

## On the morphology of *Steneotarsonemus pallidus* and *S. fragariae* (Acar., Tars.)

by

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Judging from literature hitherto known to us, no morphological characters have been published so far which allow to separate the two mites described as *Steneotarsonemus pallidus* (Banks, 1901), from *Cyclamen*, and as *Steneotarsonemus fragariae* (Zimmermann, 1905), from strawberry (*Fragaria*).

Transmission efforts made by various investigators to compare *Steneotarsonemus* on *Cyclamen* with *Steneotarsonemus* on strawberry show different results.

EWING & SMITH (1934) in America succeeded in transferring mites from strawberry to *Cyclamen*. In the opposite case BOYD & HODSON (1936) could infest strawberry with mites from *Cyclamen*.

MASSEE, and later on WIESMANN (1941), resp. in England and in Switzerland, did not succeed in transferring mites from strawberry to *Cyclamen*.

Transmission experiments made by GROENEWOLD had the following results: mites from *Cyclamen* do not settle on strawberry plants, and in the opposite case mites from strawberry do not settle on *Cyclamen*. In both experiments damage was caused a short time after the transmission. However the whole population turned out to have disappeared later on.

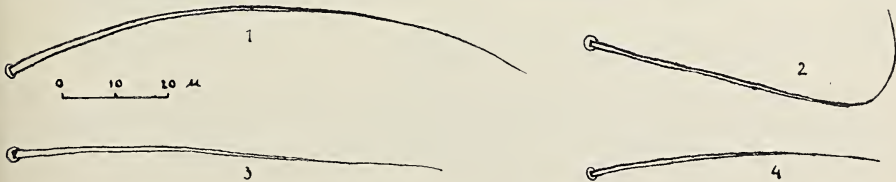
Laboratory experiments showed that in comparison with *Steneotarsonemus* from strawberry, *Steneotarsonemus* from *Cyclamen* lays only very few eggs on young strawberry leaves.

Moreover it was found that mites from *Cyclamen* can settle on Ivy (*Hedera*), whereas this is impossible for mites from strawberry.

After having compared a great number of slides, kindly submitted to him by Mrs. H. GROENEWOLD and Mr. M. VAN DE VRIE, Wilhelminadorp, who is also studying on *Tarsonemus* mites, the first author discovered a very characteristic morphological difference between the *Cyclamen* mite and the strawberry mite. This difference is confirmed by his own material which he received from, and collected in Belgium in 1957. It can be found in the long dorsal hair, called the third dorsal seta by BEER (1954), the measurements of which are:

	<i>S. pallidus</i>	<i>S. fragariae</i>
♀	96—102 μ	80—88 μ
♂	78—86 μ	58—66 μ

Apart from this marked difference in length, it may be said that (in the slides) the somewhat shorter hair of *S. fragariae* is rather stiff, showing a normal fine



Dorsal hair of *Steneotarsonemus pallidus*, fig. 1 ♀, fig. 2 ♂, id. of *S. fragariae*, fig. 3 ♀, fig. 4 ♂.

*don't believe this - EWB*

apex, whereas the somewhat longer hair of *S. pallidus* is more slender and curved, sometimes even whiplike, whilst its ending is extremely long and fine, more or less fading away (figs. 1—4). The latter difference is the most striking in the males.

It may be that further studies might reveal complementary morphological differences. We have not studied American material, but this provisional result, based on our experiments with mites of the Netherlands, shows in our opinion that the European Cyclamen mite, known in Europe as *Steneotarsonemus pallidus* (Banks, 1901) and the European strawberry mite *Steneotarsonemus fragariae* (Zimm., 1905) are two different species, so that both names can be maintained.

Our investigations have been based on the following material:

- Cyclamen: Middelburg, 30.IX.1957  
 Middelburg, 9.X.1957  
 Gorsem/St. Truiden, Belgium, misit Dr. Ir. A. SOENEN, 22.V.1957
- Strawberry: Biezelinge, 20.V.1957, various populations  
 Biezelinge, 12.X.1957, various populations  
 Kapelle, 18.VI.1958, various populations  
 Gorsem/St. Truiden, Belgium, misit Dr. Ir. A. SOENEN, 10.V.1957  
 Wépion near Namur, Belgium, leg. A. SOENEN et G. L. VAN EYNDHOVEN, 19.VI.1957

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Amsterdam, Zoölogisch Museum, Zeeburgerdijk 21.

Wilhelminadorp (Z.), Proefstation voor de Fruitteelt in de Volle Grond.

*Eurycus cressida* F. (Lep., Rhopalocera). Enige weken geleden ontving ik van ons medelid R. STRAATMAN, thans te Brisbane, per vliegpost enige poppen van Australische Rhopalocera. Op 24 maart j.l. kwam de eerste uit en leverde een prachtig volgroeid ♀ op van *Eurycus cressida* F., een typische Australische vertegenwoordiger van de familie der Papilionidae. Het was voor mij een sensatie deze mooie tropische vlinder levend in huis te hebben en aangezien mij uit de literatuur niet bekend is, dat een dergelijke proef eerder is gedaan, acht ik het wel de moeite waard hiervan melding te maken. De vlinder is inmiddels verhuisd naar Diergaarde Blijdorp, alwaar ook de verdere exemplaren onderdak zullen vinden.

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