

ON FOUR NEW RHYNCHOTA OF THE FAMILY ALEURODIDAE  
FROM BURMA.

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Genus *Aleurotrachelus* Quaintance and Baker (1914).

*Aleurotrachelus tuberculata*, sp. nov.

(PLATE VIII).

*Locality*.—Horticultural gardens, Rangoon. Insein.

*Host*.—*Ficus* sp.

*Pupa case*.—(Fig. 1) Black, with a short fringe of apposed wax filaments; waxy secretion on the dorsum arranged in the form of narrow white bands on the ridges. Margin (Fig. 4) with two rows of rounded teeth, the teeth in the inner row alternating with those in the outer and having semielliptical pores at their bases outwardly; a pair of fine bristles arising from the teeth in the outer row towards the caudal margin; at the bases of some of the teeth in the inner row, there are inwards short inconspicuous papillae. Dorsum with a distinct ridge and the usual folds, characteristic of the genus; with five pairs of long spines, three pairs situated sub-medially on the cephalothorax, a pair cephalad of the vasiform orifice and a pair near the caudal margin; dorsum also provided with small tubercular papillae (Fig. 5) disposed on the greater part of the cephalothorax except on the longitudinal folds, along the abdominal transverse folds, and also on the medial ridge, the segmentation of which is indicated by a concentration of papillae arranged in transverse rows; submargin with indistinct irregular radial streaks; a pair of translucent eye spots indicated on the sides of the first pair of spines; tracheal folds or pores not indicated; minute circular pores sparsely spread over the dorsum.

Vasiform orifice (Figs. 2, 3) semielliptical, situated on a conspicuous elevation, and surrounded by the caudal continuation of the medial ridge which narrows posteriorly; operculum similarly shaped, entirely covering the orifice and obscuring the lingula.

Length of case 0.558 mm.; breadth 0.342 mm.; length of vasiform orifice 0.042 mm.; breadth 0.034 mm.; length of spine 0.126 mm.

Adults unknown.

This species differs from other species of the genus in the presence of tubercular papillae arranged on the dorsum in the manner described above. It is always found on the underside of leaves, generally associated with *Aleurothrixus indicus* Singh (1931), but is never very abundant. Collected by the author in October 1929. Numerous specimens on slides and leaves in my collection. Type in the Indian Museum (No.  $\frac{4592}{H 7}$ ).

Genus **Pealius** Quaintance and Baker (1914).**Pealius kalawi**, sp. nov.*Locality*.—Kalaw.*Host*.—*Laurus* sp.

*Pupa case*.—(Fig. 10) Colourless, elliptical, with a narrow palisade of wax, slightly elevating the case from the leaf. Margin (Fig. 12) of close-set teeth, provided with thirteen pairs of short bristles with tubercles at their bases; a narrow portion of submargin presenting a corrugated appearance here and there. Dorsum distinctly segmented, thoraco-abdominal suture reaching the margin, sparsely covered with small papillae, and a pair of circular markings submedially on each of the abdominal as also the thoracic segments; thoracic tracheal folds and pores not indicated.

Vasiform orifice (Fig. 11) almost semicircular with the cephalic margin straight; the rim internally with a few folds, bounded laterally by chitinized bands which extend to the caudal margin bounding the caudal furrow between them. Operculum subrectangular, rounded laterally, setose, covering about  $\frac{2}{3}$  of the orifice; lingula swollen at the tip, setose, and extending to the caudal rim of the orifice; the caudal furrow broad anteriorly, forming more or less of a pit round the vasiform orifice, narrowed posteriorly and sculptured reticulately as indicated in figure 2.

Length of case 0.864 mm.; breadth 0.63 mm.; length of vasiform orifice 0.029 mm.; breadth 0.034 mm.

Adults unknown.

This species is assigned to the genus *Pealius*, owing to the characters of the vasiform orifice, though the other characters are by no means typical of the genus. The bands on the sides of the orifice recall the genus *Aleurolobus*, but in this case this boundary is not trilobed. Not abundant. Collected by the author in December 1929. Numerous specimens on slides and leaves in my collection. Type in the Indian Museum. (No.  $\frac{4593}{H 7}$ ).

Genus **Setaleyrodes** Takahashi (1931).**Setaleyrodes takahashia**, sp. nov.*Locality*.—Kalaw.*Host*.—*Streblus asper*.

*Pupa case*.—(Fig. 8) Colourless, surrounded by a high palisade of wax, elevating it from the surface of the leaf, on the under side of which it is generally found sticking to the sides of the thick veins. Elongate, elliptical in form; margin (Figs. 6, 7) entire, incurved ventrally with a pair of fine setae caudally; submargin bearing suture-like lines and provided as a rule with seven pairs of strong spines of unequal length, of which three pairs are disposed cephalad, the other three caudad and one about the middle of the abdomen. Dorsum distinctly segmented, sparsely pitted all over except its median area which is occupied by a conspicuous ridge on the abdomen; the ridge with prominent subconical elevations (Fig. 6) on the first four abdominal segments, and a pair of

circular or oval markings laterally on each of the abdominal segments, except the last; there are also a few circular or oval markings submedially on four of the cephalothoracic segments; the thoraco-abdominal suture reaching the margin; tracheal folds and pores not indicated.

Vasiform orifice (Fig. 9) situated on the caudal termination of the ridge, subcordate, the cephalic margin straight with a thick rim and with a few folds inwards; operculum more or less similarly shaped, setose, filling about two-thirds of the orifice; lingula cylindrical with its caudal tip slightly swollen, setose, and protruding a little beyond the operculum. Vasiform orifice bounded on either side by a low ridge which continues to the caudal margin; caudal fold forming a depression postero-laterally of the orifice, and sculptured as shown in figure 9.

Length of case 0.81 mm.; breadth 0.27 mm.; length of vasiform orifice 0.037 mm.; breadth 0.037 mm.; average length of spine 0.126 mm.

Adults unknown.

This species closely resembles *Setaleyrodes mirabilis*, Takahashi (1931), from which it differs in the characters of the margin, details of the vasiform orifice and the caudal furrow. It also bears a superficial resemblance to *Aleurotulus arundinacea* Singh (1931). Not abundant. Collected by the author in December 1929. About a dozen specimens on slides and leaves in my collection. Named after Mr. Ryoichi Takahashi as a token of esteem. Type in the Indian Museum. (No.  $\frac{4594}{H 7}$ ).

Genus **Trialeurodes** (Ckll.) Quaintance and Baker (1914).

**Trialeurodes meggitti**, sp. nov.

*Locality*.—Kalaw.

*Host*.—*Ficus* sp.

*Pupa case*.—(Fig. 14) colourless surrounded by a low waxen palisade on the underside of leaves. Margin (Fig. 15) crenulated, of close set wax tubes, with narrow indentations between, provided with two pairs of setae, a pair cephalad and a pair caudad; submargin covered with numerous irregularly distributed sub-conical elevations (Fig. 16) which superficially appear as crescentic chitinous markings. Dorsum free from the elevations, distinctly segmented, the sutures not extending to the submargin. Thoracic tracheal folds faintly discernible, terminating in a few deeper indentations on the margin; caudal fold in the form of a wide shallow furrow joining the orifice with the margin and terminating in a few deeper indentations, cephalad of which there is a pair of spines.

Vasiform orifice (Fig. 13) subtriangular, with the cephalic margin straight, lateral margins thickly chitinized; operculum lobed marginally, and with a notch on the posterior border, setose, covering about half of the orifice; proximal half of the lingula cylindrical covered by the operculum, distal half subcircular, setose, with a conspicuous notch at the tip, and provided with two pairs of setae on the posterior border, lying exposed in the narrower caudal portion of the vasiform orifice, which has some irregular lines in it. Legs and antennae normal.

Length of case 0.9 mm.; breadth 0.68 mm.; length of vasiform orifice 0.075 mm.; breadth 0.058 mm.

*Adults*.—Of the usual colouration, and snowy white wings, with the ordinary venation; antennae of seven segments, in the male I segment, 0.016 mm.; II club-like, 0.042 mm.; the remainder cylindrical, imbricate III, 0.1 mm., with two spiked sensoria near the distal end; IV, 0.033 mm.; V, 0.05 mm., with two spiked sensoria at the distal end; VI, 0.037 mm. with a single spiked sensorium; VII, 0.033 mm. with a spiked sensorium and a seta at the distal end.

Vasiform orifice normal, almost covered by the operculum with the lingula projecting behind; penis a little shorter than the claspers, which have a conical tooth and a few spines directed inwards near the distal end. Females larger in size than the males.

This species appears to have some resemblance to *Trialeurodes merlini* Bemis (1904), from which, however, it differs in respect of the distribution of the papilla-like elevations, and the shape of the vasiform orifice. Collected by the author in December 1929. Fairly common. Numerous specimens on leaves and slides in my collection. Types in the Indian Museum. (Nos.  $\frac{4595-96}{H 7}$ ).

Named after Dr. F. J. Meggitt, Professor of Biology in the University of Rangoon. My sincere thanks are due to him, for providing me with every facility, during my stay at the University College, to keep up my interest in the group.

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