

A NOCTUID MOTH COMPLETING ITS LIFE CYCLE IN LAVA TUBES ON TENERIFE, CANARY ISLANDS.

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MARTIN (1992) reported the presence of adults and cocoons of a noctuid moth (*Schrankia* ? sp.) in Cueva del Viento-Sobrado and Cueva de Felipe Reventón (Tenerife). After frequent visits to these and other caves on the island we can corroborate the occurrence of this insect and clarify some aspects of their biology. Indeed, it is confirmed to belong to the species *Schrankia costastrigalis* (Stephens, 1829), kindly identified by Dr. D. Agassiz at the International Institute of Entomology in London. According to BACALLADO (1973), this species had already been recorded for La Palma and Gran Canaria by Pinker in 1963, and there was just an obscure record by Simony for Tenerife at the end of last century. Since the moths have been accurately studied in the Canaries during the last decades (see BACALLADO, 1973; BACALLADO & PINKER, 1982), these limited records indicate that *Schrankia costastrigalis* is very scarce in epigeal environments. However, very abundant individuals, either caterpillars, cocoons or adults have been observed by ourselves in some caves on Tenerife, especially Cueva de Felipe Reventón.

The larvae feed on tender parts of roots, usually on the growing tips. Most of them are on root sprouts belonging to shrubs or trees that live outside above the lava tubes, reaching the cave through cracks and developing mainly hanging from the roof. They can also be seen upon the rootlets that grow horizontally on the ground of lava tubes, especially when there is some soil. These caterpillars are semiloopers, grey coloured and are usually perching upside down to feed on the root tips.

They prepare a cocoon for pupation with pieces of roots spun together and tied to a dangling root, usually the one they have been feeding on. The cocoon remains hanging at some 2 to 4 cm from the roof. The larvae that feed on roots growing on the ground, pupate hanging under stones or wall prominences, always close to the roots.

The complete process of pupation was followed in the laboratory: several larvae were reared using the same roots picked up in the cave and preserved hanging in humid chambers. They are living-root chewers and refuse roots that dry out. The caterpillars reared in the laboratory were collected in at least the third instar, so we could not calculate the exact time taken for larval development. Three of the pupae obtained from these larvae achieved their development, hatching on the twelfth day after being enclosed in the cocoon.

The newly hatched adults spend a long time on the cocoon before they start flying; in the cave it is common to see them in this position. Unlike caterpillars, the adults are found all along the lava tube, even far from the roots, what indicates their easy mobility. They are commonly perched on the walls or sitting on the lateral benches or on stones, and fly easily when disturbed. Some mating couples have been observed, and on one occasion a female was laying eggs on a hanging root.

These moths are particularly abundant in Cueva de Felipe Reventón, but they also occur in some other lava tubes of the same area, although they are much scarcer. They do not simply occur in caves with abundant roots, but in those where abundant root sprouts are still growing tender and whitish. As far as we have observed, some of the rootlets in the cave age and become dark, larger roots, but most of them stop growing and dry out. It is only each spring when new rootlets are put forth and provide food for the larvae, who are abundantly seen from June to September but not the rest of the year. The adult moths, however, can be observed at any time, but only frequently during spring and summer.

Neither the larvae nor the adults show special adaptations for cave life, and both males and females are good fliers. HOWARTH (1981) reported the presence of five species of *Schrankia* known from lava tubes on Hawaii, with different degrees of adaptation. In Kazumura Cave (Hawaii Big Island) there are three species. One is usually found nearer the entrance and has indistinctly patterned wings; in the two

