

slender thing which might easily have been overlooked even when one was engaged in following the thread upon which it lived. A touch was sufficient to put it in motion, then a touch at the opposite extremity would cause it to move backward with equal address. But nothing would induce it to leave the thread, and I have since learned that the heat from a burning candle applied to its body and destroying its life leaves it clinging to this fragile object. Not even spiders show such tenacity in retaining possession of their egg-cases, or webs, when in danger, and I infer that the welfare of this larva is intimately associated in some way with the silken path it makes along the face of the rocks. The thread is always occupied by a single individual, and may be a foot or more in length. I have found no examples nearer the floor than three feet.

The larva clings to its thread by means of pads provided with very minute chitinous asperities. One such pad occurs at the anterior ventral margin of the second, and another in the same position on the third, some. These form rather large transverse rounded folds of the skin, covered posteriorly with dark denticles in numerous short series. The fourth somite lacks the pad, but on the ventral side and anterior margin of each of the succeeding divisions is a pad of another form, these being broader but not extending so far up the sides. When creeping an undulatory motion passes along the body, the pads dragging it forward, the posterior appendage apparently aiding by seizing the thread.



The details of structure have not been thoroughly worked out. In a general way the head is like that of the larva described in the Bulletin in 1891, but the large ocellus-like smooth areas of the Mammoth Cave larva are not present in this, although I find smaller oval areas surrounded by black rims and accompanied by pigment spots, which appear to represent these structures. The mouth parts are much like those of larval *Sciara*. The palpi which project from the under side of the head spring from the maxillæ. In very young examples I can make out large ducts which convey a secretion of some kind (doubtless the material of which the silken fiber is composed) to the under side of the head. No outward trace of respiratory organs is apparent. Four dark-brown Malpighian tubules can be seen, through the body-wall, opening independently into the intestine.

On the dorsal middle line near the anterior margin of each of the somites 8 and 9 is a turret-shaped prominence, the nature of which I have not determined. The top is sometimes a trifle impressed as if there were an opening to a gland beneath the skin. They can not be stigmatal prominences, for these are always paired. A study of sections may yield an explanation of them.

The habit of living upon the side walls of the cave is probably a means of avoiding enemies. Few of the predaceous cave species would find the larvæ there. The only available food would seem to be occasional tallow drippings and the molds growing on them.

Silk spinning is not general among Dipterous larvæ, but the cave species is not peculiar in this regard. I suspect that the Mammoth Cave larva produces a thread also. Among ordinary Diptera the clover midge (*Cecidomyia trifolii*) occurs to me at this moment as an example of species which produce material in the nature of silk. It envelops itself in a rather tough papery cocoon when ready for pupation.

A SILK-SPINNING CAVE LARVA.

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In the Bulletin of the Essex Institute, Vol. XIII., 1891, I described a singular larva from Mammoth Cave, which was compared with larvæ of the Dipterous genera *Sciara* and *Chironomus*, to which it bears some resemblance. Since this larva was discovered a lookout has been kept for other specimens in hope of learning something of the adult, but thus far no additional examples have been seen. My search has been rewarded, however, by the discovery of a second larva, very different from the first but in its way almost as strange. Evidently it is a related insect. I take it to be the young of some cave-inhabiting fly.

Large examples measure 12.5 millimetres in length by 1 millimetre in greatest diameter. The body is composed of twelve somites behind the head, very distinct from each other and gradually increasing in diameter from the first to the seventh, after which they remain constant to the twelfth, which is only about one-half the length of the preceding somite and not more than one-fourth its size. The head is very small, and is enclosed in a smooth and shining crust of a pale yellowish brown color. The body terminates in a double finger-like clasping organ.

On a visit to a small cave near Lexington, Kentucky, some months ago my eye was caught by a glistening thread on the limestone forming the side wall of the cavity, about four feet from the floor. Thinking it was the trail left by a spider, I began to follow it carefully, expecting by this means to come upon the insect. Instead of a spider this larva was found,—a translucent