

almost bent in the middle, beyond which the heaviest part is found; this is not large but gibbous, transversely convex, and directed downward, the hooks straight, with a scarcely perceptible separation, together continuing the taper of the centrum, stout and very blunt and heavy at tip, where it is scarcely arched; lateral arms stout, curving upward and inward at tip, meeting just beyond the tip of the hooks. Clasps about half as long again as broad; the upper process broad and short, squarely docked, scarcely turned upward, but directed backward, a little incurved, the lower angle sharp, but the upper rounded; above this the posterior margin of the clasp retreats a little, and bears in the middle a broad and short truncate tooth, overhung by the upper process, the base of which is curved over so as to be horizontal, is similar to the lower process, but bears at its lower extremity a long, equal, slightly depressed, incurving finger, nearly half as long as the breadth of the clasp, its bluntly pointed tip touching the extremity of the upper organ.

Length of fore-wing, male 15.75-16.25 m.m., female 17.-17.5 m.m.; of antennæ, male 7.75-8.4 m.m., female 7.8-8.1 m.m.; of hind tibiæ and tarsi, male and female 7.75-8 m.m.; of fore tibiæ and tarsi, male 4.9-5.15 m.m., female 5.25-5.3 m.m.

Described from two males and three females from the Western States.

PREPARATORY STAGES OF APATELA FELINA, GROTE.

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YOUNG LARVA.—Length .10 inch; body cylindrical; head broader than the body, oblique. Color of the upper part and sides of joints 2, 4, 5, 7, 8, 9, 12 and 13, reddish purple; the rest of the upper part and sides and the venter dull whitish; six rows of tubercles from which proceed small clusters of brown hairs, the four rows of dorsal clusters longer than the body; head black; feet purplish. Duration of this period, 4 days.

After First Moulting:—Length .22 inch; shape about as before. The joints that were reddish purple during first stage are now black, the others white, the tubercles small, black; head black; hairs from the dorsal tubercles dark gray, the others white. Duration of this period, 3 days.

After Second Moulting:—Length .35 inch. Color of the upper part