae and Callidosomatinae (one specimen). The genus *Leptus* dominated up to nearly 100 %. Totally 66 noctuids and one geometrid were affected. In half of the observations the mite was found on the legs, other preferred sites are the antennae, wings, eyes, abdomen etc.

The larva spends at least one week on the host and increases rapidly in size as an effect of engorgement of haemolymph (Figs 1–2). Accordingly the length varies between 470–830  $\mu\text{m}$ . No immediate effects on the hosts have been established, and the average number of *Leptus* larvae attached to one moth is only 1.8. This low figure might be based on evolutionary mechanisms. Egg-laying at few places or specific hosts or stationary behaviour among the larvae might result in severely parasited hosts with low ability to satisfy the nutritional requirement of the acari larvae. Further development is stunted and the unfavourable behaviour is consequently eliminated. Phoretic mites that are often found on crowded hosts might not waste energy on scattering.

The incidence of infestation varies considerably among different species, e.g. *Leptus* larvae are at least six times more frequent on *Mythimna* [= *Leucania*] *impura* Hb. than on *Amphipoea* [= *Hydraecia*] *fucosa* Frr. Some moth species that were caught during the period when *Leptus* larvae are active never carried mites. The host's choice of resting place during daytime is considered as one possible cause of differences in infestation frequency.

Annual variation in phenology and incidence of *Leptus* larvae can not be disregarded. Still, no such differences were found between the two years studied.

### Sammanfattning

Under somrarna 1983 och 1984 har storfjärilar, främst noctuider, undersökts i syfte att belysa förekomsten av kvalster. Hittills har endast ektoparasitiska larver av släktet *Leptus* påträffats.

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