On the history and life-history of Leto venus Stoll.

by

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Although this lovely moth was described and figured as early as 1780, very few specimens were known for a long time and it was only round about 1870 that something became known about its interesting life-history. As I pointed out in "The Moths of South Africa" (vol. IV, p. 32), it was the Newdigate family who studied this moth closely and who had been successful in rearing it; in fact most of the moths, if not all, found to-day in the world's collections, have been reared by them.

When Miss E. G. Newdigate heard that nothing was published yet about the life-history of this moth she kindly sent me a little bundle of letters on the subject, written by Mr. R. Trimen to her father between June 1869 and July 1882. These letters made most interesting reading and showed that Mr. Newdigate was the first to send a specimen to the South African Museum collection in August, 1869. One learns how Trimen valued this specimen from his statement that the moth arrived in a broken condition but that he was elated that he had been able to repair it successfully! However, Trimen was not a mere collector; he wanted not only more specimens but also to know more about this very local moth and its life habits and he urged Mr. Newdigate to send larvae and pupae as well as information, as he wanted to publish a paper on it.

In 1875 he received another moth and got the information that it was a nightflyer and, in the letter of March, 1875, Trimen expressed his inability to account for the beautiful colour and markings which appear to be useless to a moth that had so far never been seen flying in the day time! In the letter of May, 1878, the news came that a Silver Moth, just emerged from the chrysalis, had been found inside the wood of a chopped-down Keurboom [Virgilia oroboides (Berg) Salter (= V. capensis L.)]. This surprised Trimen, as the tree has a wide distribution while the moth is localised in the Knysna district.

More moths were sent during 1878, but in March, 1879, Trimen asked for larvae and pupae to be sent in Keurboom sawdust and these duly arrived in May and more followed the next year. None of these, however, seem to have survived, as Trimen reported in March, 1880, that none had emerged yet and advised that stumps of wood be sent with larvae and pupae in it. These duly arrived, with more stumps to follow in March, 1882, but these too do not seem to have produced adults as in July, 1882, (the last letter I have seen) the death is reported of all the larvae. As far as I have been able to find out, this is probably the reason why Trimen
never carried out his intention of publishing an account of the life-history of the Silver Moth. In view of this, and as a result of correspondence with Miss E. G. Newdigate, I asked her to compile and publish what she knew about it, so that her knowledge would not be lost and with it this elusive life-history of the Silver-spotted Ghost Moth. Miss Newdigate kindly complied with my request and wrote out all she knew about it. This I publish herewith, practically unaltered.

"The eggs are apparently laid in the soft earth round the stem or roots of the Keur tree (Virgilia capensis) the only food plant of this caterpillar.

The young larvae evidently begin boring operations on the foot of the tree and, as their galleries are enlarged, the sawdust from which their food has been extracted is pushed out through a hole in the trunk of the tree at the top of the tunnel, usually about two feet from the ground. These holes are closed with a small cap of gummy sawdust just before pupation and it is by these caps that the tunnels can be located. About two or three inches of the tunnel near the cap is filled up with a fine silky spinning, which is obviously intended to keep out ants, which are their enemy number one.

"The precise length of time for the larva to reach maturity I have never been able to ascertain but, as during the month of moth emergence larvae are found in different stages of growth, it follows that it must take several years. The chrysalis too must take at least a year to mature."
It is interesting to note that the moth invariably emerges in late February or during March and at no other time of the year.

When the chrysalis reaches maturity the silver spots begin to show through the skin, which becomes more loose and wrinklely and the covering finally splits open near the head so that the moth can crawl out, leaving the pupal skin sticking half-way out of the hole. The moth clings to the bark with the wings hanging down while these unfold and harden. When fully expanded they are lifted straight up, quivering for two or three minutes. After that they are placed in the resting position, the hind wings covered by the forewings, thus forming a roof over the body. It is now ready to fly or crawl about. A feature, probably unknown, as it can only be seen in the newly hatched moth, is that around each silver macula there is a lovely violet ring which disappears a day or two after the specimen is killed.

The males fly fairly well but the females with their heavy egg-laden bodies are clumsy and just flop about.

The female lays a large number of eggs, I have counted up to 100, but there were very many more.

The moth has many enemies of which the ants and the bats are the chief ones, but not less so . . . . . man! Especially since men are in the habit of cutting down young Keur-trees from one inch in diameter upwards (in order to use the stems for fencing spars and fire-wood, etc.) there is great danger of the moth disappearing. Not only are young larvae thus deprived of food, but many older larvae and the pupae are unknowingly killed as it seems that they can only live and develop in the living wood.

As far as I know, the moth occurs all through the Zitzikama forests as far east as White Els Bush and westwards as far as George.

Thus far Miss Newdigate’s account. I herewith wish to express my appreciation for her kindness in giving this information, but I also wish to point out that she and her family have, ever since they discovered the secret of this moth, endeavoured to preserve this moth for posterity, knowing how easy it is to kill hundreds of the larvae before one can secure one perfect adult if searched for by people ignorant of how to get them. It is hoped that this moth will be preserved in the forest region, not only on account of its exquisite beauty, but also for its scientific interest.