

STUDIES ON THE FAUNA OF CURAÇAO AND OTHER
CARIBBEAN ISLANDS: No. 54.

THE HETEROPTERA OF THE NETHERLANDS
ANTILLES - V

TINGIDAE (Lace Bugs)

by

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The present paper is based upon the lace bugs, Family Tingidae, collected by the junior author in the West Indies, on the islands of Aruba, Curaçao, Bonaire, St. Martin, Saba, and St. Eustatius. This collection of several tingids comprises 17 species, including the five new forms described below. The larval stages of most of these species will be dealt with by the junior author in a separate contribution to the present series.

Dictyla parmata, from Aruba, Curaçao, and Bonaire;

Dictyla alia, n. sp., from Aruba, Curaçao, and Bonaire;

Teleonemia validicornis, from Curaçao;

Teleonemia scrupulosa, from Aruba, Curaçao, Klein Bonaire, and Bonaire;

Teleonemia syssita, n. sp., from St. Eustatius, Saba, and St. Martin;

Teleonemia sacchari, from St. Eustatius, Saba, and St. Martin;

Acanthocheila thaumana, n. sp., from St. Eustatius, and St. Martin;

Leptopharsa ruris, from St. Martin;

Vatiga illudens, from St. Eustatius;

Phymacysta tumida, from Aruba, Bonaire, and St. Eustatius;

- Gargaphia nigrinervis*, from Aruba, Curaçao, and Bonaire;
Corythaica carinata, from Aruba, Curaçao, St. Eustatius, Saba, and St. Martin;
Corythaica cyathicollis, from Aruba, Curaçao, St. Eustatius, Saba, and St. Martin;
Corythucha gossypii, from Aruba, Curaçao, Bonaire, St. Eustatius, Saba, and St. Martin;
Corythucha morrilli, from Aruba, Curaçao, Bonaire, and St. Eustatius;
Corythucha championi, n. sp., from Curaçao;
Corythucha agalma, n. sp., from Saba.

The plant species mentioned in connection with these Tingid species are:

<i>Abutilon umbellatum</i> Sweet	<i>Lantana camara</i> L.
<i>Achyranthes aspera</i> L.	<i>Lantana canescens</i> H.B.K.
<i>Annona muricata</i> L. [soursop]	<i>Lippia alba</i> (Mill.) N.E.Br.
<i>Ayenia magna</i> L.	<i>Malpighia puniceifolia</i> L.
<i>Capparis cynophallophora</i> L.	<i>Manihot utilissima</i> Pohl [manioc]
<i>Corchorus hirsutus</i> L.	<i>Passiflora foetida</i> L.
<i>Cordia alba</i> R & Sch.	<i>Piriqueta ovata</i> Urb.
<i>Cordia cylindrostachya</i> R. & Sch.	<i>Ricinus communis</i> L. [castor oil plant]
<i>Croton flavens</i> L.	<i>Sida procumbens</i> Sw.
<i>Egletes prostrata</i> O. Ktze	<i>Solanum argillicolum</i> Dunal
<i>Helianthus annuus</i> L. [common sunflower]	<i>Solanum lycopersicum</i> L. [tomato]
<i>Hibiscus rosa-sinensis</i> L.	<i>Solanum melongena</i> L. [eggplant]
<i>Ipomoea batatas</i> Poir. [sweet potato]	<i>Solanum nigrum</i> var. <i>americanum</i> Schulz
<i>Jatropha gossypifolia</i> L.	<i>Solanum racemosum</i> Jacq.
<i>Jatropha multifida</i> L. [coral plant]	<i>Solanum torvum</i> Sw.
<i>Jatropha urens</i> L.	<i>Synedrella nodiflora</i> Gärtn.
<i>Lagascea mollis</i> Cav.	<i>Vernonia</i> spec.
<i>Lagenaria leucantha</i> Rusby [sweet gourd]	<i>Wedelia jacquini</i> L.C.Rich.

For the illustrations, we wish to express our sincere thanks to Mrs. PATRICIA J. HOGUE, Arlington, Virginia, for making figures 80, 82, and 84; and to Mr. M. P. VAN DER SCHELDE, draughtsman of the Laboratorium voor Entomologie, Wageningen, Holland, for figures 77, 78, 83, 85, 86, 87, and 89. Figures 74–76, 79, 81, and 88 were drawn by the junior author.

Dictyla parmata (Distant)

(Fig. 74b, 75b, 76b)

Monanthia parmata DISTANT, 1888, Ann. Soc. Ent. Belgique 23, p. lxxxii.*Monanthia parmata*, CHAMPION, 1898, Trans. Ent. Soc. London 1, p. 64, pl. 3 fig. 12.*Dictyla parmata*, DRAKE & RUHOFF, 1960, Proc. U.S. Nat. Mus. 112, p. 51.

Venezuela, Brazil, Peru, Paraguay, Argentina. – It is said to feed on *Cordia corymbosa* Willd., *C. verbenacea* Poir., and *Cochranea anchusaefolia* Gürke, all Boraginaceae.

ARUBA: Hofje Fontein, 4.VII.1930 (2 ♀♀, 3 larvae, leg. H. J. Mac Gillavry); Hofje Fontein and Rooi Tamboe, 10.IV.1957.

CURAÇAO: Seroe Christoffel, 22.III.1957.

BONAIRE: Jatoe Bacu Bacura, 11.V.1957, larvae.

In all localities living on *Cordia cylindrostachya*.

Dictyla alia sp. nov.

(Fig. 74a, 75a, 76a, 77)

ARUBA: St. Martha, Villa Maria, 4.IV.1957. Marawiel, 10.IV.1957.

CURAÇAO: Julianadorp, 12.X.1956. St. Martha, 13.X.1956. Santa Barbara, Pos Cajoeada, 18.I.1957. Hofje Schottegatweg Noord no. 12, 9.VI.1957.

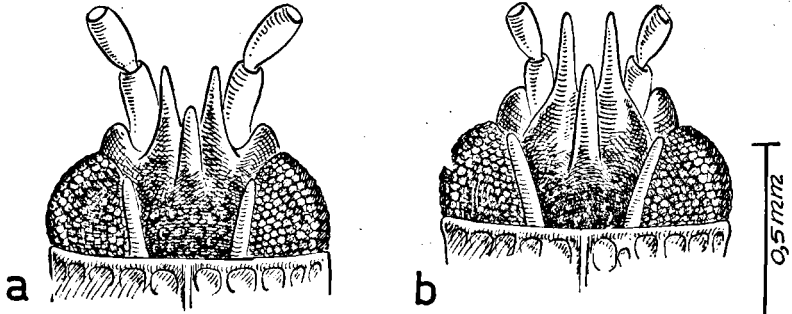
BONAIRE: Hofje Fontein, 9.V.1957.

In all localities living on *Cordia alba*.

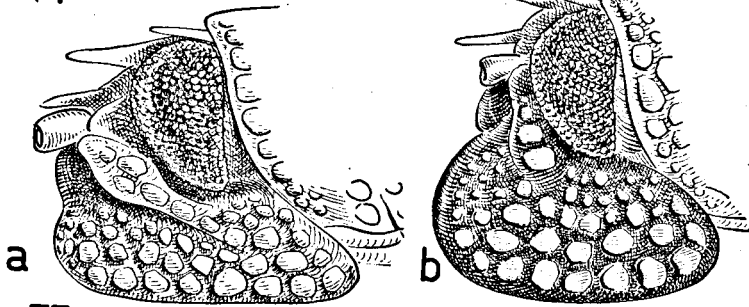
Small, oblong, grayish or brownish testaceous, head and eyes blackish, pronotal disc stramineous to fuscous, collum and paranota pale testaceous with a few veinlets fuscous, pronotal carinae pale testaceous, elytra brownish testaceous with a few veinlets fuscous, arolae hyaline. Legs pale testaceous with femora brownish and last tarsal segment dark fuscous. Antennae pale testaceous with first two segments brown and fourth segment dark fuscous. Body brown or brownish fuscous.

Head very short, strongly deflexed in front of eyes, armed with five, moderately long, testaceous spines, the frontal three spines occasionally dark brown; bucculae wide, testaceous, areolate, with ends meeting in front. Labium brownish, dark fuscous at apex, extending upon metasternum; labial laminae testaceous, uniseriate, parallel on mesosternum, more widely separated and cordate on

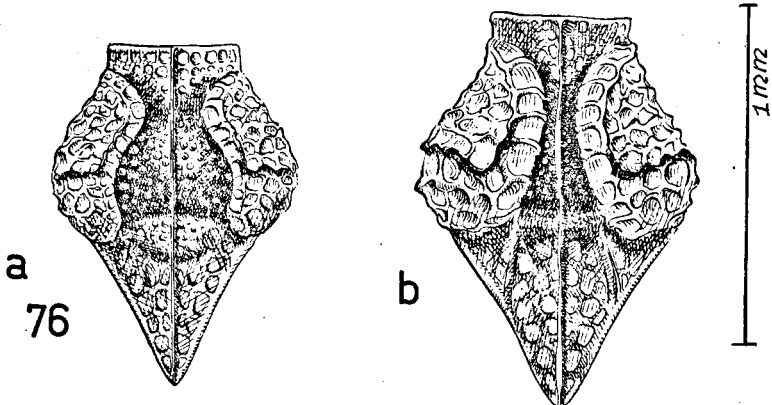
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74



75



76

Fig. 74a, 75a, 76a, *Dictyla alia* sp. n. — Fig. 74b, 75b, 76b, *Dictyla parmata* (Distant). — 74, dorsal aspect of head. — 75, lateral aspect of head. — 76, dorsal side of pronotum.

metasternum. Antennae moderately long, indistinctly pubescent, segmental measurements: I, 0.10 mm; II, 0.07 mm; III, 0.54 mm; IV, 0.20 mm. Hypocostal laminae uniseriate. Legs moderately long, rather slender, femora scarcely swollen, tarsi two-segmented with first segment very short. Metathoracic scent glands with ostiole and ostiolar canal not visible.

Pronotum distinctly punctate, moderately convex across humeri, tricarinate; median carina long, slightly more elevated than lateral pair, without areolae; lateral carinae short, present only on posterior projection, distinct, converging anteriorly; callum distinct, areolate, truncate in front, with a tiny hood projecting backwards between calli; paranota moderately large, reflexed on pronotal surface, with the vein separating outer two rows of areolae slightly raised longitudinally above surface of pronotum, six areolae deep in widest part, the space between outer margin of each paranotum and median carina almost as wide as a paranotum. Elytra a little longer than abdomen, with sutural areas overlapping so as to be jointly rounded behind in repose; costal area uniseriate, with fairly large areolae, with transverse veinlets between cells slightly thickened; discoidal area about two-thirds as long as an elytron, acutely narrowed anteriorly, with C-shaped projection of the apical part extending into subcostal area to within one row of cells of the costal area; sutural area on same horizontal level as the discoidal area. Hind wings nearly as long as fore pair.

Holotype (♂) and allotype (♀), CURAÇAO, St. Martha, 13.X.1957 (in Drake Collection, U.S.N.M.).

Length of 10 ♂♂ : 2.18–2.30 mm; width 0.86–0.90 mm.

Length of 10 ♀♀ : 2.31–2.59 mm; width 0.92–1.10 mm.

This species can be differentiated from *D. parmata* in the following respects:

1. The total body-measurements are slightly smaller. The length and width of 10 ♂♂ of *D. parmata* from the Netherlands Antilles are 2.21–2.50 and 0.98–1.11 mm respectively, and 10 ♀♀ 2.36–2.63 and 1.10–1.22 mm respectively.

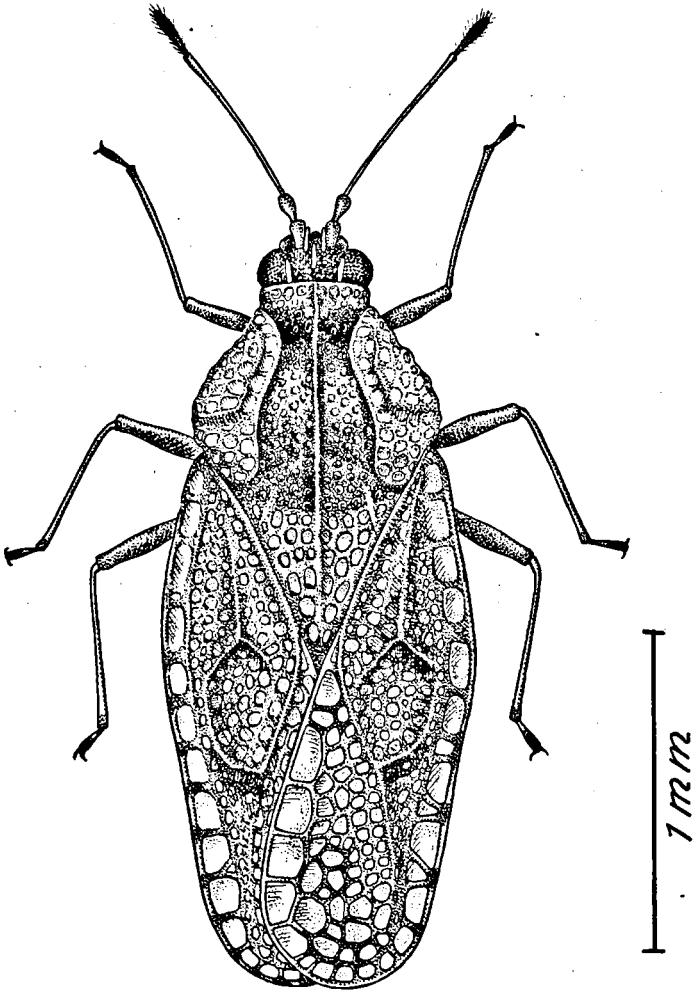


Fig. 77. *Dictyla alia* sp. n., female, from Curaçao, Nieuwpoort.

2. The latero-frontal head spines are shorter, and the first antennal joint is longer, so that the spines scarcely reach the apex of the first antennal joint, if at all, whereas in *D. parmata* they extend far beyond it (Fig. 74 a-b). The occipital head spines are somewhat shorter than in *D. parmata*.

3. The lateral view of the head of both species is strikingly different, because of the shape of the bucculae (Fig. 75a–b).
4. The paranota are much narrower and concave along the median margin in *D. alia*, whereas they are wider and medially convex in *D. parmata* (Fig. 76a–b). In the former the median carina is not so sharply elevated as in the latter species.

Teleonemia validicornis Stål

(Fig. 78, 79b)

Teleonemia validicornis STÅL, 1873, Kong. Svenska Vet. Ak. Handl. 2, p. 132.

Venezuela, British, Dutch and French Guiana, Brazil, Colombia, Panama.

CURAÇAO: Top of Seroe Christoffel, 21.X.1956, 18.XI.1956, and 21.III.1957, a total of 6 specimens, all swept from *Lantana camara*.

Teleonemia scrupulosa Stål

(Fig. 79a, 81a)

Teleonemia scrupulosa STÅL, 1873, Kong. Svenska Vet. Ak. Handl. 11, p. 132.

Teleonemia scrupulosa, CHAMPION, 1897, Biol. Centr. Amer. Rhynch. 2, p. 40, pl. 3 fig. 12–12a.

Teleonemia scrupulosa, DRAKE, 1956, Bernice P. Bishop Mus. 7, p. 108, fig. 3.

Teleonemia bifasciata, KIRKALDY (nec Champion), 1907, Bull. Soc. Ent. France 15, p. 216.

Teleonemia lantanae DISTANT, 1907, Entomologist 40, p. 60.

From Florida and Texas south to Colombia, Venezuela, the Guianas, Brazil, Paraguay and Peru; West Indies. – Widely known as the lantana lace bug. For the control of lantana weed, it has been introduced and become established in Hawaiian Islands, many islands of the South Pacific and Indian Oceans, Philippine Islands, India and Australia.

ARUBA: Territory of Eagle Petr. Comp., 1.IV.1957, on *Lantana camara*. Oranje-stad, 2.IV.1957, on *L. canescens*; 29.IV.1957, on *L. camara*. Siribana, 28.IV.1957, on *Lippia alba*.

CURAÇAO: Base of Seroe Christoffel, 21.X., 18.XI.1956 and 22.III.1957, on *L. camara*. Piscadera, 11.X., 25.X.1956, on *L. camara*.

KLEIN BONAIRE: S.E. coastal zone, 6.V.1957, on *L. canescens*.

BONAIRE: Coastal zone between Punt Vierkant and Witte Pan, 7.V.1957, on *L. canescens*.

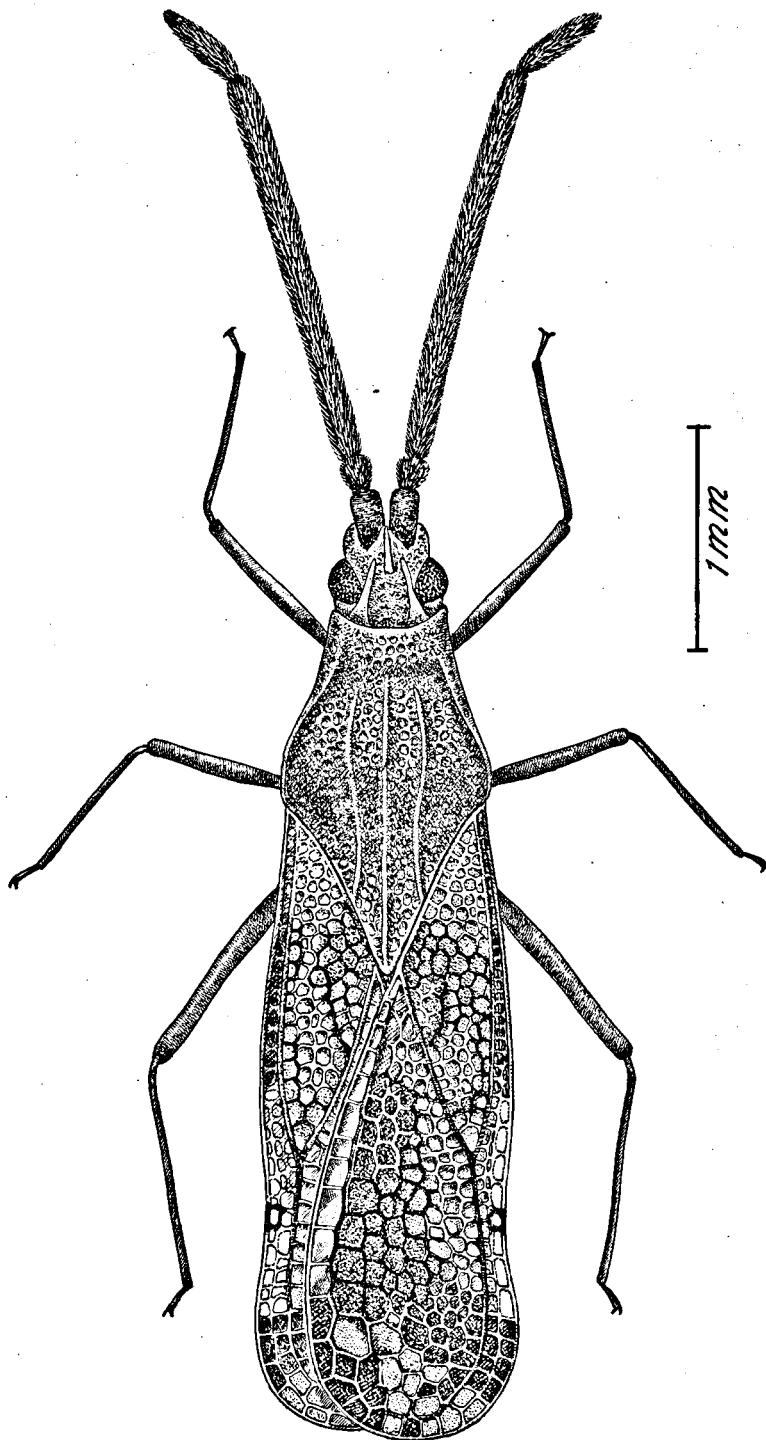


Fig. 78. *Teleonemia validicornis* Stål, male, from Curaçao, Seroe Christoffel.

Teleonemia syssita sp. nov.

(Fig. 79d, 80, 81b)

ST. EUSTATIUS: Oranjestad, 4-10.I.1957. All specimens were netted on *Lantana canescens*.

SABA: Windwardside, 13.XII.1956. The Bottom, 18.XII.1956.

ST. MARTIN: Cul de Sac, 23.XI.1956. Kay Bay Hill, 1.XII.1956. Simson Bay 4.XII.1956.

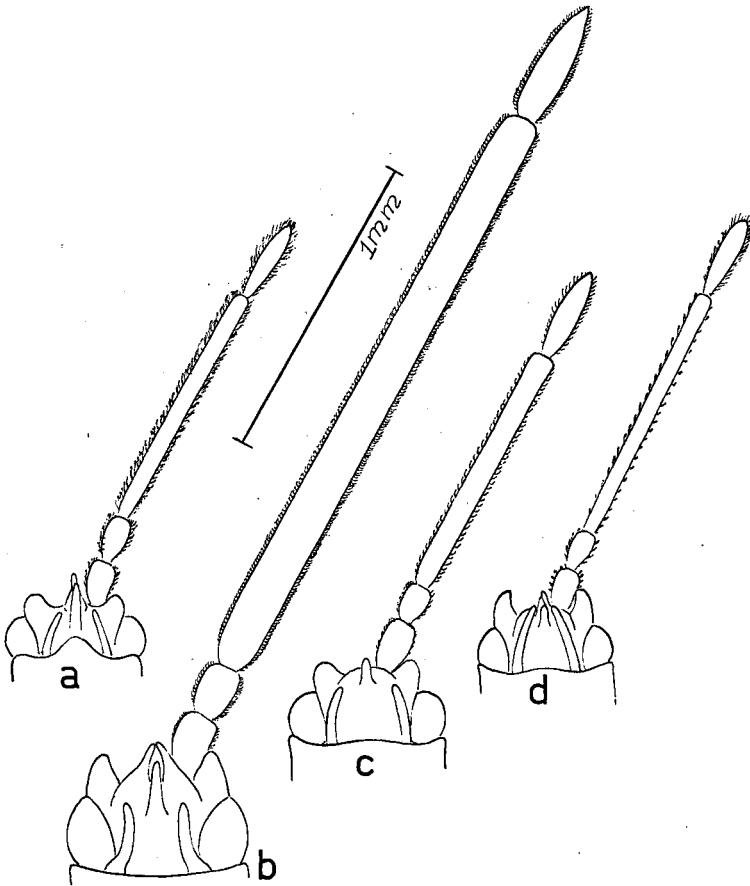


Fig. 79. *Teleonemia*, dorsal aspect of head and right antenna. — a, *T. scrupulosa*, Stål, from Curaçao. b, *T. validicornis* Stål, from Curaçao. c, *T. sacchari* (Fabricius), from St. Martin. d, *T. syssita* sp. n., from St. Martin.

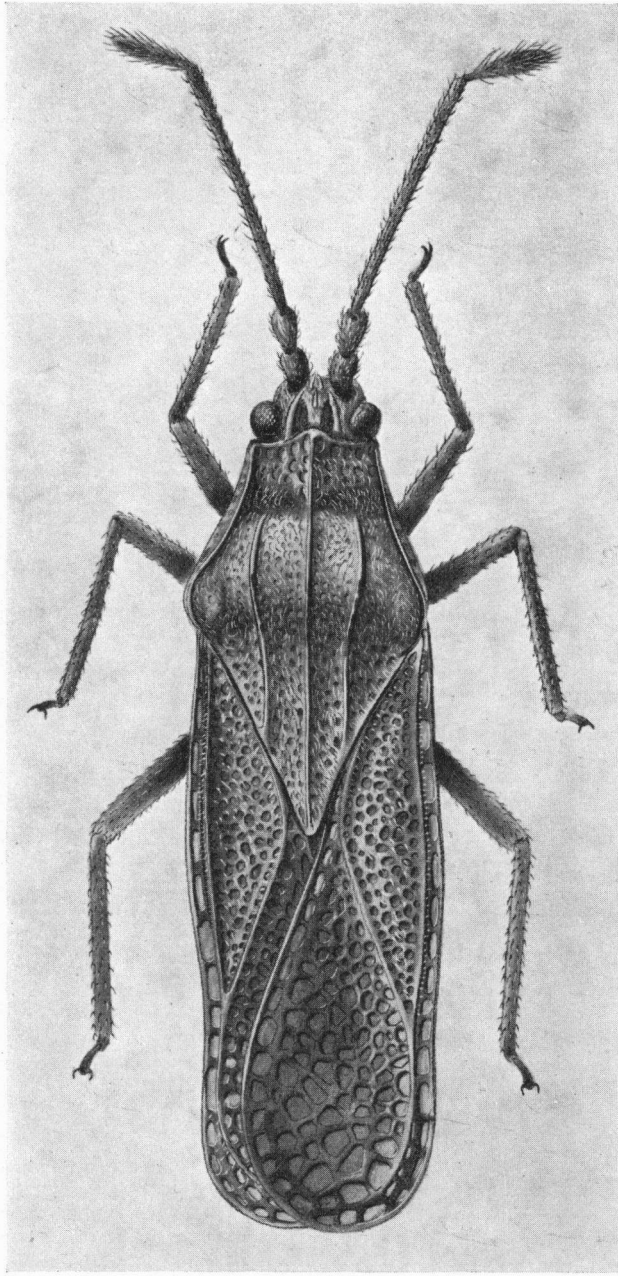


Fig. 80. *Teleonemia syssita* sp. n., female, from St. Martin, Simson Bay. ($\times 39$)

Rather small, slender, nearly parallel-sided, brownish with parana and costal areas (cross-veins mostly brownish) testaceous; carinae testaceous, dark fuscous on pronotal disc; head brown with cephalic spines whitish, eyes reddish fuscous; hind projection of pronotum and discoidal areas of elytra at times mostly grayish or brownish testaceous; body beneath brown. Labium brown with tip blackish; buccal and labial laminae of labial channel whitish testaceous. Legs brownish testaceous, with narrow tips of femora and tarsi dark fuscous. Antennae with first two segments partly brown, third segment brownish testaceous, and fourth segment brown with distal half blackish. Antennae beset with tiny, inconspicuous tubercles from each of which arises a fine, short, grayish or yellowish, setalike, pubescent hair. Legs, particularly the femora, with slightly larger, brownish tubercles, each tubercle bears a short, grayish or yellowish, setalike, pubescent hair. Entire dorsal surface of body sparsely clothed with short, flattened, more or less curled, grayish or yellowish pubescence; dorsal surface frequently with a little yellowish exudation. Male customarily slightly slenderer than the female.

Head short, smooth, armed with five processes; hind pair of processes very long, subappressed, the three frontal processes much shorter, subporrect; bucculae areolate, with ends meeting in front of labium so as to close the buccal sulcus; labium extending to end of metasternum; labial laminae widely separated from each other, forming a wide sulcus, closed behind. Antennae moderately long, moderately stout, segmental measurements: I, 0.01 mm; II, 0.01 mm; III, 0.97 mm; IV, 0.31 mm. Metathoracic scent glands furnished with a distinct ostiole and ostiolar sulcus on each metapleuron, the sulcus raised, whitish, and nearly upright. Legs moderately long, femora scarcely swollen. Hypocostal laminae uniseriate, the areolae not very large.

Pronotum distinctly punctate, moderately transversely swollen across humeri, tricarinate, the carinae about equally elevated, each composed of one row of small areolae; median carina extending anteriorly on collum, there without areolae; lateral carinae divergent anteriorly, more widely separated and concave within in front of pronotal disc, terminating at calli; calli smooth, brown,

impunctate; collum slightly raised, areolate, slightly sinuate in front, feebly elevated under median carina so as to form there an indistinct hood; paranota narrow, uniseriate, reflexed slightly more than upright but not in contact with pronotal surface, each areola slightly more than twice as long as wide. Elytra not wider than pronotum at humeral angles, a little longer than abdomen, with sutural areas overlapping so as to be jointly rounded behind in repose; costal area narrow, composed of one row of triangular areolae, many of the areolae two or more times longer than wide, cross-veinlets mostly thick and brown; discoidal area obliquely vertical, narrow, uniseriate; discoidal area about two-thirds as long as elytra, acutely angulate at both ends, with outer boundary vein nearly straight, four or five areolae deep in widest part opposite apex of pronotal projection; sutural area on same level as discoidal area. Hind wings slightly shorter than fore pair, clouded with fuscous.

Holotype (♂) and allotype (♀), ST. MARTIN, Cul de Sac, 23.XI.1956, collected on *Eantana canescens* (in Drake Collection, U.S.N.M.).

Length and width of 10 ♂♂: 2.88–2.96 and 0.86–0.96.

Length and width of 10 ♀♀: 2.92–3.12 and 0.94–1.00.

This lantana-feeding tingid can be distinguished from *T. scrupulosa* Stål by its narrower form, narrower paranota and costal areas, shorter and less pilose antennae, and especially by the finely granulate antennae and legs. Each of the granules bears a short, seta-like pubescent hair.

The median and the lateral frontal head processes of the new species are very short and inconspicuous, whereas the occipital processes are longer than in *T. scrupulosa* (Fig. 79 a, d). The male genitalia of the four *Teleonemia* species mentioned here show no discrimination characters.

Though the characters of the adults of *T. scrupulosa* and *T. systa* are not very dissimilar, the larvae show striking differences. The dorsal aspect of larva V of *T. scrupulosa* is gleaming, with only a few simply spherical, glandular hairs on pronotum and abdomen; the position of spines and processes can be seen from Fig. 81a.

The larva V of *T. syssita*, on the other hand, is rendered almost totally dull by the presence of numerous rosette-shaped glandular hairs, which stand close together; there are only two spines present on the abdominal segment 1; the median processes of segments 2, 5 and 6 are long, whereas the median process of segment 8 is entirely absent (Fig. 81b).

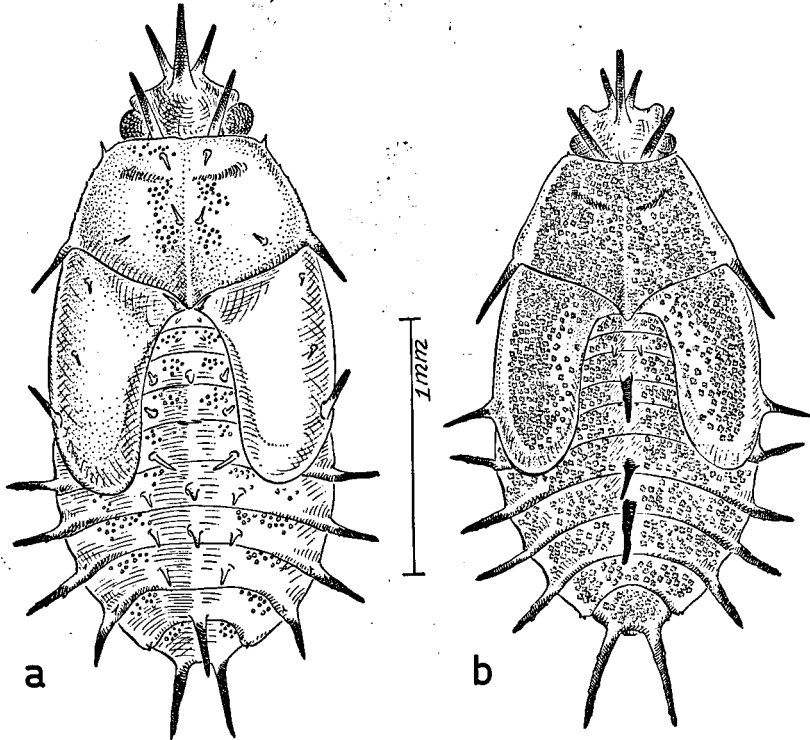


Fig. 81. *Teleonemia*, larva V. — a, *T. scrupulosa* Stål, from Curaçao. b, *T. syssita* sp.n. from St. Martin.

Teleonemia sacchari (Fabricius)

(Fig. 79c)

Acanthia Sacchara FABRICIUS, 1794, Ent. Syst. 4, p. 77.

Tingis Sacchara, FABRICIUS, 1803, Syst. Rhyng., p. 126.

Monanthia Sacchari, HERRICH-SCHAEFFER, 1839, Wanz. Ins. 5, p. 85, fig. 533.

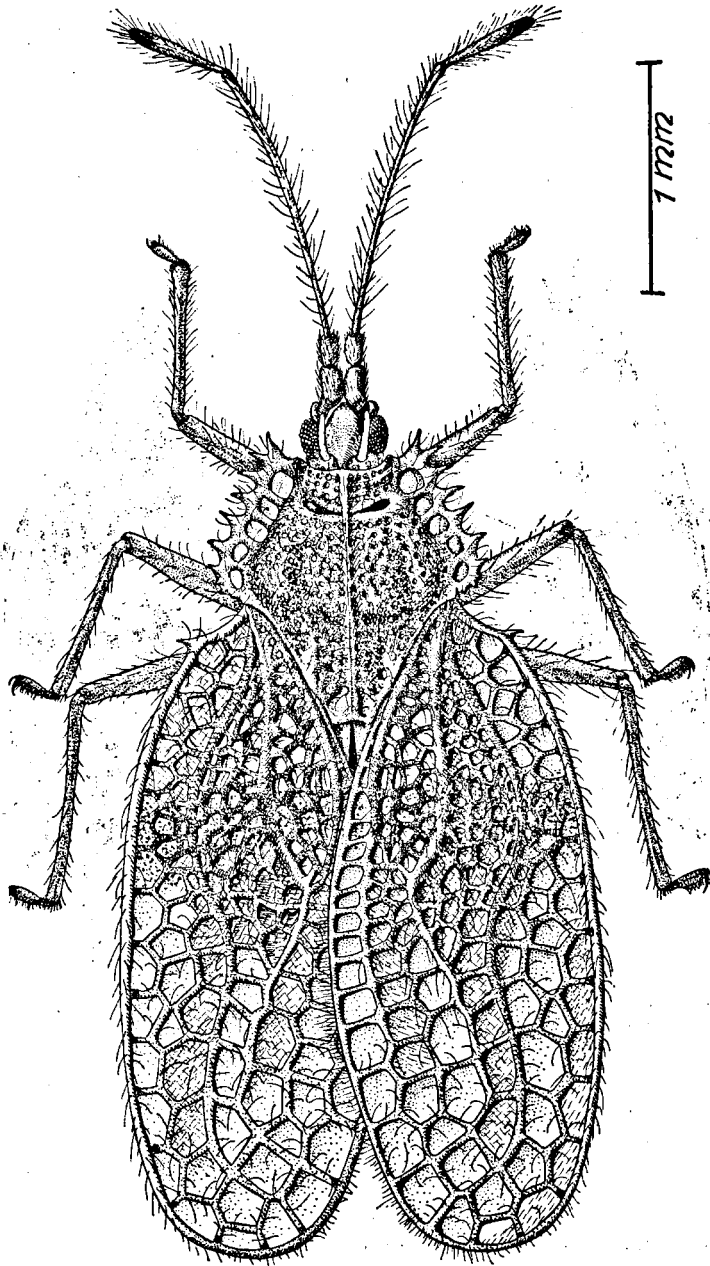


Fig. 82. *Acanthocheila thaumana* sp. n., female, from St. Martin, Koolbaai.

- Monanthia (Tropidocheila) Sachari*, FIEBER, 1844, Ent. Monogr., p. 76, pl. 6 fig. 22-25.
Monanthia Sacchari, WALKER, 1873, Cat. Hemipt. Het. Brit. Mus. 6, p. 191.
Teleonemia (Teleonemia) Sacchara, STÅL, 1873, Kong. Svenska Vet. Ak. Handl. 3, p. 132.
Teleonemia sacchari, CHAMPION, 1898, Trans. Ent. Soc. London, p. 62.

Florida, California, Mexico, Panama; Cuba, Jamaica, Puerto Rico, St. Thomas, St. Croix, St. Barts, St. Vincent, Grenada, Trinidad. — On *Lantana camara*, Brazil, *L. involucrata*, Cuba, *Verbena* flowers, Puerto Rico, and on sugar cane in several localities.

- ST. EUSTATIUS: Oranjestad, 28.XII.1956, on *L. canescens*. Cultuurvlakte, 2.I.1957, on *L. canescens*.
 SABA: Booby Hill, 10.XII.1956, on *Lantana* spec. The Bottom, 18.XII.1956. Middle Island, 21.XII.1956.
 ST. MARTIN: Cul de Sac, 23.XI.1956, on *Lantana camara*. Kay Bay Hill, 1.XII.1956. Simson Bay, 4.XII.1956, on *L. camara*. Koolbaai, 5.XII.1956.

***Acanthocheila thaumana*, sp. nov.**

(Fig. 82)

- ST. EUSTATIUS: Little Mountains, 8.I.1957.
 ST. MARTIN: Kay Bay Hill, South, 1.XII.1956. Koolbaai, 5.XII.1956.
 A total of 21 specimens, with males in the majority and numerous larvae, swept from an unknown, non-flowering shrub.

Moderately large, broad, flavotestaceous, with pronotum stramineous and marked with fuscous, head brownish, elytron with veinlets of discoidal and basal half of subcostal areas brown or pale fuscous, with a more or less prominent, transverse, fuscous band as shown in illustration (Fig. 82). Legs pale testaceous. Antennae pale testaceous, with apical third of last segment blackish and usually with a brownish streak on exterior side of each basal segment. Labium brownish, with tip dark; buccal laminae pale testaceous; labial laminae pale testaceous. Body beneath black, with abdomen quite shiny.

Head armed with a pair of long, pale appressed basal processes; other processes absent. Antennae moderately clothed with fairly long, stiff hairs, segmental measurements: I, 0.18 mm; II, 0.11 mm; III, 1.30 mm; IV, 0.45 mm. Bucculae wide, areolae closed in

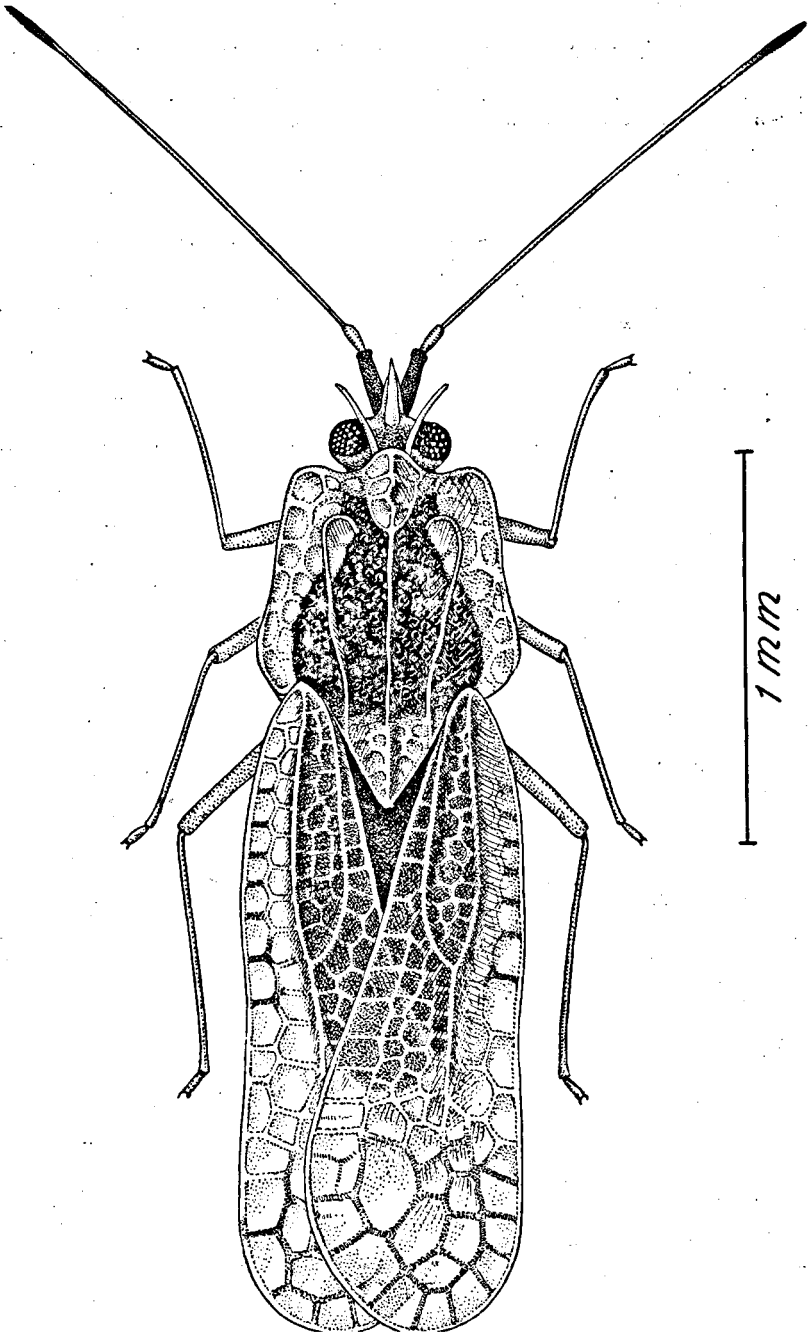


Fig. 83. *Leptopharsa ruris* Drake, male, from St. Martin, Marigot.

front. Labium nearly reaching to middle of mesosternum; labial laminae low, indistinctly areolate, widely separated from each other so as to form a broad sulcus, closed behind. Ostiole and ostiolar sulcus of metathoracic scent glands present on each metapleuron.

Pronotum moderately convex across humeral angles, distinctly punctate, with prominent median carina; calli impressed, impunctate; collum raised, distinct, with three transverse rows of small areolae; paranotum moderately wide, composed of one row of five or six fairly large, rounded areolae, the exterior margin armed with five to ten spines; posterior process abbreviated and subtruncated at apex. Elytra with apices separated from each other, armed only with one to three sharp, subbasal spines on each costal margin; costal area wide, three or four areolae deep in widest part; subcostal area three or four areolae deep opposite apex of discoidal area; discoidal area not extending to middle of elytron, three areolae deep in widest part; areolae of all areas mostly hyaline. Entire dorsal surface moderately clothed with fine, moderately long hairs. Legs with fairly stiff, pale hairs.

Holotype (♂) and allotype (♀), ST. MARTIN, Koolbaai, 5.XII.1956 (in Drake Collection, U.S.N.M.).

Length of 10 ♂♂: 3.2–3.5 mm; width 1.98–2.1 mm.

Length of 5 ♀♀: 3.6–3.8 mm; width 2.1–2.3 mm.

Both *A. exquisita* Uhler and *A. spinicosta* Van Duzee of the West Indies are furnished with a long row of spines on the basal three-fourths of the costal margin of each elytron, whereas *thaumana* only has one to three of such spines.

Leptopharsa ruris Drake

(Fig. 83)

Leptopharsa ruris DRAKE, 1942, Iowa State Coll. J. Sci. 17, p. 16.

Leptopharsa ruris, HURD, 1946, Iowa State Coll. J. Sci. 20, p. 466.

Antigua, and not recorded elsewhere, until now.

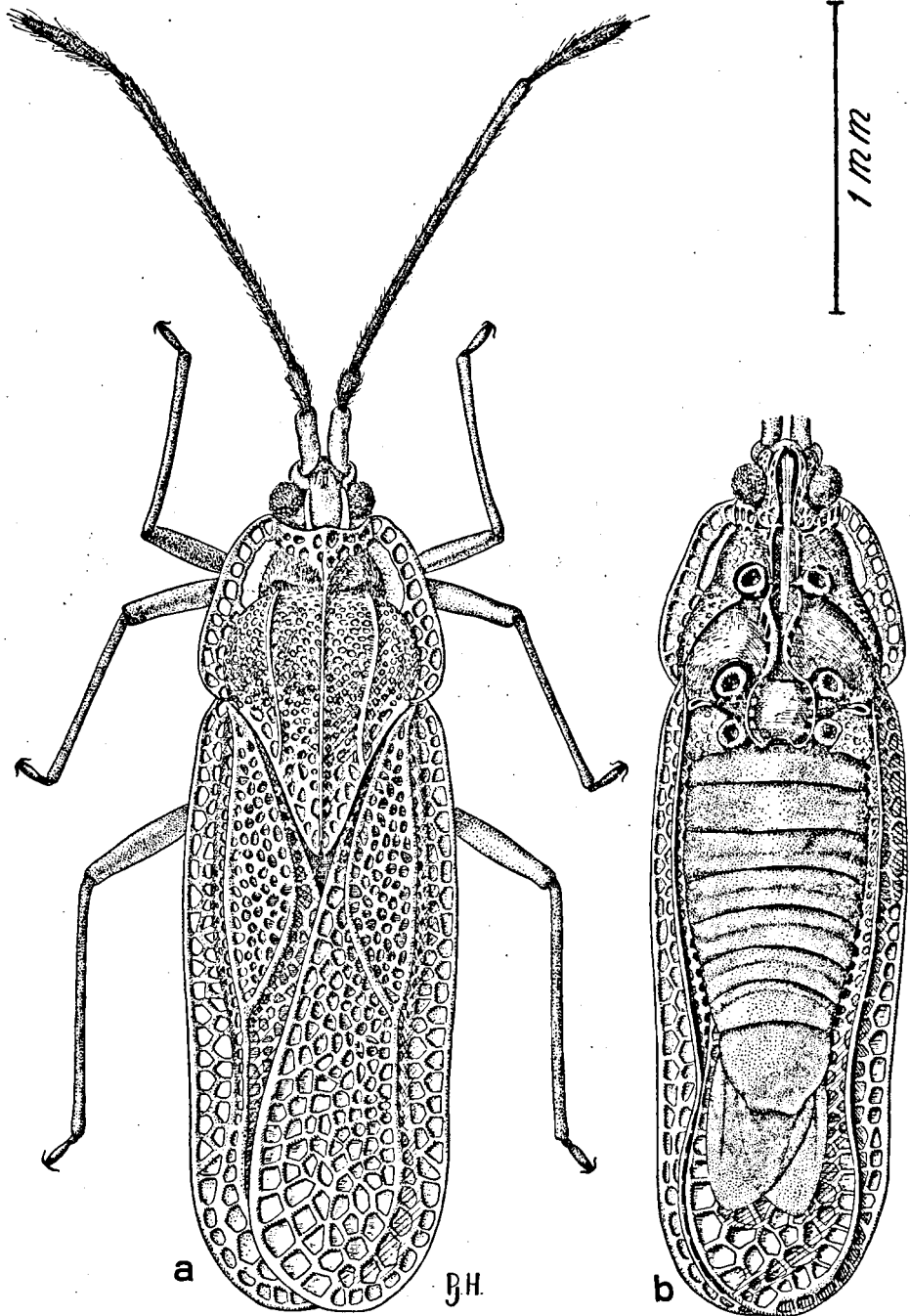


Fig. 84. *Vatica illudens* (Drake), male from St. Eustatius, Oranjestad. — *a*, dorsal aspect. *b*, ventral aspect.

St. MARTIN: Marigot, slope of fortress, 8.XII.1956. Simson Bay, near Devil's Hole Swamp, 10.I.1957. – Very abundant, with larvae, all taken on the under surface of the leaves of *Croton flavens*.

Vatiga illudens (Drake)

(Fig. 84a–b)

Leptopharsa illudens DRAKE, 1922, Mem. Carnegie Mus. 2, p. 370.

Athaeus nigricornis, VAN DUZEE, 1907, Bull. Buffalo Soc. Nat. Sci. 7, p. 6.

Athaeus pallidus, BARBER, 1923, Amer. Mus. Novitates 75, p. 7.

Vatiga illudens, DRAKE & HAMBLETON, 1946, Proc. Biol. Soc. Wash. 59, p. 10.

Cuba, Jamaica, Hispaniola, Puerto Rico; Brazil.

St. EUSTATIUS: Oranjestad, 6.I.1957, on *Manihot utilissima*, cassava. – Apparently absent on the other islands of the Netherlands Antilles, where *Manihot* has been thoroughly investigated. – It was also collected on yuca, *Manihot esculenta*, in Cuba. It is at times a pest of much importance on cassava.

Phymacysta tumida (Champion)

(Fig. 85)

Leptocysta tumida CHAMPION, 1897, Biol. Centr. Amer. Rhynch. 2, p. 10, pl. 1 figs. 17–17a.

Gelchossa tumida, VAN DUZEE, 1907, Bull. Buffalo Soc. Nat. Sci. 7, p. 19.

Phymacysta tumida, MONTE, 1942, Papéis Avulsos Zool. São Paulo 2, p. 102.

Phymacysta tumida, DRAKE & HAMBLETON, 1945, J. Wash. Acad. Sci. 35, p. 362.

Phymacysta tumida, HURD, 1946, Iowa State Coll. J. Sci. 20, p. 476.

Texas, Mexico, Guatemala, Ecuador, Peru, Brazil, Venezuela; Trinidad, Hispaniola, Jamaica, Cuba.

ARUBA: St. Martha, Villa Maria, 4.IV.1957.

CURAÇAO: Hofje Groot St. Joris, 19.X.1956. Westpunt, 11.XI.1956. Hofje Santa Barbara, Pos Cajuda, 18.I.1957. Hofje Knip, 3.II.1957.

BONAIRE: Playa Grandi, 4.V.1957. Jatoe Bacu Bacura, 11.V.1957.

St. EUSTATIUS: Oranjestad, 6.I.1957.

This species was collected on *Malpighia puniceifolia* in all of the above localities. – In addition to *M. puniceifolia* and *M. glabra*, *Ph. tumida* has been taken in numbers on *Adenocalymna bracteatum* D.C. in Brazil.

Phymacysta tumida is one of the more variable species in size, including the tumid elevations of the pronotum, and perhaps one or two other species described from the West Indies may be inseparable from it.

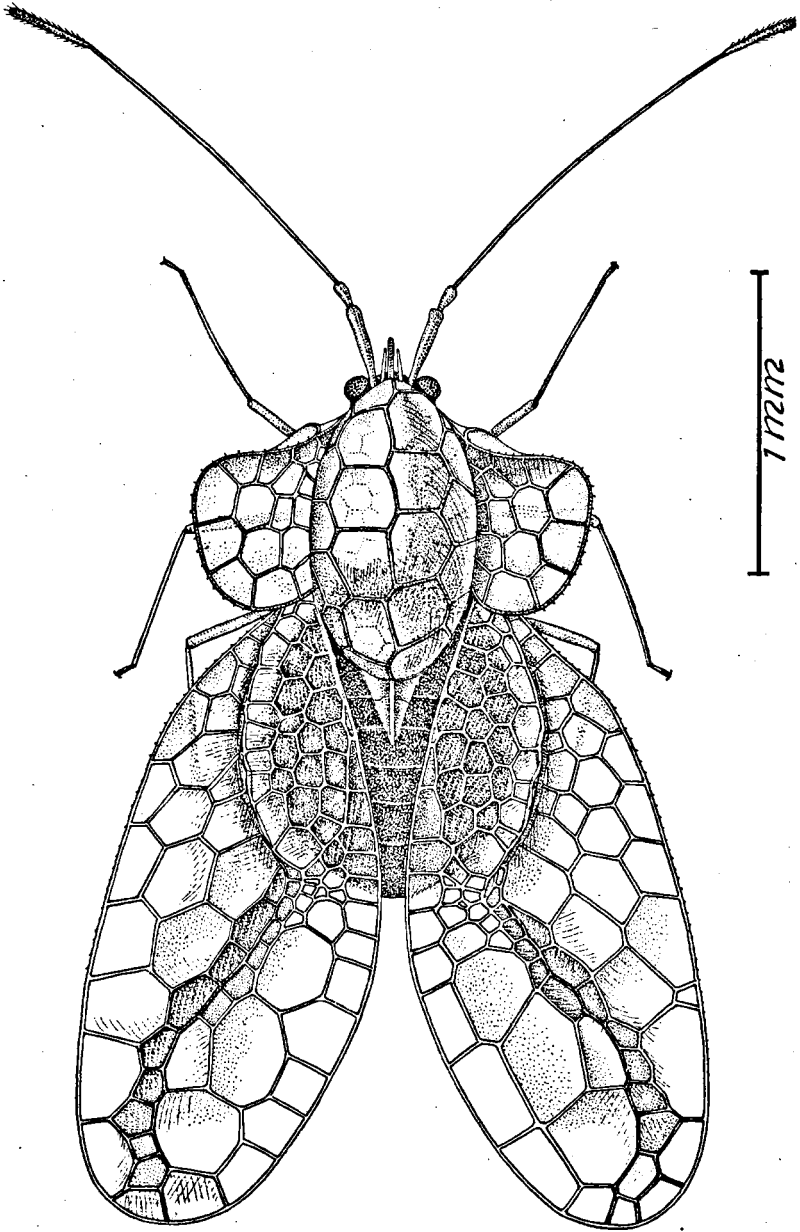


Fig. 85. *Phymacysta tumida* (Champion), female, from Curaçao, Westpunt.

Gargaphia nigrinervis Stål

(Fig. 86)

- Gargaphia nigrinervis* STÅL, 1873, Kong. Svenska Vet. Ak. Handl. 3, p. 125.
Gargaphia nigrinervis, CHAMPION, 1897, Biol. Centr. Amer. Rhynch. 2, p. 10, pl. 1
 fig. 13-13a.
Gargaphia nigrinervis, DRAKE & HAMBLETON, 1945, J. Wash. Acad. Sci. 33, p. 365.

Guatemala, Panama, Colombia, Peru, Venezuela.

ARUBA: Arikok, 3.IV.1957. St. Martha, Villa Maria, 4.IV.1957. Rooi Tamboe, 9.IV.1957.

CURAÇAO: St. Martha, 14.X.1956. Seroe Christoffel, 21.X.1956. Barber, 7.III.1957.

BONAIRE: Plantage Slagbaai, 19.V.1957. Hofje Fontein, 21.V.1957.

On all three islands it has been taken in numbers on *Jatropha urens*, family Euphorbiaceae, but, remarkably enough, not on *Solanum*, on which it has been found on the South American continent.

Corythaica carinata Uhler

(Fig. 87)

- Corythaica carinata* UHLER, 1894, Proc. Zool. Soc. London, p. 203.
Corythaica carinata, CHAMPION, 1897, Biol. Centr. Amer. Rhynch. 2, p. 9, pl. 1
 figs. 11-11a.
Corythaica constricta, OSBORN & DRAKE, 1917, Ohio J. Sci. 17, p. 304.
Corythaica carinata, HURD, 1945, Iowa State Coll. J. Sci. 20, p. 88, pl. 1 fig. 1.

Florida, Texas, Mexico, Guatemala, Honduras; Cuba, Jamaica, Hispaniola, Puerto Rico, St. Vincent, Grenada.

According to literature, this species feeds on *Solanum melongena* L. (egg-plant), *Althaea rosea* Cav. (hollock, in Cuba), and malvaceous plants (Haiti). It is known as the eggplant tingid in the West Indies, attacking both wild and cultivated species.

In the Netherlands Antilles only the following species has been met with on eggplant and tomato, and not this one.

ARUBA: St. Martha, Villa Maria, 4.IV.1957, numerous on *Passiflora foetida*. Hofje Fontein, 4.IV.1957, num. on *P. foetida*. Palm Beach, 8.IV.1957, adults and larvae abundant on *Corchorus hirsutus*.

CURAÇAO: Emmastad, 9.X.1956, num., with larvae on *P. foetida*. St. Martha, 13.X.1956, num., with larvae on *P. foetida*. Willemstad, Wishi, Garden of Theresia-klooster, 29.X.1956, num., with larvae on *Achyronthes aspera*, in small numbers on *Piriqueta ovata*.

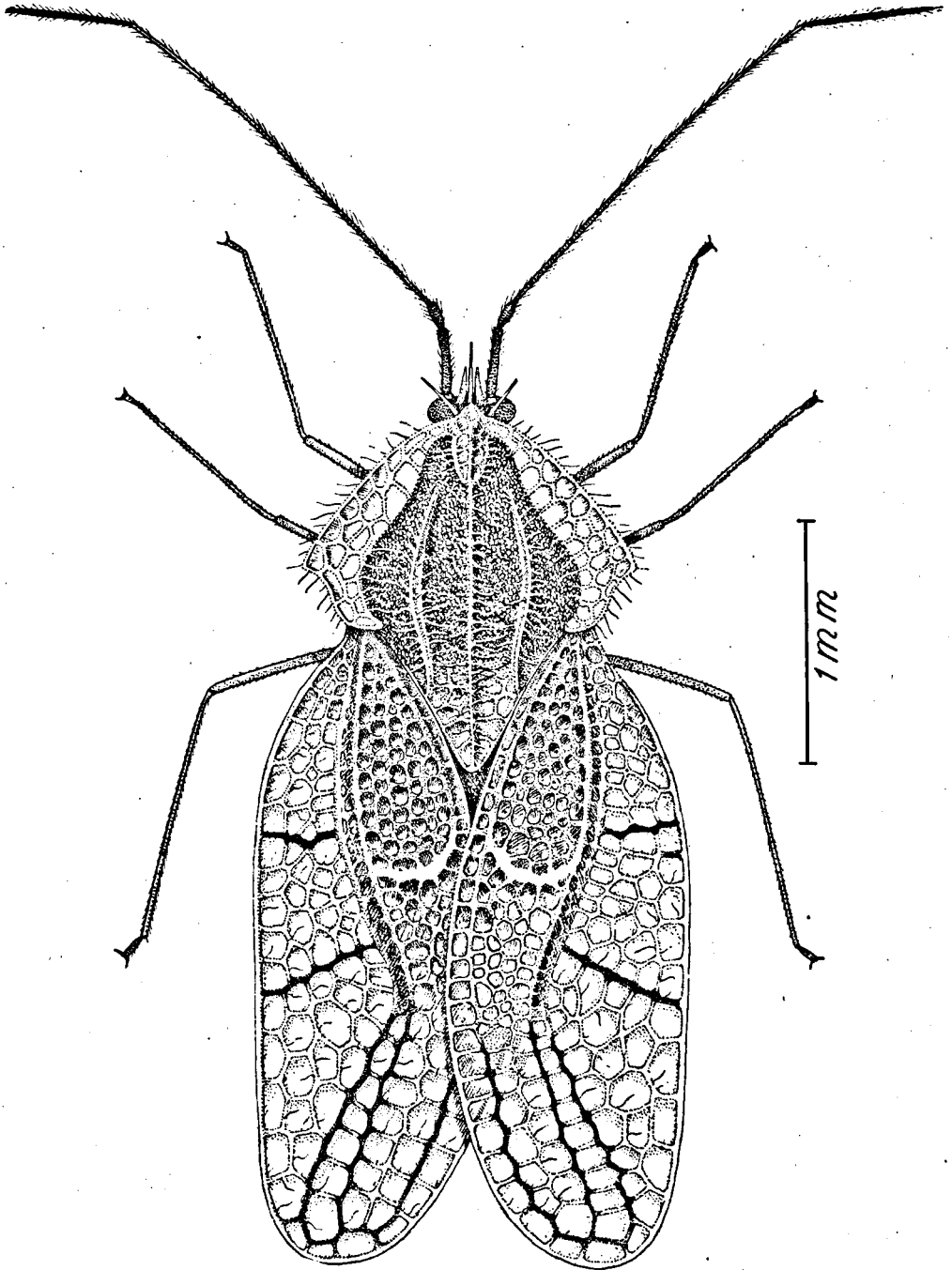


Fig. 86. *Gargaphia nigrinervis* Stål, female, from Curaçao, St. Martha.

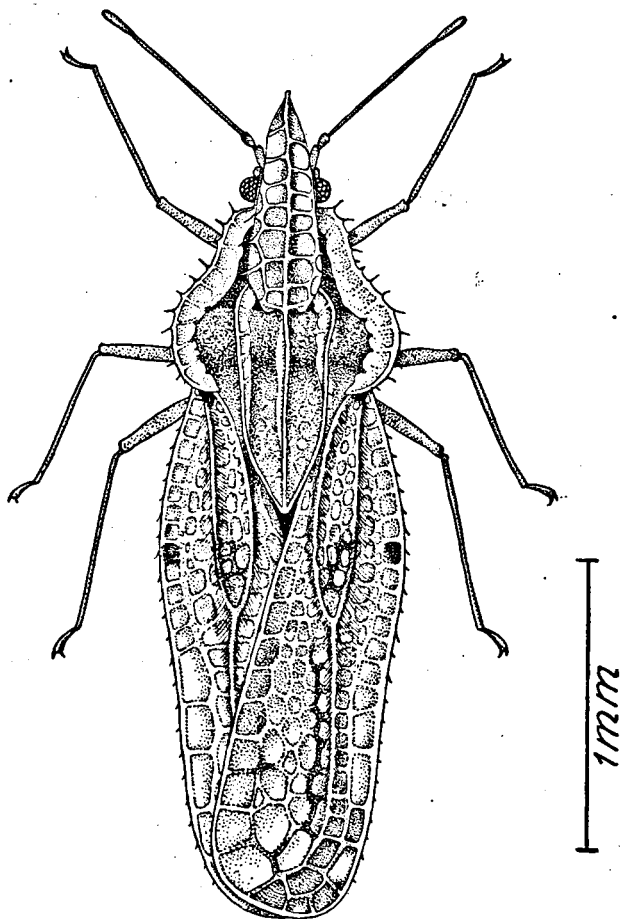


Fig. 87. *Corythaica carinata* Uhler, female, from Curaçao, St. Martha.

ST. EUSTATIUS: Cultuurvlakte, 28.XII.1956, 1 ♀; 2.I.1957. Oranjebaai, 5.I.1957.

SABA: Booby Hill, 12.XII.1956, 1 ♂.

ST. MARTIN: East of Great Salt Pond, and Cul de Sac, 23.XI.1956, 3 ♂♂, larvae. Koolbaai, 5.XII.1956.

In all the last three islands living on *Sida procumbens*.

Corythaica cyathicollis (Costa)

Tingis cyathicollis COSTA, 1864, Ann. Mus. Zool. Napoli 2, p. 78, pl. 2 fig. 4-4b.

Corythaica momancha STRÅL (in part), 1873, Kong. Svenska Vet. Ak. Handl. 2, p. 123.

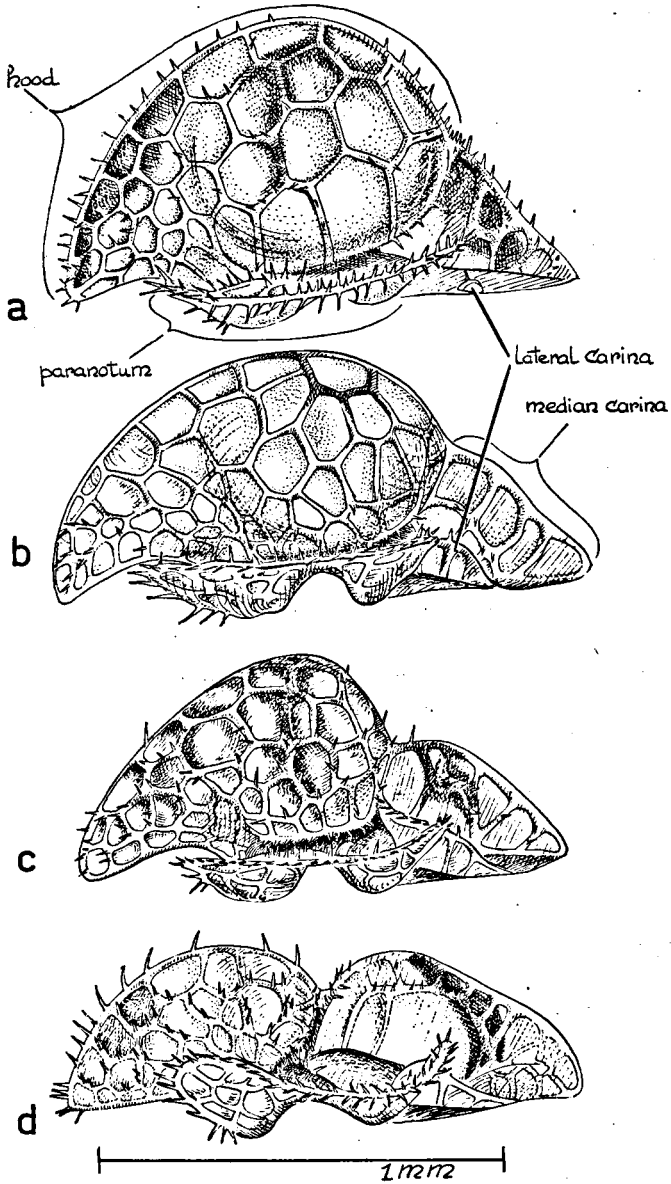


Fig. 88. *Corythucha*, lateral view of pronotum. — a, *C. championi* sp. n., from Curaçao. — b, *C. agalma* sp. n. from Saba. — c, *C. morrilli* Osborn & Drake, from Curaçao. — d, *C. gossypii* (Fabricius), from Curaçao.

- Leptobyrsa passiflorae* BERG, 1883, Ann. Soc. Argentina 16, p. 85 (repr. Hemipt Arg. p. 102).
Troponotus planaris UHLER, 1893, Proc. Zool. Soc. London, p. 716.
Corythaica cyathicollis, HURD, 1945, Iowa State Coll. J. Sci. 20, p. 80.

Panama, Colombia, Brazil, Argentina; Cuba, Puerto Rico, Martinique, St. Vincent, Grenada.

Generally known as the eggplant lace bug in the West Indies.

- ARUBA: St. Martha, Villa Maria, 4.IV.1957, on *Solanum melongena*.
 CURAÇAO: Hofje Groot St. Joris, 19.X.1956, on *S. melongena* and *S. lycopersicum*. Piscadera, 21.X.1956, on *S. argillicolum*. Top of Seroe Christoffel, 22.III.1957, on *S. nigrum* var. *americanum*. Hofje Schottegatweg Noord no. 12, 9.VI.1957, on *S. melongena* and *S. lycopersicum*.
 ST. EUSTATIUS: Oranjestad, 3.I.1956, on *S. melongena*.
 SABA: St. Crispin and The Bottom, 9.XII.1956, on *S. melongena*. Booby Hill, 10.XII.1956, on *S. torvum*.
 ST. MARTIN: Proeftuin St. Peter, 28.XI.1956, on *S. melongena* and *S. racemosum*. Low Lands, 29.XI.1956.

Corythucha gossypii (Fabricius)

(Fig. 88d)

- Acanthia gossypii* FABRICIUS, 1794, Ent. Syst. 4, p. 78.
Tingis gossypii, FABRICIUS, 1803, Syst. Rhyng., p. 126.
Tingis decens STÅL, 1862, Stett. Ent. 23, p. 324 (new synonymy).
Corythucha gossypii, STÅL, 1868, Hemipt. Fabriciana, p. 93.
Corythucha decens, STÅL, 1873, Kong. Svenska Vet. Ak. Handl. 2, p. 123.
Corythucha gossypii, STÅL, 1873, Kong. Svenska Vet. Ak. Handl. 2, p. 123.
Corythucha decens, CHAMPION, 1897, Biol. Centr. Amer. Rhynch. 2, p. 7, pl. 1 fig. 7-7a
Corythucha gossypii, VAN DUZEE, 1917, Cat. Hem. America N. Mex., p. 214.
Corythucha decens, LUTZ, 1923, Ent. News 40, p. 233.

Gulf States, Mexico, Central America, Venezuela; West Indies.

- ARUBA: St. Martha, Villa Maria, 4.IV.1957, on *Solanum melongena*. Meiveld, 21.IV.1957, on *Ricinus communis*.
 CURAÇAO: Piscadera, 8.X.1956, on *Jatropha gossypifolia*. Julianadorp, 12.X.1956, on *J. multifida*. St. Martha, 13.X.1956, on *R. communis*. Groot St. Joris, 19.X.1956, on *Capparis cynophallophora*. Hofje Knip, 3.XI.1956, on *R. communis*. Hofje Pos Cajuda, Santa Barbara, 8.I.1957, on *Annona muricata*. Willemstad, Wishi, 15.III.1957, on *Hibiscus rosa-sinensis*. Hofje Schottegatweg Noord, no. 12, 9.VI.1957, on *S. lycopersicum*, *H. esculentus*, *Lagenaria leucantha*. Hofje Blauw, 13.VI.1957. Groot St. Joris, 16.VI.1957, on *R. communis*.
 BONAIRE: Kralendijk, Fontein, and Dos Pos, V.1957, very abundant on *R.*

communis and *A. muricata*. Fonteijn, 9.V.1957, on *C. cynophallophora*. Salinja Matthys, Washington, 31.V.1957, on *C. cynophallophora*.
 ST. EUSTATIUS: Oranjestad, 31.XII.1956, on *R. communis*.
 SABA: Hellsgate, 20.XII.1956, on *R. communis*.
 ST. MARTIN: Proeftuin St. Peter, 23.XI.1956, on *R. communis*.

Through the co-operation of Dr. P. L. TUXEN of Copenhagen, and Dr. MAX BEIER of Vienna, we have been able to study the types of *Acanthia gossypii* Fabricius (1794) and *Tingis decens* Stål (1862), respectively. The type specimens of these species are in a good state of preservation. The identity, synonymy, and confusion of the two forms in the literature are discussed below. It should be noted that STÅL included both *gossypii* and *decens* in *Corythucha* as distinct species at the time he founded the genus.

The type of *Acanthia gossypii* Fabricius is a macropterous male from "Habitat in Americae meridionalis insularis, Dom. Smidt." There are also three paratypes of *gossypii*. This species is widely known in the West Indies, Central America, Mexico, and United States as the 'cotton' and 'castor bean' tingid. It also attacks and breeds on a considerable number of other cultivated and wild plants. Many specimens have been examined from the West Indies, Colombia, Venezuela, Central America, and southern United States. The most northern record seems to be of a series of specimens taken near Philadelphia, Penna., 1926, by JOHN C. LUTZ. Although *Corythucha gossypii* is very distinct and readily separated from its congeners, this species has been frequently confused in the literature with at least five other members of *Corythucha*. On this account it is at times difficult to be sure of host-plant labels on pins and of published records in the literature.

The type specimen of *Tingis decens* Stål is a macropterous male from Tabasco, Mexico (Signoret Collection), in Naturhistorischen Museum, Vienna. A comparison of the types of *gossypii* Fabricius and *decens* Stål shows that these two specific names apply to the same species and that they are synonyms (new synonymy). Since the former has priority by nearly a century, it is the valid technical name for the 'cotton tingid'.

In the *Biologia Centrali-Americana*, CHAMPION (1897) confused four species of the Genus *Corythucha* with the type specimen of

decens Stål from Tabasco, Mexico. These specimens included, besides the type and other typical examples of *gossypii*, specimens of *C. morrilli* Osborn & Drake, *C. marmorata* Uhler, and the two new species described below. The species figured by CHAMPION as *decens* (pl. 1 fig. 7-7a) is the species we have named *C. championi*, n. sp.

***Corythucha morrilli* Osborn & Drake**

(Fig. 88c)

Corythucha morrilli OSBORN & DRAKE, 1917, Ohio J. Sci. 17, p. 298.

Corythucha mexicana GIBSON, 1918, Trans. Amer. Ent. Soc. 44, p. 95.

Southern United States, Mexico; West Indies.

ARUBA: Palm Beach, 18.IV.1957, on *Egletes prostrata*. Cura Cabaai, 25.IV.1957, on *Helianthus annuus*.

CURAÇAO: Piscadera, 12.X.1956, on *E. prostrata*. Groot St. Joris, 19.X.1956, on *Lagascea mollis*. Piscadera, 15.XI.1957, on *Synedrella nodiflora*.

BONAIRE: Coeroe Boeroe, 5.V.1957, on *Ipomoea batatas*. Flor de Cuba, 12.V.1957, on *I. batatas*.

ST. EUSTATIUS: Little Mountains, 5.I.1957, on *Wedelia jacquini*.

***Corythucha championi* sp. nov.**

(Fig. 88a, 89)

Corythucha decens, CHAMPION (not Stål), 1897, Biol. Centr. Amer. Rhynch. 2, p. 7, pl. 1 fig. 7a (in part).

Corythucha decens, GIBSON, 1918, Trans. Amer. Ent. Soc. 44, p. 96.

Corythucha decens, DRAKE, 1926, Ann. Carnegie Mus. 16, p. 96.

Corythucha decens, DRAKE & HAMBLETON, 1945, Jour. Wash. Ac. Sci. 35, p. 366. - Ent. News 42, p. 123.

Corythucha decens, HURD, 1946, Iowa State Coll. J. Sci. 20, p. 483.

Pennsylvania, Mexico, Guatemala, Colombia.

CURAÇAO: Groot St. Joris, 16.X.1956, on *Abutilon umbellatum*. Hofje Knip, 3.XI.1956, on *A. umbellatum*. Willemstad, Wishi, 11.II.1957, on *Ayenia magna*. On the plants mentioned, which both belong to the Malvales, very abundantly.

Small rectangular in outline, pale testaceous, with brown or fuscous markings as depicted in the illustration; areolae fairly large,

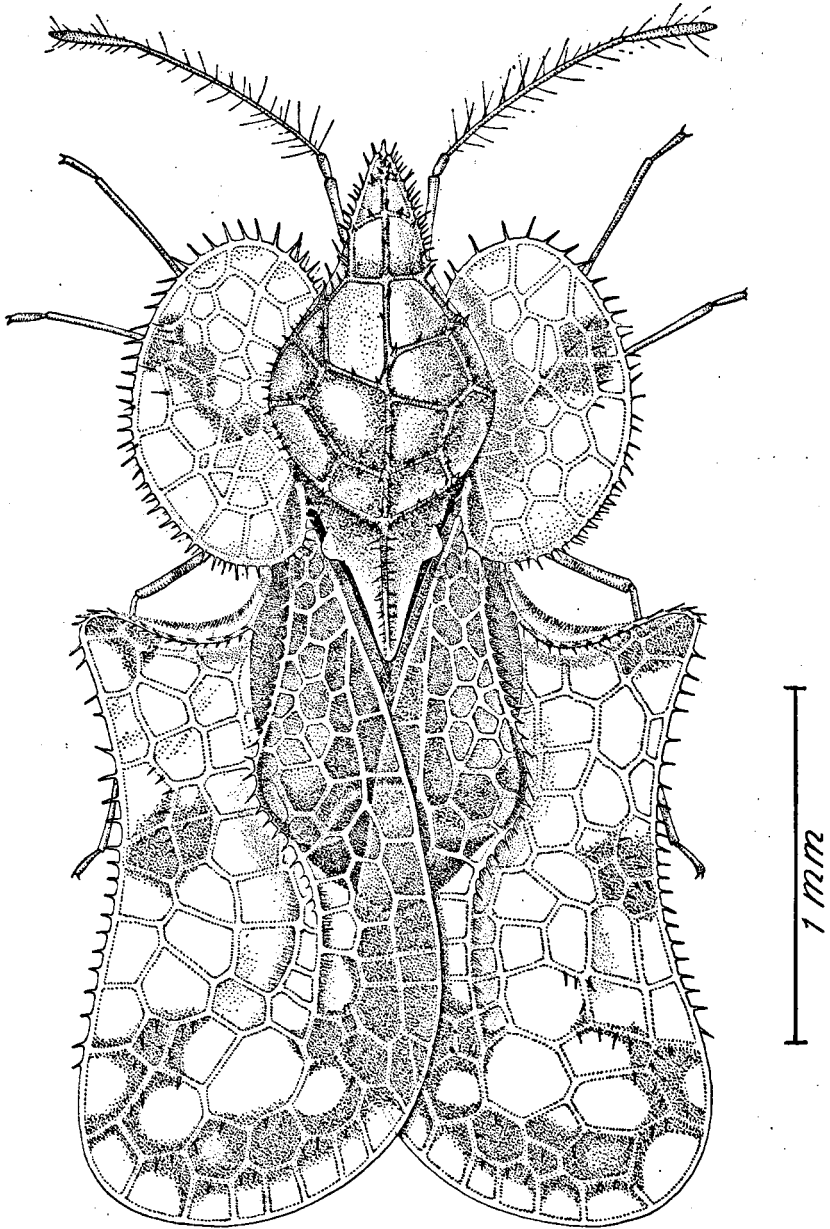


Fig. 89. *Corythucha championi* sp. n., female, from Curaçao, Willemstad.

hyaline, except a few cells partly clouded with fuscous; abdomen beneath flavous-brown, clothed with fine, pale hairs. Outer margins of paranota and elytra beset with a double row of fairly long, sharp, pale spines; spines on hood and boundary veins of discoidal area much shorter and not as numerous as those on exterior margins. Labium brown, with black apex; laminae of rostral sulcus large, hyaline, meeting behind. Bucculae wide, areolate, with ends meeting in front of base of labium. Appendages pale testaceous, with tips of tarsi and last antennal segment brownish. Length 3.00–3.15 mm, width 1.50 mm.

Head very short, strongly declivous in front, concealed dorsally by the very large, inflated hood, which curves arcuately downward anteriorly beyond apex of head; cephalic processes small; concealed by hood. Labium slightly passing mesosternum. Antennae moderately long, very slender, beset with numerous, long, stiff, pale hairs; measurements: I, 18; II, 8; III, 46; IV, 28. Hypocostal lamina narrow, uniseriate. Metathoracic scent glands with ostiole and ostiolar canal on each metapleuron.

Pronotum (Fig. 88a, 89) brownish, finely punctate, slightly convex, tricarinate, mostly covered by large hood; lateral carinae very short, very small, flap-like, inconspicuous; median carina present on hind process, nearly triangular in form, highest in front, there with basal length and height subequal; paranota large, reniform; hood strongly inflated behind, constricted near anterior third, thence anteriorly narrow with lateral sides compressed, basal length much greater than basal height (88 : 50), basal width and basal height subequal. Elytra much wider and longer than abdomen, with outer margin distinctly concave, boundary vein between discoidal and subcostal areas jointly sharply elevated, inflated, narrowly tectiform; costal area wide, triseriate, areolae moderately large. Metathoracic wings white, longer than abdomen.

Holotype (♂) and allotype (♀), CURAÇAO, Groot St. Joris, 16.X. 1956 (in Drake Collection, U.S.N.M.). Paratypes: Many specimens from localities on Curaçao, mentioned above; Mexico (Orizaba Bilimek, 38 spec., Mus. Vind.); Guatemala (Los Cerritos, 5.VII.1944, 12 spec.; Guatemala City, 15.V.1944, 6 spec.; Panteleon, 2 spec.); Colombia (Río Frío, 12.V.1926, 4 spec.); El Salvador (4.IV.1955, 4 spec.); U.S.A. (Philadelphia, Penna., 26.VI.1927, 1 spec.; John C. Lutz).

This pretty species is named in honor of Mr. G. C. CHAMPION, who published an excellent account of the Tingidae of Central America.

The species may be separated from the new species characterized below by the much shorter carinae, narrow and distinctly tectiform tumid area of each elytron, and different elytral markings.

***Corythucha agalma*, sp. nov.**

(Fig. 88b)

Corythucha decens, CHAMPION (not Stål), 1897, Biol. Centr. Amer. Rhynch. 2, p. 7 (not illustrated).

Guatemala.

SABA: Hellsgate, 20.XII.1956, abundant with larvae on a composite, probably *Vernonia* spec.

Small, rectangular in outline, pale testaceous, with some veinlets embrowned or infusate as depicted in the illustrations; areolae hyaline; pronotum and head brown or fuscous brown, abdomen beneath brownish. Appendages pale testaceous, tips of tarsi and apical part of fourth antennal segment brownish. Outer margins of paranota and elytra beset with fairly long, sharp, pale spines. Length 2.90–3.05 mm, width 1.50–1.65 mm.

Head very short, strongly declivous, dorsal processus reduced or obsolete, dorsally concealed by large hood. Antennae not very long, very slender, beset with several, very long, stiff hairs; measurements: I, 14; II, 7; III, 50; IV, 22. Labium extending slightly beyond mesosternum; rostral laminae of sternal sulcus uniseriate, closed behind. Bucculae wide, areolate, closed in front. Hypocostal lamina narrow, uniseriate. Scent glands provided with ostiole and upright sulcus on each metapleuron. Legs moderately long, slender.

Pronotum (Fig. 88b) moderately convex, finely punctate, mostly covered by large hood, tricarinate; lateral carinae rather short, nearly flaplike terminating anteriorly considerable back of hood; median carina united with median vein of hood above base of posterior process, highest in front, there with height shorter than its basal length; hood strongly inflated behind, constricted on lateral sides

near anterior two-fifths, thence narrowed to apex, basal length much greater than basal width (82 : 40), not as high behind as basal width there (54 : 44). Elytra with outer margins almost straight, feebly concave, tumid elevation of discoidal and subcostal areas very large, strongly inflated, not compressed laterally; costal area mostly triseriate, areolae moderately large. Spines on exterior margins of paranota and elytra arranged largely in one row (two rows in a few places), spine on veinlets of pronotum, hood, and elytra small and not numerous.

Holotype (♂) and allotype (♀) both macropterous, SABA, Hellsgate, 20. XII.1956 (in Drake Collection, U.S.N.M.). Paratypes: Saba, Hellsgate, 20. XII.1956, numerous specimens; Guatemala, Panteleon, G. W. Champion, 2 spec. (in Drake Collection, U.S.N.M.).

Separated from *C. championi*, n. sp. by its broader form, shorter antennae, much larger and more inflated tumid elevation of elytra, and longer pronotal carinae; the spines on exterior margins of paranota and elytra are less numerous and arranged largely in a single row. The brown or fuscous markings on the elytral veinlets are also distinctive.