

fice projecting beyond the hind end of pupa case. Marginal teeth stouter, not sinuate on the surface, with a few minute spines. Named after Mr. G. H. Corbett who has much contributed to the studies of Malayan Aleyrodidae and other insects.

All the specimens were collected by the writer and were deposited in the Selangor Museum, Kuala Lumpur, Malaya.

Description of the sawfly larva, *Pseudotaxonus secundus* Takeuchi

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Family Tenthredinidae

Subfamily Selandriinae

Pseudotaxonus secundus Takeuchi

Stage : Ultimate instar larva.

Size : 18~20mm long. Head : Length 1.3mm and 3.6mm high by 3.5mm broad.

Color : Head yellowish brown; eyes and eye disks black; mouth parts brown. Body green, the apex of claws and spiracles brown.

Structure —

Head : Frontal aspect circular in outline, smooth and setigerous. Vertical furrow (vf) distinct. Eye disks (ed) flattened and smooth, lens (a) slightly convex. Antenna (a) conical and with 5 joints and an antacoria (an); relative lengths of 5 segments about 5:3:3:3:4. Frons (f) nearly semi-circular, $\frac{6}{7}$ as high as broad, with many setae arranged rather regularly (with 6 setae along epistomal suture). Clypeus indistinctly subdivided into pre- and postclypeus which are about 2:5 in relative length; postclypeus (oc) with 6 setae and preclypeus (ec) bare. Labrum with 8 setae. Sinistral mandible with 7 and dextral with 6 dentes and each with a seta. Maxilla with palpifer (pf) large, setigerous with 2 setae; palpus (mp) 4-segmented, 2nd with a seta, and the others bare; relative lengths of palpal segments about 3:7:5:5; stipes (st) large, with a seta; galea (g) large, without setae; lacinia (la) broad, flattened, with 10 rather strong setae along apical margin. Labium with palpiger (pg) and 3-segmented palpus (lp); basal and apical palpal segments without setae, middle one with a seta; proportional lengths of palpal segments about 5:5:6. Mentum divided into pre- and postmentum, and relative lengths of two regions about 3:2; prementum (em) subdivided by paired longi-

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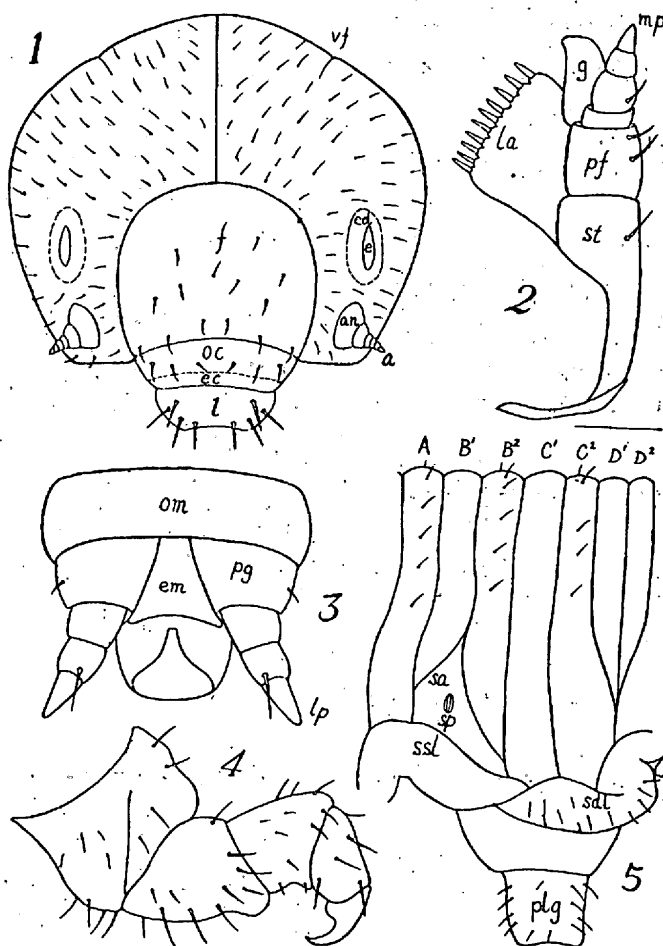
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tudinal depressions into a pair of palpigers and median area; palpiger with a seta; postmentum (om) bare.

Cuticle : Thickly granulated microscopically.

Thorax : Prothorax subdivided into 4 annulets, A, B, C¹ and C²; annulet A with one or two setae and its dorsal part hidden under head capsule; B with many (about 12) setae; C bare. Meso- and metathorax each with 5 annulets, A, B¹, B², C¹ and C²; but C of mesothorax not reaches the mid-dorsal line; B¹ and C¹ each with several setae. Sternal side bare. Surpedal and subspiracular lobes setigerous with minute setae. Prothoracic spiracle largest and metathoracic one atrophied. Legs setigerous excepting claws, each similar in size, with 4 joints* and a claw; relative lengths of 4 segments and claw about 15:14:11:11:5; basal segment with a suture, making an angle of about 40° with



Explanation of figure : 1. Head, frontal aspect 2. Maxilla
3. Labium 4. Mesothoracic leg 5. 3rd abdominal segment

apical margin and not reaching anterior basal margin. 2nd and 3rd segments of legs slightly dilated at ventro-distal part.

Abdomen : 1st-8th abdominal segments each with 7 annulets, being composed of A, B¹, B², C¹, C², D¹ and D²; A, B² and C² bearing with several setae; 9th abdominal segment without annulet D. Dorsal side of 10th abdominal segment represented by a large epiproct and without appendage, bearing with minute setae. Sternal side of each 2nd-8th segments setigerous only between larvapods, and corresponding parts of 1st and 9th setigerous. 1st-8th each with a distinct and oval spiracle (sp)

* The exact nomenclature of these segments will be retained, at further investigations are needed for this task.

on spiracular area (sa), but spiracles absent on 9th and 10th. Subspiracular (ssl) and surpedal lobes (sdl) with minute setae. Larvapods wanting on 1st and 9th abdominal segments, and those of 10th smallest; larvapods (plg) except apex setigerous, with minute setae.

Biological notes —

Food plants : *Osmunda japonica* Thunberg

Habits : This species has only one generation in a year. The adults appear late in April in Tokyo. The female lays eggs one by one on the under-side of the growing leaves almost always near the veins. Eggs are deposited on the surface of the leaves and not embedded. The edge becomes incurved, if the eggs were laid at the edge of the leaf, as the growth of the oviposited part is delayed while that of the other parts is normal. The larvae almost always grow on the underside of the leaves, they have not a habit of coiling or curving their bodies, and when disturbed they fall down on the ground. The fullgrown larvae bore into a dead branch of various plants on the ground, where they make their pupal chamber and change into prepupae. Pupation occurs two or three weeks before their emergence.

This work was carried out using the materials collected in May of 1949 and 1950 in National Nature Educational Gardem (formally Sirokane Estate) in Tokyo.

ヒマ蠶蛾觸肢の光に對する反應について

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Studies on the antennal reaction of Eri-silkworm moth
(*Philosamia cynthia ricini*) to the artificial light

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一般に觸肢が昆蟲の主要な嗅覺器であることは、McIndoo (1926), Minnich (1925-26), Sihler (1924), Newton (1931) 等多數の研究者によつて知られている。私はヒマ蠶の誘引腺に關する實驗を行つてゐる時に、觸肢が光を感じる機能を有することを認めたので、觸肢の光に對する反應に就て實驗した。其の結果を茲に報告する。尙觸肢は熱或は音を感じる機能を有すると言う報告は多いが、光を感受すると言う報告は未だ知らない。

この研究を行うに當り、終始御懇篤な御指導を賜り、且本稿を御校閲下された本學教授蒲生