The Cotton Leaf-Caterpillar.

Cosmophila erosa.

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THE cotton leaf-caterpillar is sometimes a pest of young cotton plants in village cultivations and in experimental plots. It is also known to feed on some other cultivated plants related to cotton, such as ladies' finger (bandakai, S.), and shoe-flower (wadmal, S.), and on certain weeds, such as abutilon (anoda, S., Vaddatutti, T.), which are usually to be found growing within and around cotton areas.

This insect passes through four stages in its development, namely : (1) egg, (2) caterpillar, (3) pupa or cocoon, and (4) moth.

The eggs are pale green, circular and somewhat flattened (see Figs 3 and 4) and are not easily seen on the leaves.

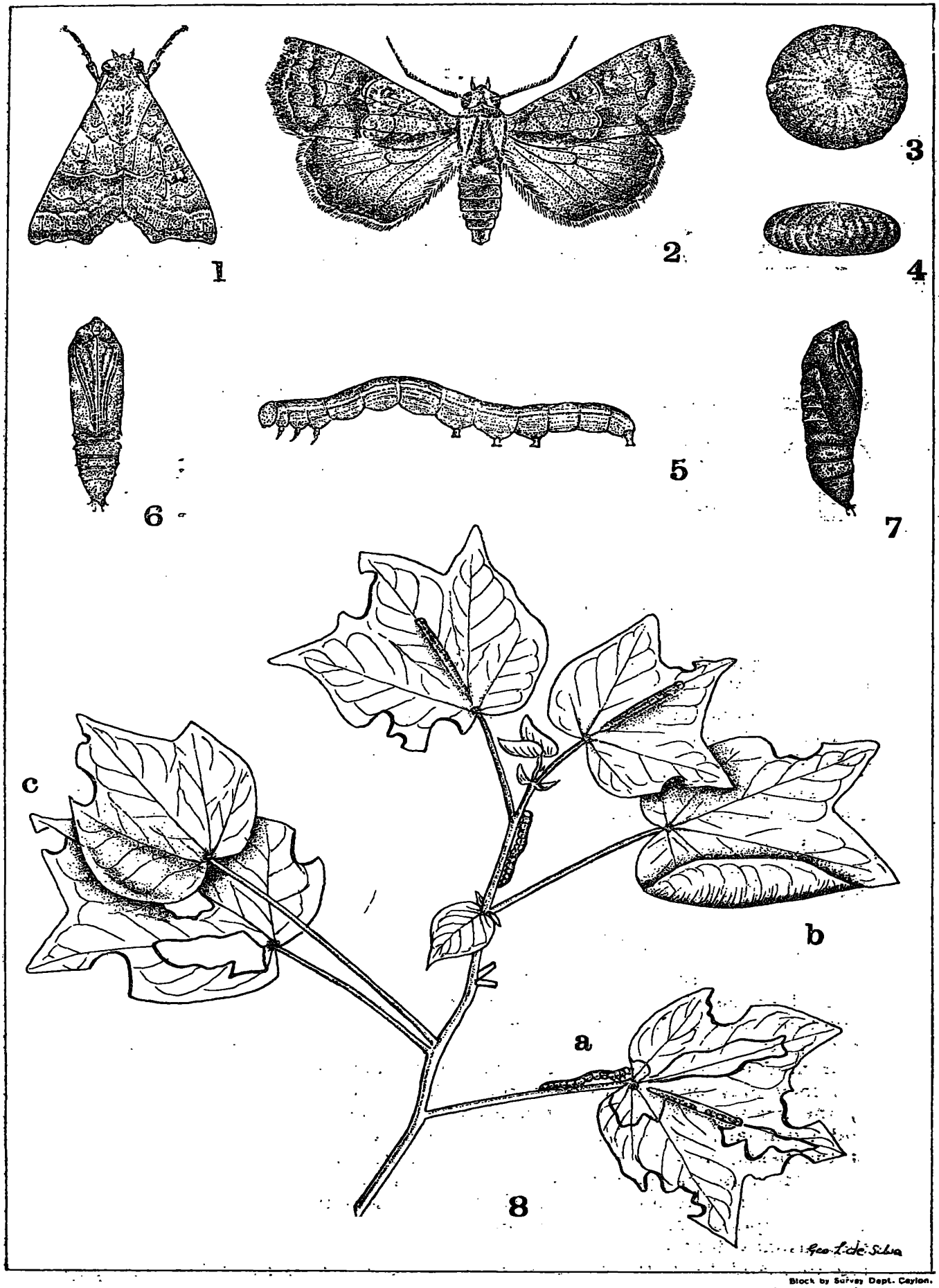
The young caterpillars are very small, pale-green, and usually escape notice. The older caterpillars (Fig. 5) are darker green, with five whitish lines along the back and sides.

The pupa (Figs. 6 and 7) is dark brown, and is formed within a fold of a leaf or between two leaves webbed together, as shown in Fig. 8 (*b*) and (*c*).

The moths differ in colour according to the sex. The female (Fig. 1) is pale-brown, while the male (Fig. 2) is brown with darker markings on the outer half of the wings. Both sexes rest with wings closed as seen in Fig. 1.

Life History and Habits.

The eggs are laid singly on the young leaves and shoots, and hatch in about four days. The caterpillars are very active in all stages and are sometimes known as "semi-loopers" from their habit of walking by partly arching the middle of the body. They may also be seen standing up on their hind legs and waving their bodies around like leeches. When disturbed they may drop to the ground. The presence of the pest is indicated by the gradual appearance of holes in the leaves, mainly the older leaves, and eventually the plants, especially those growing near unweeded edges of the fields, may have most of their outer leaves stripped bare. It is fortunate that the pest prefers the older leaves, since vigorous and well-grown plants may undergo a fairly bad attack without being vitally injured. The caterpillars are full-grown in about three to four weeks, after which they usually fold over a portion of a leaf or web two or more leaves together and form the pupa or resting stage within the fold. The pupal stage lasts about ten days, after which the moths emerge. The females begin egg-laying within a week after emergence and a single female may lay more than 800 eggs. Under favourable conditions a female moth lives about two to four weeks, while a male may live about three to four weeks



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The Cotton Leaf Caterpillar.

1. Female moth, resting position × 2.
2. Male moth, flying position × 2.
3. Egg, from above, much enlarged.
4. Egg, side view, much enlarged.
5. Full-grown caterpillar, × 2.
6. Pupa, removed from leaf.
7. Pupa, side view.
8. Cotton twig, half natural size, showing—
   (*a*) Caterpillars on leaves.
   (*b*) Cocoon within fold of leaf, and
   (*c*) Cocoon between two leaves.

about two to four weeks, while a male may live about three to four weeks

Control.

Preventive Measures.—(1) Cultivate and manure the land thoroughly before planting, so as to produce a vigorous early growth which will enable the plants to recover from any injury caused by this pest. (2) Practise clean weeding within and around the cotton area not only before the crop is planted but during the early stages of growth. The removal of all weeds, especially those related to cotton, will tend to prevent outbreaks not only of this caterpillar but of many other insect pests of cotton. (3) Do not grow such crops as ladies' finger (bandakai, S.) or roselle (rata-bilincha, S.) anywhere near cotton areas.

Remedial Measures.—Hand-pick the caterpillars and cocoons or shake the plants and collect any caterpillars which fall to the ground. In either case the collection can be put into vessels containing water and a little kerosene.

Natural Control.— Birds, such as mynahs, may sometimes be seen in numbers in fields attacked by this pest and probably help to control it. Small parasitic wasps and flies may assist in control, but cannot be relied upon. It has been noticed on several occasions that this pest may completely disappear after heavy rains, but it is not advisable to rely upon rains to control the pest.

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