

PREPARATORY STAGES OF CATOCALA DESPERATA, GUEN.

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EGGS.—Diameter, .04 of an inch ; low conoidal, the edges of the base rounded ; striated, fifteen of the striæ reaching the micropyle, sixteen more that do not reach the apex, though but few of these are only half length ; shallow transverse striæ. Color dull brownish olive. Duration of this period 201 days.

YOUNG LARVA.—Length, .15 inch ; cylindrical, slender, shape like others of the genus, a looper from the abortion of first two pairs of prolegs. Color of dorsum and head smoky, the head the darkest, pale between the joints ; sides a little paler than the back, with three fine dark red lines. Towards the last of this stage the color is more of a whitish olivaceous with a slight pinkish tinge, and the head and top of joint 2 brownish. Duration of this period 10 days.

After 1st moult.—Length, .35 inch ; shape much as before. Color, purplish black ; four white stripes tinged with the ground color, the two upper blending on joint 2, the lower situated below the stigmata ; venter pale with purple black spots in the middle of the joints ; head striped with broken whitish lines ; thoracic feet pale. Towards the last of this stage the black stripes are separable into a paler center and a darker border line ; the pale a little lilac tinted. Duration of this period 7 days.

After 2nd moult.—Length, .85 inch. Colors much as before, four dark and five light stripes, the pale of the dorsum making a pale stripe, each stripe double ; the pale stripes are lilac color, but the two dark stripes on the dorsum have prominent darker patches in the dark bordering lines on the posterior part of joints 4 and 5, and some on the joints back of these, being a spreading of these lines towards the centre of the body, so that between the two there is only a fine lilac line. Piliferous spots black, but so small as to be scarcely perceptible ; head about as during preceding stage ; venter with a prominent black patch on middle of each joint. Duration of this period 3 days.

After 3rd moult.—Length, 1.35 inches. Developing more into the usual *Catocala* larva shape, slightly flattening and fusiform. Striped as before, but paler ; ground color, pale lilac ; the bordering lines to the stripes black, broken into dots and short bars, the central part of the stripes mottled with black, the mottling in the dark stripes heavier than