

STUDIES ON THE FAUNA OF CURAÇAO AND OTHER
CARIBBEAN ISLANDS: No. 111.

**THE HETEROPTERA OF THE NETHERLANDS
ANTILLES - VIII**

PLEIDAE, NAUCORIDAE, RANATRIDAE

by

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The material studied was mainly collected during Dr. P. WAGENAAR HUMMELINCK's voyages to the West Indies (1930, 1936/37, 1948/49, 1955, 1963/64, 1967), and on a special entomological collecting trip by Dr. Ir. R. H. COBBEN (1956/57). Some specimens of the Zoologische Museum at Copenhagen and the Rijksmuseum van Natuurlijke Historie at Leiden were also studied. Unless otherwise stated, a date in the years 1956 and 1957 indicates specimens collected by Dr. COBBEN, and a date in another year specimens collected by Dr. HUMMELINCK.

As in the author's former papers on Antillean water-bugs (NIESER 1967, 1969) THIS CONTRIBUTION ALSO DEALS WITH SPECIMENS COLLECTED ON OTHER CARIBBEAN ISLANDS.

Descriptions of the islands and data on the localities 1930-1949 and 1956-1957 are given in WAGENAAR HUMMELINCK 1933, 1940a-c, 1953 and COBBEN 1960.

Thanks are due to Dr. Ir. R. H. COBBEN (Landbouwhogeschool, Wageningen), Dr. P. H. van DOESBURG, Jr (Rijksmuseum Natuurlijke Historie, Leiden), Dr. N. MØLLER ANDERSEN (Zoologische Museum, København) and Dr. P. WAGENAAR HUMMELINCK (Rijksuniversiteit, Utrecht) for the loan of specimens. Mrs. E. DE GROOT-TAAT (Rijksuniversiteit, Utrecht) kindly read the greater part of the manuscript.

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TABLE I.
SPECIES AND LOCALITIES OF CRYPTOCEPATA DISCUSSED IN THIS PAPER

Species	Figures
Pleidae	
<i>Plea puella</i>	145-146
<i>Plea punctifer</i> ?	
Naucoridae	
<i>Pelocoris conexus</i>	147-151
Ranatridae	
<i>Ranatra galantiae</i>	153-157
<i>Ranatra obscura</i>	158-159
<i>Ranatra zeteki</i>	160-162
Jamaica	X
Puerto Rico	X X
St. John	X
St. Croix	X
St. Martin	X
Barbuda	X
Guadeloupe	X
Martinique	X
Grenada	X
Barbados	X
Trinidad	X
Margarita	X
Bonaire	X X
Curaçao	X X X
Aruba	X
Venezuela, mainl.	X
Suriname	X

COBBEN's collection is to be found at the Entomologisch Laboratorium of the Landbouwhogeschool at Wageningen (W) together with the greater part of the older material of WAGENAAR HUMMELINCK. The remainder has been presented to the Zoologisch Museum at Utrecht (U). The specimens of the Copenhagen Museum are indicated with a K, those from the Leiden Museum with a L. Some specimens are in the reference collection of the Afdeling Systematiek, Zoologisch Laboratorium at Utrecht (S) and in the author's collection.

The Belostomatidae will not be treated in this paper, as Dr. D. R. LAUCK (California) kindly offered to study the material belonging to this family. The remaining families of Cryptocerata not yet studied will be treated in this paper. A Key for the identification of families will be given below. The complete set of publications on aquatic bugs in these "*Studies*" can now be used to identify a given specimen. It has to be kept in mind that the Keys to Species only refer to those actually known from the Netherlands Antilles; the reader should realise that they can be applied to specimens from other Lesser Antilles only with caution, especially when the islands under consideration are rich in true fresh-water habitats. For the fauna of the Greater Antilles these keys are of little value.

CRYPTOCERATA can be separated from other Hemiptera-Heteroptera in having the antennae shorter than the head, while possessing well-developed eyes.

KEY TO FAMILIES OF CRYPTOCERATA

- | | |
|--|----------------|
| 1a. Rostrum apparently unsegmented, often with transverse sulcations.
Front tarsi often spatulate | Corixidae |
| 1b. Rostrum clearly 3- of 4- segmented, front tarsi not spatulate | 2 |
| 2a. Head completely fused with the prothorax, only a shallow impression
at the boundary | Helotrephidae |
| 2b. Head free or at most partially fused with prothorax | 3 |
| 3a. Ocelli present | 4 |
| 3b. Ocelli absent | 5 |
| 4a. Fore legs raptorial, antennae concealed | Gelastocoridae |
| 4b. Fore legs normal, antennae free | Ochteridae |
| 5a. Fore coxae inserted at front of prosternum, hind tarsi with distinct
claws. | 6 |
| 5b. Fore coxae inserted at back of prosternum, hind tarsi without claws | 9 |

- 6a. Membrane without veins, no respiratory funnel Naucoridae
(and Aphelocheiridae, which do not occur in the Western Hemisphere)
- 6b. Membrane with reticulate venation, respiratory funnel present, although
more or less concealed in Belostomatidae (in rare instances the mem-
brane may be reduced so far that no venation is present) 7
- 7a. Hind tibiae flattened and fringed, respiratory funnel short Belostomatidae
- 7b. Hind tibiae simple, respiratory funnel usually long. 8
- 8a. Coxae long, about half the length of femur, ratio length: width of body
at least $5\frac{1}{4}$, body more or less cylindrical Ranatridae
- 8b. Coxae much shorter than half the length of femur, ratio length: width
of body at most $3\frac{1}{4}$, body distinctly flattened dorso-ventrally Nepidae
- 9a. Rostrum 4-segmented, width of head more than 3 times the width of
synthlipsis, generally over $3\frac{1}{2}$ mm long Notonectidae
- 9b. Rostrum 3-segmented, width of head less than 2 times the width of
synthlipsis, length of specimens not over $3\frac{1}{2}$ mm Pleidae

Plea puella Barber, 1923

Plea puella BARBER, 1923, p. 11 (Puerto Rico, Guadeloupe).

Plea puella; DRAKE & CHAPMAN 1953, p. 54 (Trinidad).

Paraplea puella; DRAKE & MALDONADO CAPRILES 1956, p. 53 (Hispaniola).

Plea puella; WILSON 1958, p. 146.

U.S.A., Florida, Mississippi, Louisiana, Texas; MÉXICO, San Luís Potosí, Guerrero; CANAL ZONE; JAMAICA!; HISPANIOLA, República Dominicana; PUERTO RICO; ST. JOHN!; ST. MARTIN!; GUADELOUPE; MARIE-GALANTE!; MARTINIQUE!; GRENADA!; BARDADOS!; TRINIDAD; MARGARITA!; BONAIRE!; CURAÇAO!; ARUBA!; VENEZUELA!, Paraguaná.

JAMAICA: Green Park Estate, near Falmouth, 10.II-25.III.1967, 1♀ (H. J. Mac Gillavry; U).

PUERTO RICO: Laguna Rincón ditch, Valle de Lajas, *Sta.* 705, 18.IX.1963, 9♀; Laguna Cartagena, Valle de Lajas, 706, 18.IX.1963, 2♀; Río Guánica, dique, 708, 15.IX.1963, 1♀ (U).

ST. JOHN: 31.I.1893, 1♀ (Meinert; K).

ST. MARTIN: Doctor's Well, 538b, 16.X.1963, 4♀ (U).

GUADELOUPE: Pond de Boisvin, S. of Moule, 729, 29.I.1964, 1♀ (U).

MARIE-GALANTE: Mare Lagon, Les Galeries, Capesterre, 749, 2.II.1964, 13♀; Étang Noir, 750, 1.II.1964, 3♀; Rivière du Vieux Fort, Vangout, 752, 31.I.1964, 12♀; Mare du Moulin de Grand Pierre, 754, 1.II.1964, 13♀ (S); Mangles de Folle Anse, S. of St. Louis (*Pterocarpus*), 755, 31.I.1964, 4♀; same (*Eichhornia*), 755A, 31.I.1964, 3♀.

MARTINIQUE: Fossé du Baie de Tartane, Caravelle, 767, 9.II.1964, 17♀ (U).

- GRENADA: Point Salines, well of Calliste, 659, 23.I.1955, 83♀, numerous larvae (S).
 BARBADOS: Holetown, Ronald Tree's pool, 788, 21.II.1964, 1♀ (U).
 MARGARITA: Estanque Lato, W, Boca del Río, Macanao, 13, 20.V.1936, 6♀.
 BONAIRE: Pos Bronswinkel, 44b, 23.VIII.1955, 12♀ (U); Pos Baca, 53d, 21.II.1949, 13♀ (W), same, 53g, 4.XII.1963, 2♀ (U); Pos Baca Chikitoe, 54f, 4.XII.1963, 150♀, some larvae (S); Pos Baca Grandi, 379, 2.IX.1948, 2♀ (U), same, 379a, 16.IX.1949, 1♀ (U), same, 379d, 2.IX.1949, 9♀ (U), same, 379e, 26.III.1955, 9♀, 3 larvae (U), same, 379f, 19.VIII.1955, 6♀ (U), same, 379 g, 4.XII.1963, 32♀ (U); Salinja, Pos Caranja, 63o, 27.III.1955, 1♀ (U).
 CURAÇAO: Tanki Martha-Koosje, near Kleine Berg, 397d, 15.IV.1949, 9♀, 5 lv (W); same, 397e, 2.III.1955, 1 lv (U); Willemstad, Marchena, vuil poeltje, zoet (small dirty pond, fresh water), 10.XI.1956, 2♀ (W); Klein Santa Martha, 1.II.1957, 4♀ (W); Plantage Noordkant, zoet plasje (small freshwater pool), 20.VI.1957, 3♀ (W).
 ARUBA: Rooi Andicouri, 217, 11.V.1955, 1♀ (U).
 VENEZUELA: Paraguaná, Estanque de Santa Fé, 109, 18.II.1937, 1♀ (U).
 SURINAME: Paramaribo, VIII.1961. 6♀ (P. H. van Doesburg [r.; L]; Maasstroom, in stomach of bird, *Pardirallus maculatus*, 17.III.1964, 1♀ (F. Haverschmidt; L).

As only females have been studied, the following measurements, which are given in mm, apply to females only. For each measurement 20 specimens have been measured.

Length $\bar{x} = 1.71$, $s = 0.09$; width of head $\bar{x} = 0.76$, $s = 0.033$; width of pronotum $\bar{x} = 0.88$, $s = 0.050$; basal width of scutellum $\bar{x} = 0.48$, $s = 0.027$; synthlipsis $\bar{x} = 0.42$, $s = 0.024$.

Colour, yellowish to light ochreous, with a faint pattern of darker patches. Pore-canal on vertex generally brownish.

Ocular index 2.21 - 2.44 - 2.60. Length of pronotum 0.51 - 0.62 - 0.66. Length of scutellum 0.37 - 0.41 - 0.44. Ratio width of scutellum: its length 1.07 - 1.17 - 1.33. Fore leg (Fig. 145) and middle leg with two segmented tarsi; tarsus of hind leg three segmented. Ovipositor valve Fig. 146.

***Plea punctifer* Barber, 1923**

Plea punctifer BARBER, 1923, p. 10-11 (Puerto Rico).

Neoplea punctifer; DRAKE & MALDONADO CAPRILES 1956, p. 53 (Hispaniola).

PUERTO RICO; HISPANIOLA, República Dominicana; CURAÇAO!?

CURAÇAO: Plantage Noordkant, zoet plasje, droog (drying freshwater pool), 26.VI.1957, 1♀ (W).

As only one specimen which was very tightly glued to a carton was available, the identification must be considered provisionally.

Length 2.22, humeral width of pronotum 1.22 mm.

Colour, yellowish, pore-canal on vertex infuscated. Head, except for pore canal, pronotum and hemielytra coarsely and densely punctured, posterior half of pronotum and anterior $\frac{2}{3}$ of hemielytra honey-combed. Punctures on posterior $\frac{1}{3}$ of hemielytra brownish. Scutellum more loosely punctured. Claval suture distinct.

Greatest width of head 1.04, synthlipsis 0.65, anterior width of vertex 0.73, length of head 0.23, length of pronotum 0.89, length of scutellum 0.56, basal width of scutellum 0.62; all measurements in mm.

***Pelocoris convexus* n. sp.**

PUERTO RICO: Laguna Cartagena, Valle de Lajas, *Sta. 706*, 18.IX.1963, 1♂ (U).
 St. Croix: Trough at Canaän, *684A*, 10.VI.1955, 1♂ (U).

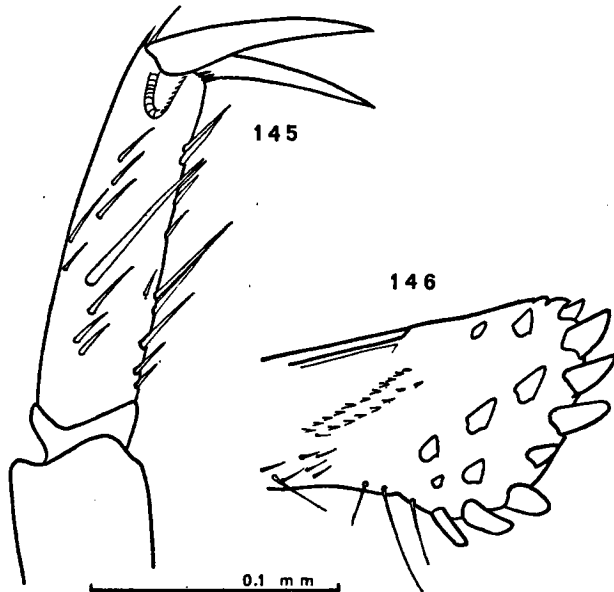


Fig. 145-146. *Plea puella*, female, from Bonaire: 145, anterior tarsus; 146, ovipositor valve.

BARBUDA: Bull Hole, 667, 9.VII.1955, 1♂, 1♀ (L); Low Pond, N. of Village, 674, 5.VII.1955, 1♂, 1♀ (U).
 GUADELOUPE: Pond de Boisvin, S. of Moule, 729, 29.I.1964, 2♂, 2♀ (U).
 MARIE-GALANTE: Mare Lagon, Les Galeries, Capesterre, 749, 2.II.1964, 8♂, 8♀; Mare Noire, Étang Noir, 750, 1.II.1964, 1♂, 4♀; Mare Médecinié, Meynard, 753, 31.I.1964, 1♂; Mare du Moulin de Grand Pierre, 754, 1.II.1964, 1♂ (S, U).
 ILES-DES-SAINTES: Terre-de-haut, mare basse, 759, 6.II.1964, 4♂, 10♀ (U).
 TRINIDAD: Pitch Lake pool, 796, 16.I.1964, 1♂, 1♀ (U).

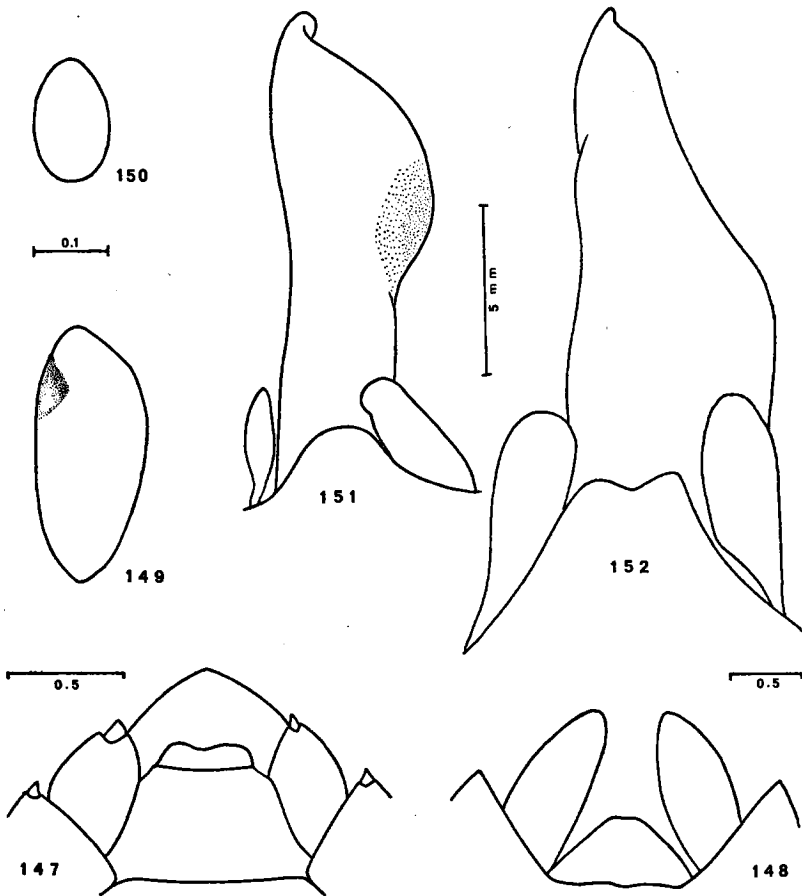


Fig. 147-151. *Pelocoris convexus*. - Female paratype, from Iles-des-Saintes, apex of abdomen: 147, ventral view; 148, dorsal view. - Male paratype, from Marie-Galante: 149-150, parameres; 151, aedeagus.

Fig. 152. *Pelocoris femoratus*, male, from New Jersey, aedeagus.

CURAÇAO: Hato, Tanki Mamaja, 75, 6.X.1936, 6♂, 10♀; Dokterstuin, Pos Europa, 82, 27.X.1963, 2♂, 1♀; Tanki Martha-Koosje, 397g, 28.X.1963, 2♂, 1♀ (S, U, W).

ARUBA: Fontein, pond, 93c, 2.VIII.1955, 3♀ (W).

Length, male 8.5 – 8.8 – 9.2; female 9.1 – 9.7 – 10.1 mm.

Head, pronotum and hemielytra brown, scutellum dark, embolium basally yellowish. Ventral side dark, legs and propleurae lighter.

Head. Greatest width of head including eyes, male 2.8 – 2.9 – 3.0, female 3.0 – 3.2 – 3.3 mm. Length of head 1.1 – 1.2 – 1.4, anterior distance between eyes 1.3 – 1.4 – 1.5, posterior distance between eyes 1.5 – 1.5 – 1.6 mm. Eyes dark, vertex smooth, laterally with some indistinct punctures, slightly mottled with dark brown, this pattern narrowing anteriorly. In females the punctation and mottling is, on the average, more distinct than in males. Inner margins of eyes concave.

Thorax. Pronotum rugulose, already visible under low power, shining. Median length of pronotum 2.1 – 2.2 – 2.3, anterior width 2.9 – 3.1 – 3.3, posterior width 4.5 – 4.7 – 5.0 mm; lateral margins convex. Scutellum often with a small apical yellowish patch, densely and finely punctate, lateral margins slightly sinuate, apex rather blunt. Length of scutellum, 1.5 – 1.6 – 1.8, basal width 3.0 – 3.1 – 3.2 mm. Hemielytra marbled, finely and densely punctate left membrane hyaline.

Abdomen. Dorsum centrally black, lighter towards margins. Mesosternal keel elevated, hairy, hairs somewhat longer but less thickly set than in *P. femoratus* P.-B.

Legs. Foreleg, coxae prominent, elongate, no reddish-brown, short spinules on interno-anterior margin, one small cluster of such spines distal on interno-posterior margin. Length of fore femur 2.1 – 2.2 – 2.3, greatest width 1.3 – 1.4 – 1.5, length of tibio-tarsus 1.7 – 1.8 – 1.9 mm. Middle leg, femur posterior with two ridges, the dorsal one with more regular and slightly stouter spines than the ventral one, which has, however, apically a comb of thickly set spinules and a thick fringe of short hairs over most of its length. Dorsal of dorsal ridge a fringe of rather long hairs. Anterior margin rounded, with few spinules over its length and an apical transverse

comb of larger spines. Tibia strongly spinose, inner surface with several spines which are split up so as to form small combs of two or three thinner spines; dorsally with long yellowish hairs. Tarsus with spines on inner surface. Length of middle femur, 1.7 - 1.9 - 2.1, greatest width 0.40 - 0.43 - 0.50, length of tibia 1.4 - 1.45 - 1.5, length of tarsus 0.7 - 0.8 - 0.9 mm. Hind legs, posterior margin of femur with two ridges, equally rather loosely, spinose. Ventrally no short hairs, nor a pretibial comb, dorsally long hairs present; anterior margin rounded, with few spines, no transverse apical comb. Tibia strongly spinose, posteriorly dorsal and ventral with a thick fringe of long hairs, and apical combs of small spines. Tarsus equally spinose and fringed with hairs which are somewhat shorter than the tibial hairs. Length of posterior femur 2.3 - 2.4 - 2.5, greatest width 0.48 - 0.50 - 0.52, length of tibia 2.3 - 2.5 - 2.8, length of tarsus 1.0 - 1.2 - 1.3 mm.

Male aedeagus and sub aedeagal plate Fig. 151.

Female subgenital plate and dorsal view of apex of abdomen Fig. 147-148.

This species is distinctly smaller and has at first sight head and abdomen more of the same colour as hemielytra than in *P. femoratus* P.-B. from New Jersey, which was available to the author by the kindness of Dr. J. T. POLHEMUS (Englewood, Colorado). Specimens from *Sta.* 750 and 796 are on the whole considerably darker than the others which might be an adaption to the environment.

Holotype male, allotype female, 1 male and 1 female paratype from Marie-Galante, *Sta.* 749, 1 male paratype from 729, 1 male and 1 female paratype from 759 and 1 male and 1 female paratype from 674 in the collection of the Zoölogisch Museum at Utrecht; 3 male and 2 female paratypes from 749, 4 female paratypes from 759 in the collection of Afd. Systematiek, Zoölogisch Laboratorium at Utrecht; 1 male and 1 female paratype from 667 in Rijksmuseum van Natuurlijke Historie at Leiden. Further paratypes in the collections of Dr. I. LA RIVERS, Reno, Nevada; Dr. J. T. POLHEMUS, Englewood, Colorado, and the author. The type-series consists of all specimens from Barbuda, Guadeloupe, Marie-Galante and Iles-des-Saintes, with the exception of the specimens from *Sta.* 750, which are much darker.

Ranatra galantae n. sp.

NEVIS: Nelson's Spring, *Sta.* 500, 28.VI.1949, 1♂ (S).

MARIE-GALANTE: Mare Lagon, Les Galeries, Capesterre, 749, 2.II.1964, 3♂, 3 larvae.

Length of body 31 – 31 – 32, length of caudal filaments 32 – 33 – 35 mm.

Head. Greatest width of an eye 1.00 – 1.05 – 1.10, distinctly more than the interocular space 0.85 – 0.88 – 0.95 mm. Antenna Fig. 157.

Thorax. Length of thorax along pleuron 9.2 – 9.3 – 9.3, length of pronotum along median longitudinal axis 7.8 – 7.85 – 7.90, length of anterior part of pronotum 5.3 – 5.3 – 5.4, length of posterior part 2.5 – 2.5 – 2.6 mm. Anterior width of pronotum 2.15 – 2.20 – 2.25, humeral width 3.05 – 3.11 – 3.15 mm. Scutellum with rather distinct carina and interrupted transverse striae. Metaxiphus strongly curved upwards at apex.

Legs. Fore leg Fig. 154.

Male paramere Fig. 155–156, with somewhat expanded rounded tip. Genital operculum of male embraced at apex by two lateral flaps Fig. 153.

This form is given specific rank in accordance with the treatment of the group by DRAKE & DE CARLO 1953. A study of variability of the species in this group based on material from many localities is most desirable. *R. galantae* differs from other species in the “*annulipes* group” (DRAKE & DE CARLO 1953) by the slightly thickened and rounded tip of the male paramere and by various measurements and ratios.

Holotype male and 3 larvae in the Zoölogisch Museum at Utrecht, 1 male paratype in the collection of the Afd. Systematiek, Zoölogisch Laboratorium at Utrecht and 1 male paratype in author's collection. The type series consists of the specimens from Marie-Galante, *Sta.* 749.

Ranatra obscura Montandon, 1907

Ranatra obscura MONTANDON, 1907, p. 60–61 (Guyane Française).

Ranatra obscura; DE CARLO 1946, p. 24–25, fig. 21, 55, 75 (Brasil).

Ranatra obscura; DE CARLO 1964, p. 151–152, fig. 18, 106 (Suriname).

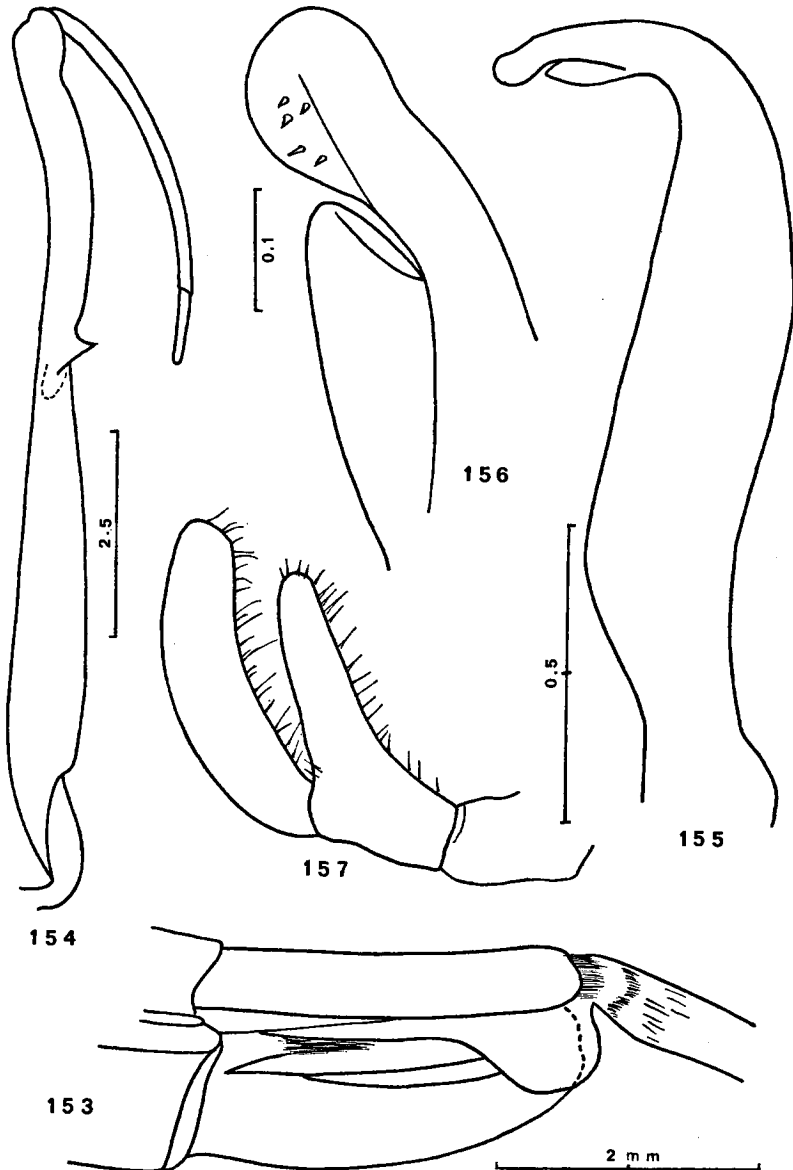


Fig. 153–157. *Ranatra galantae*. — Male paratype, from Marie-Galante: 153, apex of abdomen; 154, anterior leg. — Male holotype from Marie-Galante: 155, paramere; 156, apex of paramere; 157, antenna.

TRINIDAD!; SURINAME; GUYANE FRANÇAISE; BRASIL, Amazonas, Santa Catarina, Rio Grande do Sul.

TRINIDAD: Mainroad swamp S. of Point Fortin, *Sta.* 795, 16.I.1964, 1♀ (S).

Length of body 35, length of caudal filaments 35 mm.

Colour, greyish-blackish, apical parts of caudal filaments and legs lighter, brownish.

Greatest width of an eye 1.25, interocular space 0.88 mm. Antenna Fig. 159. Length of thorax along pleuron 10.8, length of pronotum along median line 9.4, length of anterior part 6.3, posterior part 3.1; width of pronotum anteriorly 2.5, posteriorly 3.5 mm. Transverse groove on pronotum rather broad and deep. Scutellum with carina only faintly indicated.

Fore leg Fig. 158, length of coxa 8.0, length of femur 11.5, length of tibia 3.7, length of tarsus 0.7, part of femur basal to dent 7.2, apical part 4.0; greatest width of femur 1.0 mm. Metaxiphus relatively faintly developed. Genital operculum surpassing apex of abdomen with 0.5 mm. Fringe of hairs on under edge of genital segment relatively short but thick and well developed.

Ranatra zeteki Drake & De Carlo, 1953

Ranatra zeteki Drake & De Carlo, 1953, p. 113–114, fig. 8–11 (Panamá, Colombia, Venezuela).

Ranatra zeteki; DE CARLO 1964, p. 170–171, fig. 31, 40, 94.

PANAMÁ; COLOMBIA; VENEZUELA; CURAÇAO!

CURAÇAO: Hato, Tanki Mamaja, *Sta.* 75, 6.X.1936, 7♂, 4♀, 2 lv (A, S, W). Hato, Tanki Monpos, 78, 11.X.1936, 2♂, 1♀ (W).

Length of body, male 29 – 30 – 31, female 32 – 33 – 34; length of caudal filaments male 33 – 34 – 36, female 38 – 39 – 40 mm.

Colour, light brownish with a faint pattern of darker areas.

Greatest width of an eye, male 0.95 – 1.05, female 1.10 – 1.13 – 1.20; interocular space male 0.90 – 0.96 – 1.00, female 1.00 – 1.04 – 1.10 mm. Antenna Fig. 162.

Length of thorax along pleuron male 8.5 – 8.9 – 9.2, female 10.2 – 10.4 – 10.6; median length of pronotum male 7.4 – 7.6 – 7.8,

female 8.6–8.7–8.8; length of anterior part of pronotum male 5.2–5.4–5.5, female 5.9–6.0–6.0; posterior part male 2.2–2.3–2.3, female 2.7–2.8–2.8; anterior width of pronotum male 2.15–2.18–2.20, female 2.40–2.50–2.60; posterior width of pronotum male 2.9–3.0–3.1, female 3.3–3.4–3.4 mm. Scutellum with distinct carina on posterior part, transverse striae interrupted.

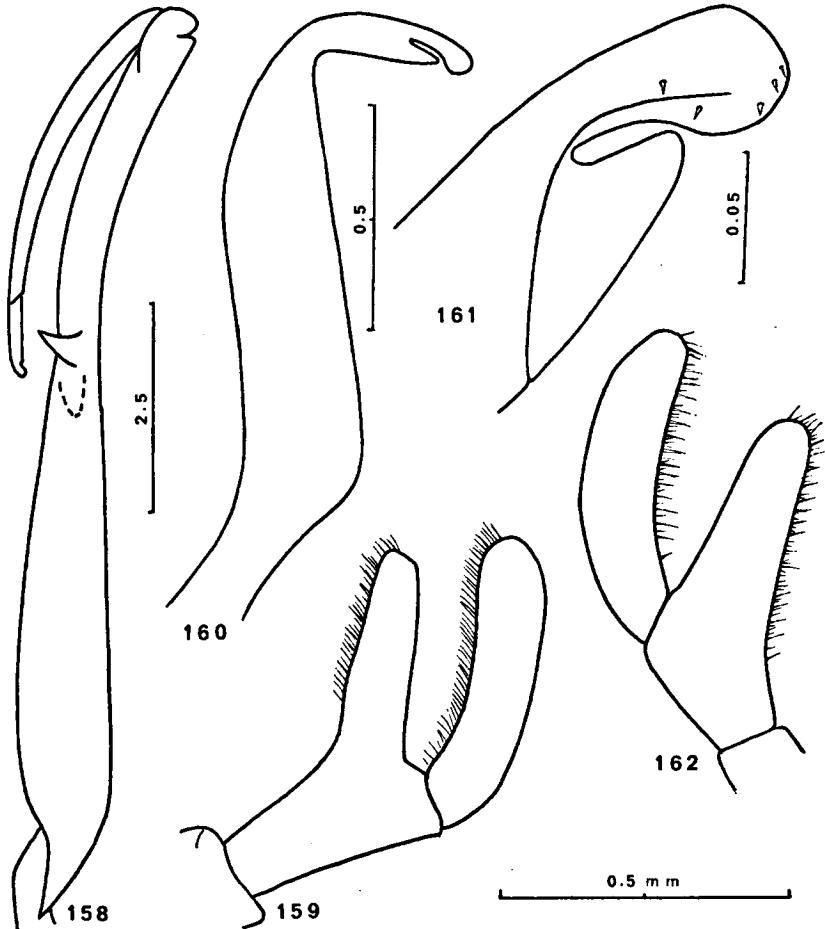


Fig. 158–159. *Ranatra obscura*, female from Trinidad: 158, fore leg; 159, antenna. Fig. 160–162. *Ranatra seteki*, male, from Curaçao; 160, paramere; 161, apex of paramere; 162, antenna.

Metaxiphus strongly developed, in lateral view extending 0.5 mm below lower margin of hind coxae.

Fore leg, length of coxa male 6.2 – 6.4 – 6.6, female 7.2 – 7.3 – 7.4; length of femur male 10.3 – 10.4 – 10.4, female 11.5 – 11.6 – 11.7; length of tibia male 3.8 – 3.9 – 3.9, female 4.2 – 4.2 – 4.3; length of tarsus male 0.8, female 0.9 – 1.0; greatest width of femur male and female 0.82 – 0.92; length of part of femur basal to spine male 5.9 – 5.9 – 6.0, female 6.8 – 6.9 – 7.0; apical part male 3.9, female 4.0 – 4.2 – 4.3 mm.

Male paramere Fig. 160–161. Apex of female genital operculum at level with apex of genital segment.

REFERENCES

- BARBER, H. G., 1923. A preliminary report on the Hemiptera-Heteroptera of Puerto-Rico collected by the American Museum of Natural History. *Am. Mus. Novitates* 75, 13 pp.
- DE CARLO, J. A., 1946. Los Ranatridae de Sud América. *An. Mus. Argent. Ci. Nat.* 42: 1–38.
- DE CARLO, J. A., 1964. Los Ranatridae de América. *Rev. Mus. Arg. Ci. Nat. Bernardino Rivadavia Ent.* 1; 133–215.
- DE CARLO, J. A., 1967. Diferencias entre Ranatridae y Nepidae. División de la familia Ranatridae en Ranatrinae y Curictinae. *Rev. Soc. Ent. Argent.* 29: 21–29.
- DRAKE, C. J. & CHAPMAN, H. C., 1953. Preliminary report on the Pleidae of the America's. *Proc. Biol. Soc. Washington* 66: 53–59.
- DRAKE, C. J. & DE CARLO, J. A., 1953. American species of the Ranatra annulipes Stål – group. *J. Wash. Acad. Sci.* 43: 109–117.
- DRAKE, C. J. & MALDONADO CAPRILES, J., 1956. Some Pleids and Waterstriders from the Dominican Republic. *Bull. Brooklyn Ent. Soc.* 51: 53–56.
- LA RIVERS, I., 1948. A new species of Pelocoris from Nevada, with notes on the genus in the United States (Naucoridae). *Ann. Ent. Soc. Amer.* 41: 371–376.
- MONTANDON, A. L., 1907. Quelques espèces du genre Ranatra des collections du Muséum de Paris. *Ann. Soc. Ent. France* 76: 49–66.
- STÅL, C., 1876. Enumeratio Hemipterorum V. Enumeratio Galgularum. Enumeratio Naucoridarum. *Kongl. Svensk. Vetensk. Akad. Handl.* 14: 137–147.
- WILSON, C. A., 1958. Aquatic and semiaquatic Hemiptera of Mississippi. *Tulane Stud. Zool.* 6: 115–170.