Another report on a migration of multitudes of spiders.

By

E. Nielsen.

The facts about the spiders' webs may often cause surprise even to those who consider themselves to possess an especially intimate knowledge on this subject. The following example will contribute to illustrate this:

In September 1936 Mr. Jens A. Weile, a board-school teacher at Lyngby, paid me a visit, bringing with him a case containing 10 m of silvery grey silky tapes, about 17.5 mm wide and rather strong; the longest of the tapes measured 4.35 m. It sounded almost incredible when Mr. Weile told me, that all of it was web, with which spiders had covered the iron-stays of a filter-plant in "Bondebyen" at Lyngby, a little north of Copenhagen.

An examination of the tapes under a microscope showed that they were made by some very little spiders, which were concealed dead and shrunk in the tapes, and nearly all of which were defective; almost all the spiders were covered with web, which was merged into the tape. It was almost in all cases impossible to discover where the spiders sat in the web except by transmitted light when they defined themselves as dark spots. By the aid of a forceps one could then remove the web that covered the spiders. The tough and rather thick tape could only have been made by innumeral wanderings of the little animals to and fro on the ironstays; this appears from the structure of the tape and from its tendency to burst lengthwise. The engineer of the filter-plant, Mr. Mortensen, has given Mr. Weile the folloving information about the web-phenomenon:

One morning at the end of September or early October in 1936 Mr. Mortensen found the filter-plant and its immediate neighbourhood covered with web to such an extent that, as soon as he saw it, he thought it had snowed during the night; besides by the web on the actual filter-plant his attention was especially attracted by a large group of rose-bushes, which were so densely covered with web, that it looked as if sheets were put on them for drying,



A piece of the silky tape spun by Lessertia dentichelis. Diminished. E. Nielsen fot.

and web-threads issued on all sides even reaching the top of a thuja, which was 10 m high.

In order to have the spiders which were the masters of these peculiar tapes determined, I sent some of them together with a piece of a tape to Dr. E. Schenkel at Basel, from whom I received the following information, for which I beg to render Mr. Schenkel my best thanks:

"Beim ersten Anblick des seltsamen, fast an menschlisches Artefakt erinnernden Gewebes dachte ich an pflanzlichen Ursprung, aber eine Brandprobe ergab das Verhalten und den Geruch tierischer Faser. ... Ich kann fast nicht glauben, dass die Bänder von dieser kleinen Art hergestellt wurden, auch sind die Tiere zu eingeschlossen und sehen wie ausgesogen aus".

When Dr. Schenkel considers it less than probable that such a little animal as *Lessertia* should have been capable of producing the tapes in question, his doubt may be justified. But the fact that the animals seemed to be sucked out is not necessarily a proof hereof, because by such an occurrence in multitudes as in this instance one animal must have fed on the other even if they were of the same species, and the empty sceletons wittness that it was only small spiders which acted as cannibals, as larger spiders would have chewed and kneaded them together. Moreover Mr. Mortensen told me that "there were lots of small spiders as large as red ants, but none of them larger".

I have no doubt but that the web-phenomenon from Lyngby is of the same kind as that which I experienced in the autumn 1929, when I found all the fields round Esrom so densely covered with web that it looked as if the small town was situated in the middle of a lake; this fact was formerly recorded in my paper "Massevandring af Edderkopper" in "Flora og Fauna" 1930 p. 51 and in "The Biology of Spiders" Copenhagen 1932 p. 47.

That a single species of the small spiders may occur in multitudes over an extensive locality, I experienced in July last in the isle of Gotland, where by collecting spiders I found Oedothorax apicatus Blev. enormously abundant under the dry seaweed along the beach north of Ljugarn over a distance as long as I was able to walk during one day.

Should this year be succeeded by a few likewise successful years, there will be a possibility of experiencing in Gotland a migration of multitudes of *Oedothorax apicatus*.