

the cuticles of the leaves of the Russian sunflower and probably of other species of *Helianthus*.

The mine is large, translucent, of irregular shape, but covering an area of from two to two and one half square inches. The black, granular frass drops to the lower margin. The mine and included larva bear considerable resemblance, on a magnified scale, to those of some *Lithocolletis*. Full-grown larva, 15 to 16 mm. long, 3.5 to 4 mm. in diameter across middle segments, from which it tapers gradually toward either end. Form cylindrical, with rounded segments and deep incisions, giving it a sub-moniliform appearance. General colour whitish green, often with a rose suffusion. Head small, broadly triangular, polished, faintly mottled, dark brown on the lobes, with dingy white, triangular face. The corneous, whitish-green collar has two large, glossy, brown spots covering the greater part of its surface; or, it might perhaps be better described as brown, with broad, pale anterior and lateral margins and medio-dorsal line. Each of the other segments has the usual arrangement of conspicuous, round, dark brown, piliferous spots, from which proceed very fine, short hairs.

The pupation is irregular. In some cases the mature larvæ desert their mines and inclose themselves in oval cocoonets on the surface of the ground, but as a rule they spin up within the mine, in a nidus of loosely-webbed frass, with an inner, more firmly woven cocoon immediately inclosing the pupæ. The latter are short, and thick, of a golden-yellow colour, without marked characteristics.

The imago appears in eight or ten days after the larva spins up.

The mines were discovered August 2nd, 1896, and in all probability were those of a second brood. Another series of mines was found on the sunflower leaves September 5th to 10th, the moths from which issued shortly and probably hibernated — no later mines appearing. I am indebted to my friend, Prof. Fernald, for the generic determination of this interesting species.

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