

中國和馬來亞幾種粉虱的記述(同翅目)*

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Dialeurodes hongkongensis Takah.

(台灣博物學會會報, XXXI:351(1941))

蛹殼 蒼白色, 在胸氣道口、在腹部分節部分的兩側以及在身體的末端各有一塊深棕色的斑(總共5塊), 其中以腹部兩側的斑塊最大, 但它顯然留出體邊, 向後也到不了管狀孔; 在身體末端的一塊斑長形, 向前頂到第8腹節的背片, 後面細小; 在有些個體的背部, 或在中間分節的部分更有一縱長的深棕色斑, 或在腹部靠近前端的中央有一個大的斑塊。體近於圓形, 稍長於闊, 在頭胸的兩側不緊縮, 在身體的後端不內凹。背部在亞緣區有很多從邊向內的長線條, 從亞緣區向內有線條所組成的網狀紋, 在中間分節部分的兩邊有很多分枝不規則的條紋, 在中間的部分有幾根長的橫線條。胸氣道口小, 閉式, 縮進體緣之內相當的距離, 有4—5個小氣道齒; 尾氣道口也是一樣, 有0—2個小氣道齒。胸氣道沒有清楚的界限, 在它的基部有很多暗淡的小點。管狀孔小, 比較闊, 形狀正常, 沒有齒紋, 在後緣向裏有一個短小的中間瘤。孔蓋蓋佔管狀孔口的大部, 孔蓋在後端呈直截狀。舌突器的末端直截狀。尾溝不顯明, 長約為管狀孔長的4.5倍。在管狀孔後面深棕色部的前半部有許多暗淡的小長方形斑塊, 並排地擺成幾橫列。體長約1毫米。

寄主 *Smilax* sp.

有幾個蛹殼是 J. L. Gressitt 在廣州採的(1948年11月12日)。

過去只知道產在香港。這種在它的背部有5塊深棕色的斑紋, 易於辨識。

Tuberaleyrodes rambutana Takah. 新種

蛹殼 色白, 背瘤棕色。體橢圓形, 後面狹細, 頭胸兩側不緊縮, 在頭胸的後部最闊, 身體的後端不內凹。胸中脊縫不清楚, 中胸背板與前胸背板相分, 橫蛻縫短; 腹節

清晰，第7腹節的背片短於第6腹節。背部在背瘤外側的亞緣區上有很多從邊向內的細溝紋；在每邊有9個長筒狀的背瘤1排，在頭胸中部的前方、在中胸背板以及在腹部的基節上也各有1對相同的背瘤，在管狀孔的前側有1對很短的背瘤；這些背瘤的基部粗，先端直截，直或彎，每個背瘤的頂端有一根長剛毛；在邊上2行背瘤中，以最後一對背瘤較短；除在管狀孔前側和在腹部末端的2對背瘤外，其餘所有背瘤上的剛毛幾與背瘤等長；除在亞緣區和第8腹節背片的中間部分之外，有無數的小乳突密佈背部；在頭胸和腹部前7腹節的中背線處，以及沿中間分節部分的兩側，都有較大而顯著的乳突，從邊上2排背瘤向內，除最後那1對背瘤外，也各有近於成2行排列的大乳突。體邊平滑。胸氣道口小，開式，幾呈方形，尾氣道口亦同。氣道都不顯明。管狀孔大，橢圓形，較長於闊，比第8腹節背片稍長，在後端有一狹而深的裂口，

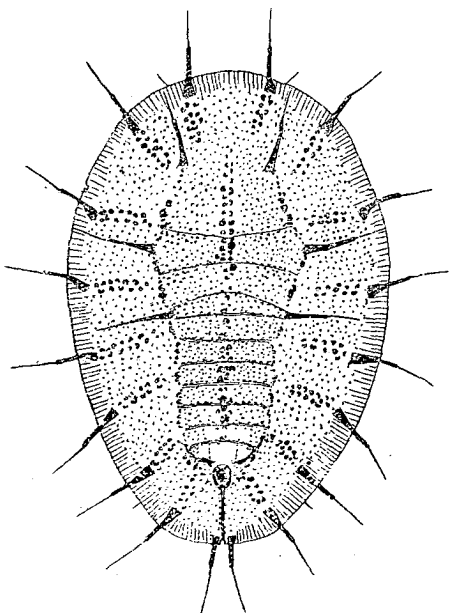


圖 1 *Tuberalecyodes rambutana* Takah.
新種。蟬殼

無齒紋及中間瘤；管狀孔有前緣區，前緣區圓而窄。孔蓋較長於闊，在後半部狹，先端圓，蓋住孔口的大部。舌突器稍顯露。尾溝很細，清晰，在前端稍闊。體長 1.2 毫米。

寄主 紅毛丹(*Nephelium lappaceum*)。

作者在馬來亞雪蘭莪省的吉隆坡採到一個蟬殼 (1945 年 8 月 10 日)，這標本收藏在吉隆坡的馬來聯邦政府博物館內。

這種和稱為 *Dialeurodes spiniferosa* Corbett 的粉虱相近，但在背瘤的分佈和數目上則與該種頗不相同。

Aleurotuberculatus jasmini Takah.

台灣總督府中央研究所農業部報告, 59:26(1932); Corbett, JI. Federated Malay St. Mus., XVII:829 (1935); 高橋, 台灣博物學會會報, XXXII:332(1942)。

寄主 黃皮。

有幾個標本是橫濱植物檢疫所從香港運去的黃皮上找到的。

過去在台灣、馬來亞和泰國已有記載。

Aleuromarginatus serdangensis Takah. 新種

蛹殼 色白，新鮮時稍帶淡綠色，在身體四週有長而薄的蠟質分泌。體幾呈長方形，在頭胸的前部最闊，後面狹小，在胸氣道口處顯然緊縮，兩端稍圓或直截狀，在後緣中部有時稍稍內凹，平薄而不隆起。胸中脊縫向前伸不到邊緣，中胸背板與前胸背板相分，橫蛻縫短，腹節狹窄，無斑紋；腹部基節背片較後胸背板稍長，也稍長於第2腹節的背片，第8腹節背片稍長於第7腹節，顯然長於管狀孔；囊紋分割。背部不硬化，無突起，有很暗淡的一些線條從邊向內，幾乎頂到中間分節的部分；在亞緣區靠近緣齒的地方，有些小孔排在一行上；在頭部及在腹部基節背片上的背毛小，在身體的每邊另有大約9根一行的小剛毛。緣毛長。緣齒短而闊，寬圓，顯然排成雙行，裏面一行的緣齒與外面的一行相同。胸氣道橢小，稍突出，有二相隔較遠的小橢齒，這二個小橢齒狹小，遠較其他的緣齒為狹，先端圓；尾氣道橢亦同，它的二個小橢齒有時外偏。胸氣道很短，不清楚。管狀孔頗小，長寬幾相仿，不突出，後緣圓，無齒紋，距離身體的後緣很遠。孔蓋蓋掩孔口的大部。舌突器隱藏。無尾溝。觸角小於前足。體長0.85毫米，闊0.6毫米。

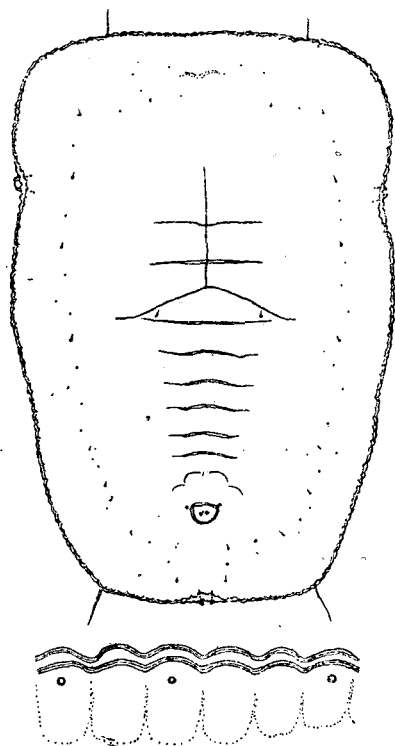


圖2 *Aleuromarginatus serdangensis* Takah. 新種。蛹殼和它的緣區

寄主 一種未定名的野生樹。

作者在馬來亞雪蘭莪省的少登採到2個標本(1945年1月20日)，都收藏在馬來亞吉隆坡的馬來聯邦政府博物館內。

這種在體形上很特殊，與同屬的其他種類顯然不同。

Trialeurodes chinensis Takah. 新種

蛹殼 蒼白色，但有一個標本經苛性鉀處理後在身體分節部分的周圍成淡棕色。

體橢圓形，在前端稍狹，在後胸處最寬，長約為寬的 1.5 倍。在頭胸兩側有時稍緊縮，在身體後緣不內凹。中胸背板稍長於後胸背板，與前胸背板相分；橫蛻縫幾頂到亞緣乳突，在它的兩端各有一小塊近於三角形的部分；腹節闊，節上沒有顯明的凹紋，第 7 腹節背片遠短於第 6 腹節，第 8 腹節與第 6 腹節等長；囊紋左右相分。背部有很多圓錐狀乳突沿四週排成一圈，這些乳突較長於闊，先端尖硬，排得密，頂到身體的邊緣，在胸氣道櫛的前方每邊有 23—25 個如此的乳突；有一個標本在前端靠近乳突的地方，和在靠近腹基部的一邊，更有 2 個相似的乳突；其他的地方全沒有背乳突；背毛短，第 8 腹節上的背毛小，位於管狀孔的側面，在孔蓋底線的後面；尾剛毛較長，但短於在頭上的前背毛，接近身體的末端。緣齒小，很短，先端圓。胸氣道櫛顯著，有時稍突出，有 5 或 6 個短櫛齒；這些櫛齒不顯明，先端圓，很寬而淺，較其他緣齒狹；有一塊硬的半月形構造與胸氣道櫛相連；尾氣道櫛不突出，有 5 個櫛齒。管狀孔大，近於心形，稍長於闊，先端圓，較第 8 腹節長得多，有幾條側脊，在後端有一個縱的中褶，這中褶向前狹而尖；管狀孔有前緣區，稍闊於管狀孔的前緣。孔蓋小，短而闊，蓋住孔口約一半長。舌突器稍顯露，在先端稍有裂口，在頂端有二個禿的側瘤，其中以後側瘤較大。尾溝狹，無刻紋，較管狀孔要長些。在前足基節的附近有一個圓錐狀的尖毛，在中足附近也有 2 根如此的毛，其中在前面的 1 根很大。觸角短。體長 0.8 毫米。

寄主 *Solanum* sp.

有一個標本是 J. L. Gressitt 在廣州採的 (1950 年 1 月 5 日)；收在作者的藏品裏。這種的特徵是具有顯明的胸氣道櫛。

Tetraleurodes fici Takah. 新種

蛹殼 黑色，很硬，在體邊有蠟。體小，細長，近於卵圓形，後面較狹，在頭胸兩側

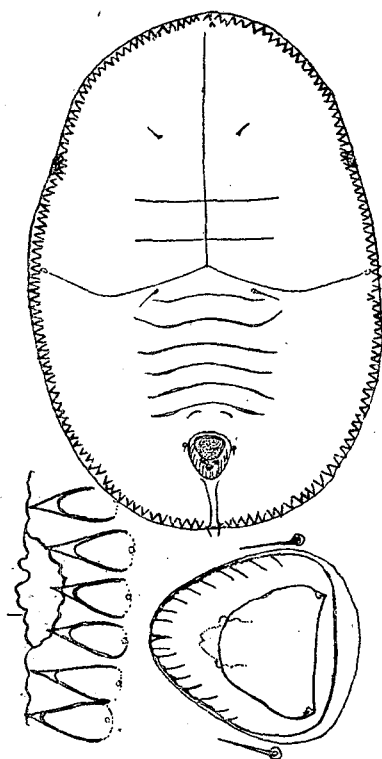


圖 3 *Tetraleurodes chinensis* Takah. 新種。蛹殼，胸氣道櫛和亞緣乳突，和管狀孔

不緊縮，在體末端不內凹。亞緣區很窄，顯然與背盤相分。胸中脊縫在後胸上不清楚，中胸與後胸之間的縫顯著，橫蛻縫在兩邊向前急彎，彎到中胸的前面，約在頭胸部長的一半處與亞緣區相接，在橫蛻縫外側的尖角區長；後胸背板常為一橫線分為前後二部，後半部稍短；腹部分節不顯，中間分節的部分在兩側多少有一定的界限，節濶，比它兩側所剩的背盤區要濶得多；4—6 腹節背片的側脊紋頂到背盤的邊緣；腹基節背片小，第7腹節背片短於第8腹節。背部的頭胸部有隱約的網紋；在頭部、在中胸背板及後胸背板上各有一對剛毛；第8腹節上的剛毛長，粗，尾剛毛很長，着生在背盤的後端。無眼斑。緣齒頗大，齒長濶相等，或較寬，齒基稍濶，先端圓或鈍角狀。胸氣道和櫛都沒有，但在後端的4—7個緣齒有時較大。管狀孔頗大，圓，稍扁濶，無缺口，突出，無齒紋。孔蓋蓋住整個的孔口。在管狀孔後面的部分約等於管狀孔長的2倍。體長0.63毫米。

寄主 *Ficus* sp.

作者在馬來亞雪蘭莪省的基蓬採到很多標本(1944年1月9日)。夥模標本存於馬來亞吉隆坡的馬來聯邦政府博物館內。

這種的特徵是它的橫蛻縫在兩端向前急彎，而且橫蛻縫在側面很長，又它的後胸背板被一橫線分割，也是它的特徵。

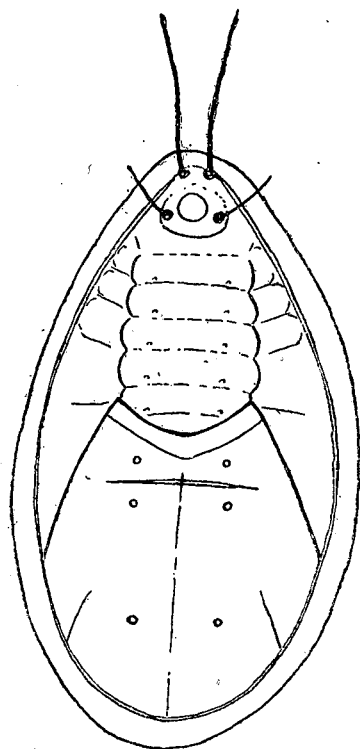


圖4 *Tetraleurodes fici* Takah.
新種。蛹殼

Tetraleurodes semilunaris Corbett

(Bull. Ent. Research, XVI:282 (1926))

蛹殼 色黑，體細長，橢圓形，長約等於寬的1.6倍，在頭胸兩側不緊縮，在身體末端不內凹，無脊紋。中胸背板與前胸背板相分，橫蛻縫在兩邊向前伸到中胸背板後緣的稍前方，達於背盤的邊緣；腹節寬，第2腹節稍短於第3節，第7腹節短於第6節，約相當於第6節長的1/3，第8節長於第6節；沒有囊紋。亞緣區在四周全然與背盤相分，寬度與中胸背板的長度相當，在外半圈色較深，每邊有60個以上小的半月形或很細的透明紋，排成一單行，這些透明紋離身體的邊緣較遠；在內半圈密佈長而不規則

的深色花紋，其中有些花紋分叉；亞緣區的溝紋不顯著；在外半圈上約有 15 個小孔排在一行上。背盤在沿邊較硬，尤其在兩側的中部如此；除第 8 腹節外，每一腹節背片上都有 4 對或 6 對小孔；在頭上及腹基節上各有 1 對小剛毛；第 8 腹節上的剛毛離管狀孔遠，位於管狀孔前緣線的稍後方，它與管狀孔之間的距離，大於半個管狀孔的寬度；不見有尾剛毛。眼不顯。無緣齒。胸氣道及櫛都沒有，但尾氣道櫛處約有 7 個小而不顯明的櫛齒；尾氣道分明，較管狀孔狹，向前不開濶，無點刻。管狀孔大，稍短於第 8 腹節背片，長濶相等，或稍長於濶，後端圓，不突出，有些脊紋；管狀孔的前緣區不分明。孔蓋近於心形，蓋沒孔口。舌突器隱藏，粗，稍拳結，拳結部分稍長於濶，多小刺，有 2 根長剛毛。尾溝很寬，寬於管狀孔，幾達於管狀孔的前緣，向後幾頂到背盤的邊緣，無顯明的刻紋。管狀孔後面的長度約等於第 8 腹節長度或亞緣區寬度的兩倍。體長 1.5 毫米。

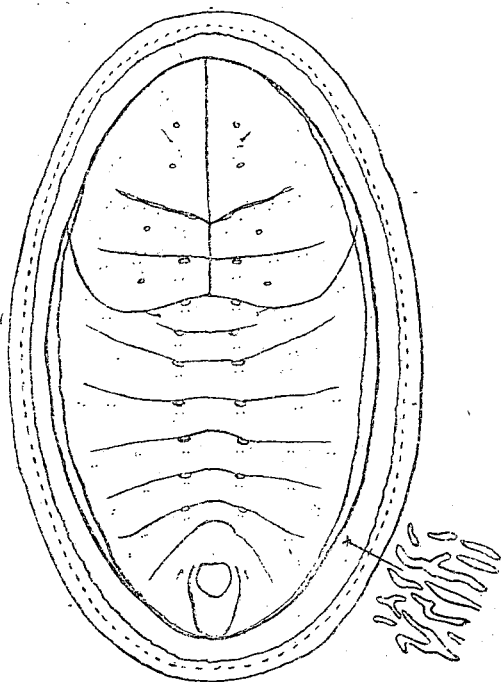


圖 5 *Tetraleurodes semilunaris* Corbett
蛹殼和在內半圈亞緣區上的花紋

寄主 一種未定名的草。

有幾個標本是 J. L. Gressitt 在廣州採的 (1948 年 12 月 22 日)。

以前在錫蘭有記載。這種不是本屬的標準型式，如管狀孔不突出、有一條寬的尾溝、亞緣區沒有溝紋、沒有緣齒。產在印度和馬來亞的 *Tetraleurodes pusana* Takah. 似與此種近緣。

Aleuroplatus malayanus Takah. 新種

蛹殼 黑色，很硬，蓋有一層膠質。體卵形，前面較狹，約在腹部的中部最寬，在前端有時稍尖，在後端常突出，在頭胸兩側不緊縮，有一中脊紋；兩側的邊緣在製片中常捲折。中胸背板與前胸背板不相分；中胸背板與後胸背板間的縫長，顯現；橫蛻縫頂到體邊，向前幾乎頂到中胸的後緣線；腹部在基部的中間部分不向前突出，第 8 腹節背

片遠長於第7節；腹節背片有短的側脊紋。腹部背上除中間的部分外，有很多嵌鑲狀的小塊斑，這些斑紋在苛性鉀處理過的標本可以見到；在頭部有1對小剛毛，在腹基背片上有1對很小的尖錐狀剛毛；第8腹節的剛毛長，在管狀孔的前面，尾剛毛較長，在身體的末端。無眼斑。緣齒不顯明。胸氣道橢圓形，突出，有5—8個大而粗的橢齒，齒先端圓，較寬於長，多在基部濶；尾氣道橢圓形，有5—7個橢齒。氣道都不清楚。管狀孔突出，幾突到身體的後緣，較濶於長，先端圓，無齒紋，管狀孔前沒有與第8腹節背片相分的前緣區。孔蓋在基部狹，較濶於長，蓋沒孔口的大部。舌突器色淡，向後稍濶，先端圓，有1對剛毛。腹面光滑。體長1.15毫米。

寄主 *Pueraria javanica* 幹上。

有很多標本是 D. V. FitzGerald 在馬來亞雪蘭莪省的烏魯亞姆；麻刺甲和塞仁邦採的(1940年7月和1941年)。夥模標本存放在馬來亞吉隆坡的馬來聯邦政府博物館內。

這個種和 *Aleuroplatus pectiniferus* Quaintance & Baker 是近緣種，但與該種的主要區別在於它的管狀孔向後突出幾頂到後緣，而且氣道橢的橢齒較粗短。和 *A. mameti* Takah. 之間最易區別的是它的管狀孔位置接近腹末，而且有顯著的氣道橢。

這一科的昆蟲通常只為害植物的葉，但這種粉虱則着生於枝上。就作者所知，在這一科裏另外像這樣的例子只有在日本的野茉莉(*Styrax japonica*)枝及幹上的 *Rachisphora styraci* Takah. 和在非洲的 *Polygala* 及 *Maerua* 葉及枝上的 *Aleuroplatus bossi* Takah.

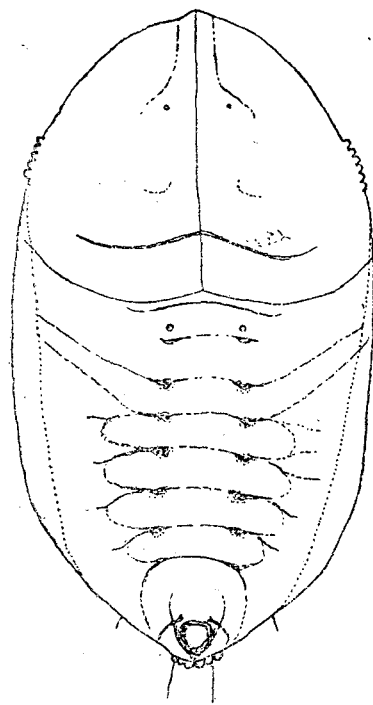


圖6 *Aleuroplatus malayanus*
Takah 新種。蟬殼

DESCRIPTIONS OF SOME NEW AND LITTLE
KNOWN SPECIES OF ALEYRODIDAE FROM
CHINA AND MALAYA (HOMOPTERA)

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Dialeurodes hongkongensis Takah.

(Trans. Nat. Hist. Soc. Formosa, XXXI, p. 351 (1941).)

Pupa case: Pale in colour, but with a large dark brown patch at each thoracic tracheal pore, on each side of abdomen laterad of the median segmented area, and also at the hind end of body (5 patches in all), the patch laterad of the segmented area of abdomen the largest, but distinctly separated from the body margin, not reaching the level of vasiform orifice; that at the hind end of body longitudinal, reaching the 8th abdominal tergite, narrowed posteriorly; in some individuals dorsum also dark brown longitudinally on the median segmented area, or with a large median patch on the abdomen near the base. Body subcircular, a little longer than wide, not constricted across the cephalothorax, not indented at the hind margin. Dorsum with many long lines running mesad from the margin, many linear markings which form reticulations mesad of the submarginal area, many irregular branched linear markings on the lateral part of median segmented area, and with a few long transverse lines on the median area. Thoracic tracheal pores small, closed, within the margin, somewhat apart from the margin, with 4 or 5 minute teeth; caudal tracheal pore similar, with 0—2 minute teeth. Thoracic tracheal folds not defined, with numerous faint minute dots on the basal part. Vasiform orifice small, wider than long, normal in shape, lacking teeth, but with a low median tubercle at the hind end. Operculum occupying most of the orifice, truncated at the hind end. Lingula truncated at the tip. Caudal furrow indistinct, about 4.5 times as long as the vasiform orifice. Many faint elongate areolations arranged more or less in transverse rows on the dark brown area behind the vasiform orifice, which are absent on the posterior half of the dark brown part. Body about 1.0 mm. long.

Host plant: *Smilax* sp.

Some pupa cases were collected by Dr. J. L. Gressitt at Fei-ha Temple north of Canton (Nov. 12, 1948).

Hitherto known from Hongkong only. This species is readily recognizable by the large dark brown patches on the dorsum.

Tuberaleyrodes rambutana n. sp.

Pupa case: Whitish, with the dorsal tubercles brown. Body elliptical, but narrowed posteriorly, not constricted across the cephalothorax, broadest at the posterior part of cephalothorax, not sinuate at the hind end. Mid-thoracic suture not discernible, mesonotum defined from the pronotum, transverse moulting suture short; abdominal segments distinct, 7th tergite somewhat shorter than the 6th. Dorsum with many thin furrows running mesad from the margin, which are reaching the submarginal tubercles; 9 long cylindrical submarginal tubercles arranged in a row on each side, a pair of similar tubercles present anteriorly on the median area of cephalothorax, on the mesonotum, and also on the basal abdominal segment, a pair of much shorter ones anterior to the vasiform orifice; these tubercles expanded basally, truncated at the tip, straight or curved, each with a long seta at the apex; the last submarginal pair shorter than the remaining submarginal ones; the apical setae of these tubercles nearly as long as the tubercles except in the pairs near the vasiform orifice and the hind end of body; numerous small papillae densely scattered over the dorsum except on the submarginal area and on the median part of the 8th tergite; larger prominent papillae present along the mid-dorsal line on the cephalothorax and abdomen except on the 8th tergite, along the lateral margin of median segmented area, and also in nearly 2 rows mesad of each submarginal tubercle excepting the last one. Margin entire. Thoracic tracheal pores small, open, almost quadrate, caudal pore similar. Tracheal folds not distinct. Vasiform orifice large, elliptical, longer than wide, slightly longer than the 8th tergite, deeply, but very narrowly notched at the hind end, wanting teeth and median tubercle; anterior marginal area of vasiform orifice defined, rounded, but not expanded. Operculum longer than wide, narrowed on the distal half, rounded at the tip, occupying most of the orifice. Lingula slightly exposed. Caudal furrow very slender, distinct, a little widened at the base. Body about 1.2 mm. long.

Host plant: Rambutan (*Nephelium lappaceum*).

A single pupa case was taken by the author at Kuala Lumpur, Selangor, Malaya (Aug. 10, 1945), which was deposited in the collection of the Federated Malay States Museum at Kuala Lumpur.

This species is related to the Aleurodid described as *Dialeurodes spinifera* Corbett, but is much different from that species in the distribution and number of dorsal tubercles,

Aleurotuberculatus jasmini Takah.

Dept. Agric., Govt. Research Inst. Formosa, Rept. no. 59, p. 26 (1932); Corbett, Jl. Federated Malay St. Mus., XVII, p. 829 (1935); Takahashi, Trans. Nat. Hist. Soc. Formosa, XXXII, p. 332 (1942).

Host plant: 黃 皮.

Some specimens were collected on the host from Hongkong at Yokohama Plant Quarantine.

Previously recorded from Formosa, Malaya, and Thailand.

Aleuromarginatus serdangensis n. sp.

Pupa case: White, slightly pale greenish in life, with long thin waxy secretions around the body margin. Body almost rectangular in shape, broadest at the anterior part of cephalothorax, narrowed posteriorly, distinctly constricted across the thoracic tracheal combs, very broadly rounded or almost straight at both ends of body, not or slightly concave at the middle of hind margin, depressed, thin, without ridges. Mid-thoracic suture not reaching the margin, mesonotum defined from the pronotum, transverse moulting suture short, abdominal segments distinct on the median rather narrow area, without markings; basal tergite a little longer than the metanotum and the 2nd tergite, 8th tergite a little longer than the 7th, distinctly longer than the vasiform orifice; pockets separated. Dorsum not sclerotized, wanting papillae, with very faint streaks running mesad from the margin, which are nearly reaching the median segmented area; minute submarginal pores arranged in a row near the marginal teeth; dorsal setae minute on the head and on the basal tergite, about 9 minute setae in a row on each side. Marginal setae long. Marginal teeth very short, but wide, broadly rounded, distinctly in 2 rows, inner teeth similar to the outer ones. Thoracic tracheal combs small, a little protruding, with 2 small teeth which are widely apart from each other, rather narrow, much narrower than the marginal teeth, and rounded at the tip; caudal comb similar, with 2 teeth which are sometimes divergent. Thoracic tracheal folds very short, not distinct. Vasiform orifice rather small, nearly as long as wide, not elevated, rounded at the hind end, wanting teeth, far distant from the hind end of body. Operculum occupying most of the orifice. Lingula concealed. Caudal furrow wanting. Antennae smaller than the fore leg. Body 0.85 mm. long, 0.6 mm. wide.

Host plant: An undetermined wild tree.

Two specimens were collected by the author at Serdang, Selangor, Malaya (Jan. 20, 1945), which were placed in the collection of the Federated Malay States Museum at Kuala Lumpur, Malaya.

This species is very peculiar in the shape of body, apparently differing from the described forms of the genus.

Trialeurodes chinensis n. sp.

Pupa case: Pale in colour, but pale brownish around the segmented area in a specimen treated with potash. Body elliptical, somewhat narrower anteriorly, broadest at about the metathorax, about 1.5 times as long as wide, very slightly or scarcely constricted across the cephalothorax, not indented at the hind end. Mesonotum a little longer than the metanotum, defined from the pronotum; transverse moulting suture nearly reaching the submarginal papillae, a small almost triangular part present at each end of transverse moulting suture; abdomen widely segmented, without prominent depressed markings, 7th tergite much shorter than the 6th, the 8th as long as the 6th; pockets separated from each other. Dorsum with many conical papillae arranged in a row along the whole margin, these papillae longer than wide, sclerotized on the apical part, sharply pointed, closely arranged, reaching the body margin, 23—25 in number anterior to the thoracic tracheal comb on each side; a similar papilla present close to the submarginal series near the front end and also near the base of abdomen on one side in a specimen; other dorsal papillae entirely lacking; dorsal setae short, 8th abdominal seta minute, laterad of the vasiform orifice, distinctly posterior to the level of the base of operculum; caudal setae longer, but shorter than the anterior dorsal setae, close to the hind end of body. Marginal teeth small, very short, rounded apically. Thoracic tracheal combs distinct, slightly or not protruding, with 5 or 6 short teeth; these teeth indistinct, rounded apically, much wider than long, narrower than other marginal teeth; a semilunar defined part present adjacent to the comb, which part is sclerotized; caudal comb not protuberant, with 5 teeth. Vasiform orifice large, subcordate, slightly longer than wide, rounded at the apex, much longer than the 8th tergite, with some lateral ridges, and a longitudinal median fold at the hind end, which is narrowed and pointed anteriorly; anterior marginal area of vasiform orifice defined, a little expanded. Operculum small, wider than long, occupying about half the length of the orifice. Lingula a little exposed, slightly divided at the tip, with 2 blunt lateral tubercles on the distal part, the posterior one of these tubercles larger. Caudal furrow narrow, without sculptures, somewhat longer

than the vasiform orifice. A conical pointed seta present near the base of fore leg, 2 similar setae near the middle leg, the anterior one of these 2 setae much larger. Antennae short. Body about 0.8 mm. long.

Host plant: *Solanum* sp.

A specimen was collected by Dr. J. L. Gressitt at Canton (Jan. 5, 1950); in the author's collection.

This species is characterized by the presence of distinct thoracic tracheal combs.

Tetraleurodes fici n. sp.

Pupa case: Black, strongly sclerotized, with wax on the margin. Body minute, elongate, subovate, narrower posteriorly, not constricted across the cephalothorax, not indented at the hind end. Submarginal area distinctly defined from the dorsal disk, rather narrow. Mid-thoracic suture not discernible on the metanotum, suture between the meso- and metanota prominent, transverse moulting suture abruptly extending latero-anteriorly at the lateral part, reaching far beyond the level of mesonotum, reaching the margin of dorsal disk nearly at midlength of cephalothorax, lateral oblique part of this suture long; metanotum often divided by a transverse line, the posterior part being a little shorter; abdominal segments faintly, but widely indicated, median segmented area more or less defined laterally, much wider than the lateral part of dorsal disk of abdomen; lateral ridges of the 4th-6th tergites reaching the margin of dorsal disk; basal tergite small, the 7th shorter than the 8th. Dorsum indistinctly reticulated on the cephalothorax; a pair of setae on the head, mesonotum and on the metanotum; eighth abdominal seta long, stout, caudal setae much longer, arising from the hind end of dorsal disk. Eye spots wanting. Marginal teeth rather large, as long as, or shorter than, wide, a little broadened toward the base, rounded or bluntly pointed apically. Thoracic tracheal combs and folds wanting, but 4-7 marginal teeth at the hind end sometimes larger than other marginal teeth. Vasiform orifice rather large, rounded, slightly wider than long, not notched, protuberant, without teeth. Operculum filling the orifice. Space behind the vasiform orifice about twice as long as the orifice. Body about 0.63 mm. long.

Host plant: *Ficus* sp.

Many pupa cases were taken by the author at Kepong, Selangor, Malaya (Jan. 9, 1944). Cotypes were deposited in the collection of the Federated Malay States Museum at Kuala Lumpur, Malaya.

This species is remarked by the lateral part of transverse moulting suture abruptly extending latero-anteriorly and being very long, as well as by the meta-

notum being divided by a transverse line.

Tetraleurodes semilunaris Corbett.

(Bull. Ent. Research, XVI, p. 282 (1926))

Pupa case: Black. Body elongate, elliptical, about 1.6 times as long as wide, not constricted across the cephalothorax, not indented at the hind end, without ridges. Mesonotum defined from the pronotum, transverse moulting suture extending a little beyond the hind margin of mesonotum at the lateral part, reaching the margin of dorsal disk; abdominal segments very widely distinct, the 2nd segment a little shorter than the 3rd, the 7th shorter than the 6th by one-third the length of the 6th, the 8th longer than the 6th; pockets wanting. Submarginal area separated from the dorsal disk all around the body, as wide as the length of mesonotum, darker on the outer half, with over 60 small semilunar or very narrow translucent parts arranged in a row on the darker part on each side, these translucent parts much distant from the body margin; submarginal furrows not distinct; inner half of submarginal area densely with elongate irregular darker markings, some of these markings branched; about 15 small pores arranged in a row along the outer darker part on each side. Dorsal disk more sclerotized along the margin, especially along the middle part of the lateral margin; 4 or 6 pairs of minute pores present on each tergite except on the 8th; a pair of minute setae on the head and basal tergite; eighth abdominal seta far separated from the vasiform orifice, a little posterior to the level of the anterior margin of the orifice, distance between the seta and the orifice longer than half the width of the orifice; caudal setae not discernible. Eyes not distinct. Margin not toothed. Thoracic tracheal combs and folds wanting, but caudal comb represented by about 7 minute indistinct teeth; caudal fold defined, narrower than the vasiform orifice, not expanded anteriorly, without dots. Vasiform orifice large, slightly shorter than the 8th tergite, nearly as long as, or slightly longer than, wide, rounded at the hind end, not elevated, with some ridges; the anterior marginal area not defined. Operculum subcordate, filling the orifice. Lingula concealed, stout, slightly knobbed, the knobbed part slightly longer than wide, setose, with 2 long setae. Caudal furrow very wide, wider than the vasiform orifice, nearly reaching the anterior margin of vasiform orifice, extending nearly to the hind end of dorsal disk, but not beyond it, without distinct sculptures. Space between the vasiform orifice and the hind end of body about twice as long as the 8th tergite or the width of submarginal area. Body about 1.5 mm. long.

Host plant: An undetermined grass.

Some pupa cases were collected by Dr. J. L. Gressitt at Canton (Dec. 22,

1948).

Previously recorded from Ceylon. This species is not a typical form of the genus, as the vasiform orifice is not elevated, a wide caudal furrow is present, the submarginal area is wanting submarginal furrows, and the marginal teeth are not developed. *Tetraleurodes pusana* Takah. from India and Malaya seems to be a related species.

Aleuroplatus malayanus n. sp.

Pupa case: Black, strongly sclerotized, covered with a gelatinous substance. Body ovate, narrower anteriorly, broadest at about the middle of abdomen, not or slightly pointed at the front end, usually a little produced at the hind end, not constricted across the cephalothorax, with a median ridge; lateral marginal parts usually folded in specimens mounted in balsam. Mesonotum not well defined from the pronotum; suture between the meso- and metanota long, prominent; transverse moulting suture reaching the margin and nearly extending to the level of the hind margin of mesonotum; abdomen scarcely produced anteriorly at the median part of the base, the 8th tergite much longer than the 7th; lateral ridges of tergites developed, but short. Dorsum with many small mosaic-like patches scattered on the abdomen except on the median area, these patches discernible in specimens treated with potash; a pair of minute setae on the head, a pair of very minute pointed conical setae on the basal tergite; eighth abdominal setae long, anterior to the vasiform orifice, caudal setae longer, at the hind end. Eye spots absent. Marginal teeth indistinct. Thoracic tracheal combs prominent, protuberant, with 5–8 teeth which are large, stout, rounded apically, wider than long, and mostly broadened toward the base; caudal comb similar, with 5–7 teeth. Tracheal folds indistinct. Vasiform orifice prominently protruding, nearly reaching the hind end of body, wider than long, rounded apically, without teeth, the anterior marginal area not distinctly defined from the 8th tergite. Operculum narrowed basally, wider than long, occupying most of the orifice. Lingula pale, slightly widened toward the apex, rounded at the tip, with a pair of setae. Venter smooth. Body about 1.15 mm. long.

Host plant: *Pueraria javanica*, attacking the stalk.

Many specimens were collected by Dr. D. V. FitzGerald at Ulu Yam, Selangor; Malacca, and Serembang, Malaya (July, 1940 and 1941). Cotypes were deposited in the collection of the Federated Malay States Museum, Kuala Lumpur, Malaya.

This species is related to *Aleuroplatus pectiniferus* Quaintance and Baker, but is differentiated from that species chiefly by the vasiform orifice nearly

reaching the hind end of body and by the tracheal combs provided with stouter and shorter teeth. Readily distinguished from *A. mameti* Takah., that possesses the vasiform orifice close to the hind end, by the presence of prominent tracheal combs.

The insects of this family as a rule attack only the foliage of plants, but the present species occurs on the stalk. As far as the author is aware *Rachisphora styraci* Takah. found on the stem and branch of *Styrax japonica* in Japan, and *Aleuroplatus bossi* Takah. on the leaves and branches of *Polygala* and *Maerua* in Africa are the only such examples hitherto known in the family.

