

ing, this is usually similar to that of an individual while at rest. Occasionally, however, the legs are held rather far apart and rarely are elevated. The pictures of ovipositing females holding the posterior legs high above their body depicts a common attitude while the insect is forcing her abdomen into the soil. In the *Ædipodinae*, at least, the position is so natural that it is necessary to view the insect closely to ascertain whether she is ovipositing or merely resting.

The fact that egg sacks are of various shapes is due to obstacles met with while the insect is drilling—egg masses are thus, at times, almost perpendicular, at others semi-horizontal. The natural shape is a gradual curl away from the ovipositing insect.

### *Ædipodinae*.

*Arphia pseudonietana* Thom. This beautiful species reaches maturity late in summer and oviposition takes place in September and October. An individual located on September 21, 1917, had her abdomen fully inserted into the ground when she was first found, in which position she remained stationary for 24 minutes. She then withdrew her ovipositor without depositing any eggs, and moving slightly commenced a fresh hole, taking six minutes in the operation. While thus employed she rested upon her four front legs and held the hind ones in the air, kicking spasmodically with first one and then the other. Having obtained the desired depth she became motionless and remained thus for 28 minutes. She then again withdrew her abdomen and commenced a fresh hole within an inch of the last, the results of which could not, unfortunately, be ascertained owing to the observer having to hasten away to catch a train. The situation in which this locust was attempting to oviposit consisted of sparse vegetation alongside of a dry ditch, the soil being rather hard and clay-like in texture. Many individuals of the same species were present in the vicinity.

A search on October 1st was rewarded by two examples being discovered ovipositing on the edge of an old trail, their operations were evidently well under way and became completed in 26 and 33 minutes, respectively. On withdrawing their abdomens the insects remained motionless for a few seconds and then slowly commenced kicking the soil into the cavity, pushing it in from