

STUDIES ON THE FAUNA OF CURAÇAO AND OTHER
CARIBBEAN ISLANDS: No. 52.

**THE HETEROPTERA OF THE NETHERLANDS
ANTILLES - III
SALDIDAE (Shore Bugs)**

by

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The material of Saldidae covered in this paper comprises:

Pentacora signoreti, from St. Martin;

Pentacora sphaclata, from Aruba, Curaçao, Klein Curaçao, Bonaire, and St. Martin;

Saldula "palustris", from St. Martin;

Saldula dentulata, from Curaçao, and Bonaire;

Micracanthia humilis, from Curaçao, St. Eustatius, and St. Martin;

Micracanthia drakei, n. sp., from Aruba, Curaçao, and Bonaire;

Micracanthia husseyi, from St. Martin.

***Pentacora signoreti* (Guérin) 1857**

(Fig. 23-28)

Southern Canada, U.S.A., Mexico, West Indies.

ST. MARTIN: about 1870, no further data (5 specimens in Leiden Museum; leg. H. E. van Rijgersma). Atwell's Pond, near Philipsburg, 17.V.1949 (leg. P. Wagenaar Hummelinck); 2.VI.1955 (9 ♂, 6 ♀; WH). Simson Bay Lagoon, near bridge, 6.VI.1955 (11 ♂, 15 ♀, 8 larvae; WH); 20.XI-9.XII.1956; 9.I.1957. Simson Bay Lagoon, shore at Koolbaai-Marigot, 1.XII.1956. Oyster Pond, 26.XI.1956. Little Bay Pond, 30.XI.1956 (1 ♂).

Pentacora signoreti appears to be absent on the islands off the Venezuelan coast.

This large and conspicuous saldid has been met with in small numbers, together with the pale larvae, at the above-mentioned localities. It is a denizen of permanent, wet, sandy and muddy salt

AVERAGE MEASUREMENTS OF NETHERLANDS ANTILLEAN *Salidiidae*.

Measurements in mm to the nearest 0.05 mm, exclusive segments of antennae. All figures are mean values of 4-15 specimens.

Species	Sex	Total length	Total width	Head		Pronotum		Hemelytra total length	Antennae		
				total width	vertex width, at level of ocelli	length	breadth at hind margin		length of joints	2	3
<i>Pentacora signoreti</i>	♂	6.65 (6.56-6.80)	2.90 (2.88-2.94)	1.50	0.55	0.80	2.40	5.10	1.90	0.80	0.60
	♀	7.20 (7.08-7.34)	3.20 (3.13-3.25)	1.55	0.60	0.85	2.55	5.50	2.05	0.85	0.60
<i>Pentacora sphacelata</i> from St. Martin	♂	4.21 (3.95-4.40)	1.80 (1.70-1.91)	1.00	0.40	0.50	1.50	3.20	0.80	0.55	0.48
	♀	4.95 (4.75-5.10)	2.10 (2.00-2.23)	1.10	0.45	0.55	1.70	3.70	0.90	0.60	0.50
<i>Pentacora sphacelata</i> from Curaçao, Fuikbaai	♂	3.44 (3.22-3.72)	1.49 (1.40-1.64)	0.85	0.30	0.40	1.20	2.55	0.75	0.60	0.55
	♀	4.28 (3.90-4.58)	1.87 (1.77-1.98)	1.05	0.45	0.45	1.55	3.20	0.90	0.65	0.55
<i>Salidula 'palustris'</i> from St. Martin	♂	3.90 (3.68-4.20)	1.84 (1.76-1.99)	1.05	0.40	0.50	1.55	2.90	0.60	0.45	0.45
	♀	4.35 (4.13-4.50)	2.13 (2.03-2.20)	1.10	0.45	0.55	1.80	3.35	0.70	0.45	0.45
<i>Salidula dentulata</i>	♂	3.00 (2.70-3.24)	1.35 (1.18-1.49)	0.80	0.30	0.40	1.20	2.30	0.50	0.43	0.43
	♀	3.40 (3.28-3.66)	1.55 (1.50-1.67)	0.90	0.35	0.45	1.30	2.50	0.58	0.45	0.43
<i>Micracanthia humilis</i>	♂	2.64 (2.30-2.80)	1.19 (1.01-1.29)	0.80	0.30	0.35	1.05	2.00	0.41	0.35	0.39
	♀	3.09 (2.96-3.30)	1.45 (1.39-1.60)	0.85	0.30	0.40	1.20	2.25	0.44	0.35	0.38
<i>Micracanthia drakei</i>	♂	2.79 (2.56-3.13)	1.29 (1.20-1.46)	0.85	0.30	0.40	1.05	1.95	0.40	0.38	0.39
	♀	3.19 (2.90-3.50)	1.52 (1.38-1.68)	0.85	0.35	0.40	1.30	2.40	0.46	0.38	0.38
<i>Micracanthia husseyi</i>	♂	2.14 (2.00-2.23)	1.03 (0.91-1.10)	0.70	0.25	0.35	0.80	1.45	0.34	0.40	0.41

banks and salines beside lagoons devoid or almost devoid of herbaceous overgrowth.

In the close vicinity of Simson Bay bridge the species occurred on shell sand together with the saldids *Pentacora sphaelata*, *Saldula 'palustris'* and *Micracanthia humilis*. Nevertheless, it was still possible to recognize an apparent succession in species. *M. humilis* has been found on the higher and drier parts of the sloping bank, which are more densely overgrown with grasses, while both the *Pentacora* species live more on the bare patches and along the water line. The *Saldula 'palustris'* population was densest in the transitional zone between *Micracanthia* and *Pentacora*. The bare shallows in the bay itself are inhabited only by the two *Pentacora* species.

When disturbed, but also wholly spontaneously, *Pentacora* skates easily and very quickly over the surface of the water from one bank or stone to another, in contrast to the behaviour of the species of the genera *Salda*, *Saldula*, *Micracanthia*, *Chartoscirta*, etc. It also shoots very quickly over the water when in copulating position, in which the male is situated alongside the female (for the manner of clasping see COBBEN 1957) or, when the female is unwilling, lying on top of her.

The distribution and intensity of melanic pigmentation in *P. signoreti* is obviously correlated with the colour of the substratum on which these pronounced predators live. On the vast, bare and very light-coloured salines of Oyster Pond only extremely pale specimens could be found (Fig. 23a). The habitat at Koolbaai, characterized by a dark-brownish mud deposit, resulted only in some dark individuals (Fig. 23c). The extent of the black pattern on the wings does not depend on whether or not the hardening process has finished. In teneral individuals the pattern of the dark design is already clearly marked. If the specimens are ranged according to increasing darkness of colouring, an eunomic sequence of variation is seen, beginning with the extremely light form and ending with the darkest form; the melanism follows a specific pattern. The formulation of eunomic series has a very clarifying effect as regards the sometimes very difficult taxonomical problems connected with saldids. This procedure was first employed with

success by WAGNER (1950) in separating *Saldula pallipes*, *palustris* and *arenicola*, and has been elaborated for all European species by COBBEN (1960). In *P. signoreti* the darkening of the hemelytra first appears in the anal corner of the mesocorium and along the clavus. In the sequence of melanism the pattern expands to the lateral side of the mesocorium, leaving certain light spots open. Finally, it extends over the exocorium at the margin of the hemelytra in two transverse offshoots. The black patches on head, pronotum and scutellum, which are already present in the lightest form, expand only slowly and slightly in the sequence from light to dark specimens. The legs and antennae also undergo a gradual darkening; in the melanistic specimens the scarcely visible spots on the femora have run together into dark patches (Fig. 23a-c).

Like the coupling-organ (Fig. 27), the genital structures (Figs. 24, 25), and in particular the median sklerotized body of the penis, show a great resemblance to those structures in *Chiloxanthus* (fig. in COBBEN 1957). These characters include, inter alia, the penis

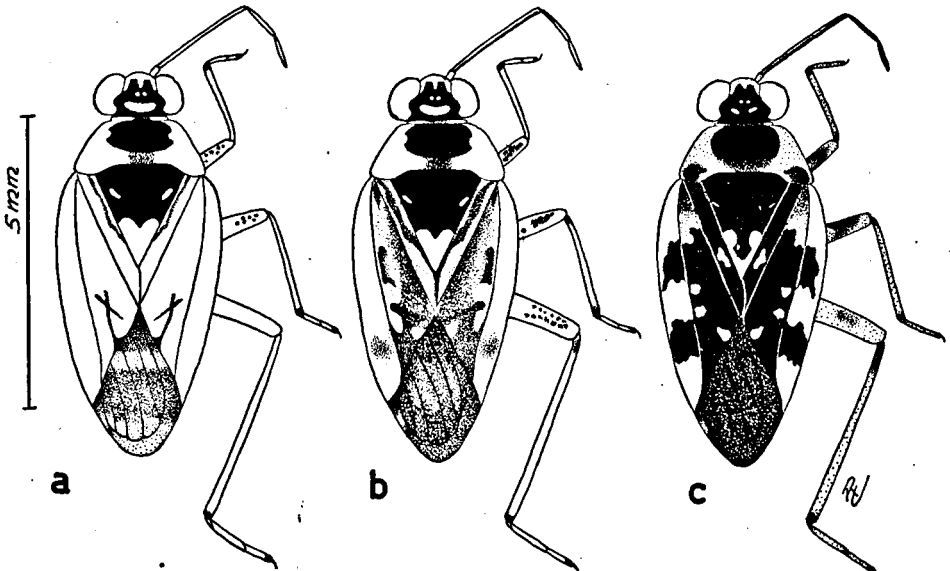


Fig. 23. *Pentacora signoreti* (Guérin), males, from St. Martin; pubescence omitted. — a, from Oyster Pond, on very light underground. b, from Simson Bay bridge, intermediate form. c, from Koolbaai, on dark underground.

filum, which is shaped like a very weakly coiled watch spring; the parandria (Fig. 26); the subgenital plate (Fig. 28); and the larval organ, which is otherwise constructed and situated than is the case in *Saldula*, *Micracanthia*, *Chartoscirta* and *Saldoidea*. Other characters also clearly show that *Pentacora* and *Chiloxanthus* are closely related and form a distinct group within the family. A revised major classification of the Saldidae has been proposed elsewhere (COBBEN 1959).

***Pentacora sphacelata* (Uhler) 1877**

(Fig. 29–33)

Coastal states of U.S.A., Utah, Mexico, Peru; West Indies; Mediterranean region of the Old World.

ARUBA: Salty dunes near Eagle Petr. Comp., 1.IV.1957. Spaans Lagoen, 5.IV.1957. Rooi Tamboe, 9.IV.1957. Picaron, 17.IV.1957. Savaneta, 26.IV.1957.

CURAÇAO: Piscadera, inner bay, northern mud flats, 22.X.1956; 23.X.1956;

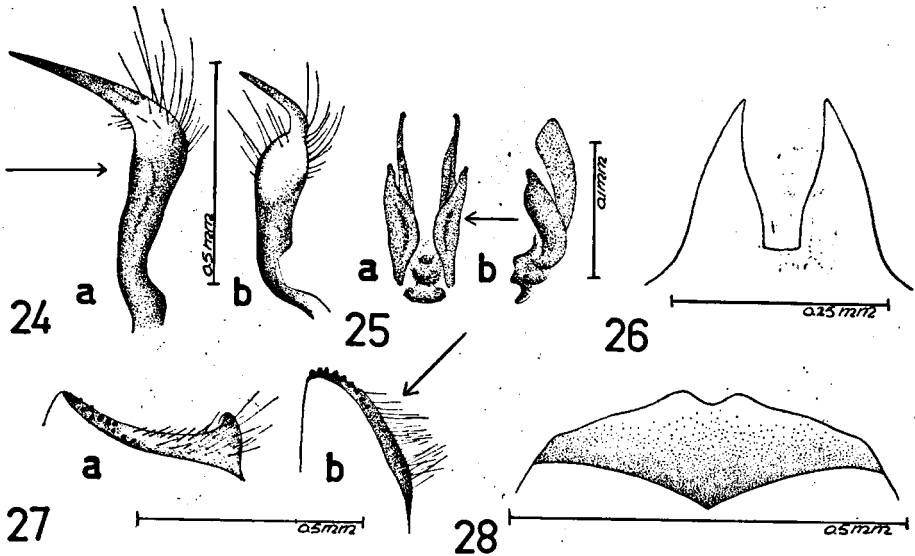


Fig. 24–28. *Pentacora signoreti*, from St. Martin. — 24, left paramere: *a*, front view; *b*, innerside, as observed in the direction of the arrow in *a*. — 25, median sclerotized structure of penis: *a*, in natural position, ventral view; *b*, left view. — 26, parandria, hind view. — 27, coupling-plate of male: *a*, as observed in the direction of the arrow in *b*; *b*, dorsal view of left connexivum. — 28, subgenital plate of female, ventral view.

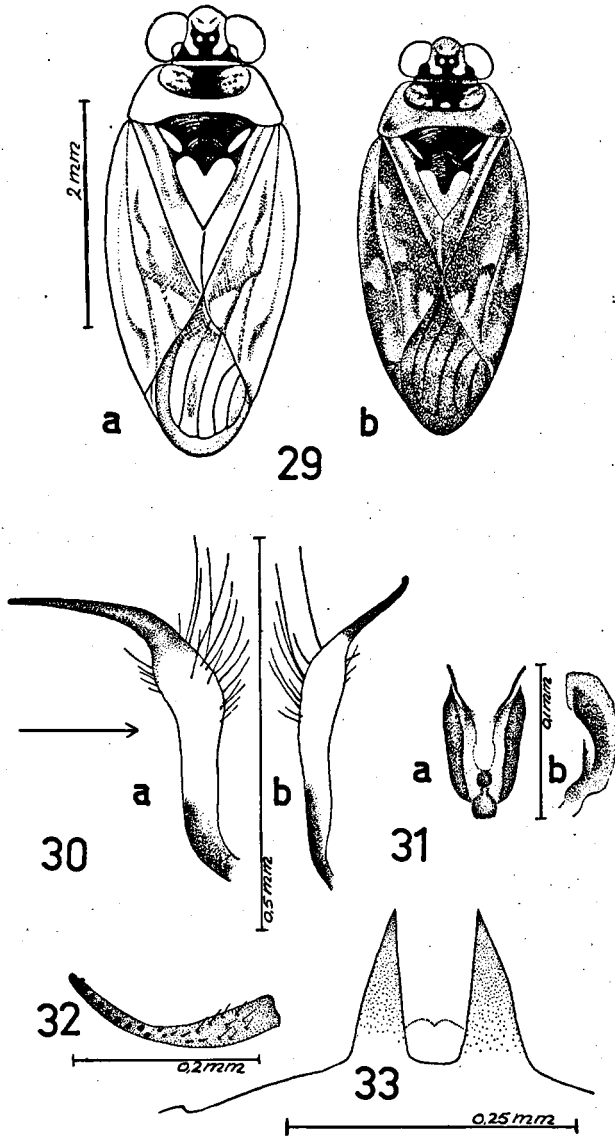


Fig. 29–33. *Pentacora sphaelata* (Uhler), males. — 29: *a*, from St. Martin; *b*, from Curaçao, Fuikbaai. — 30, left paramere. — 31, median sclerotized structure of penis. — 32, coupling-plate of male, front view. — 33, parandria.

8.XI.1956. Westpunt, near lighthouse, 1.XI.1956. St. Martha, inner bay, 3.II.1957; 10.II.1957. Malpais, 8.II.1957. Savonet, salinja, 22.III.1957. Fuikbaai, 13.I.1957. Santa Cruz, 3.II.1957. Knip, 3.II.1957.

KLEIN CURAÇAO: Northeastern salines, 23.VI.1957.

BONAIRE: Noord di Salinja, 4.VI.1957. Rooi towards Lagoen, 13.V.1957. Goto, 19.V.1957. Onima, 21.V.1957. Lac, 23.V.1957.

ST. MARTIN: Simson Bay Lagoon, near bridge, 6.VI.1955 (leg. P. Wagenaar Hummelinck). Simson Bay Lagoon, everywhere on suitable open places near the banks, 22.XI – 7.XII.1956. Great Saltpond and Atwell's Pond, 22.XI – 7.XII.1956.

Pentacora sphacelata makes the least ecological demands, and is consequently the most common shore bug of the three islands off the continent of South America. Its absence on Saba and St. Eustatius is due to the lack of lagoons and salines on those islands. It often inhabits, in large populations, open salty mud flats and shell sand beside landlocked bays and lagoons. Its territory extends deeper into the islands along the brackish banks of gullies.

The species is variable both in body dimensions and in pigmentation of the integument. The differences between populations from different localities are sometimes obvious. For instance, the mean length and width, respectively, in mm, of seven arbitrarily chosen males from St. Martin amount to 4.21 (3.95–4.40) and 1.80 (1.70–1.91); from Curaçao, Piscadera inner bay, 3.91 (3.90–3.93) and 1.66 (1.62–1.68); and from Curaçao, Fuikbaai 3.44 (3.22–3.72) and 1.49 (1.40–1.64). The small specimens from Fuikbaai are, in addition, strikingly dark in colour (Fig. 29b). Nevertheless, no constant morphological differences could be traced between these populations. The genital structures (Fig. 30–31) are also entirely identical, and hence the habit differences can be ascribed to diversities in environmental factors (dark ground and great density of population in the habitat of Fuikbaai).

Saldula 'palustris' (Douglas) 1874'

(Fig. 34, 36–38)

Europe; Asia Minor; North Africa.

ST. MARTIN: Simson Bay bridge, numerous on light-coloured, salty shell sand, 21.XI – 9.XII.1956. Guana Bay, all round a drying fresh-water puddle surrounded by *Hippomane mancinella* trees, 24.XI.1956 (1 ♀, larvae).

All specimens captured (about 40) fall within a restricted eunomic range (Fig. 34 a-e); the exocorium remains light, even when the mesocorium already shows considerable darkening, resulting in a striking resemblance to *S. opacula*. The Antillean form is placed

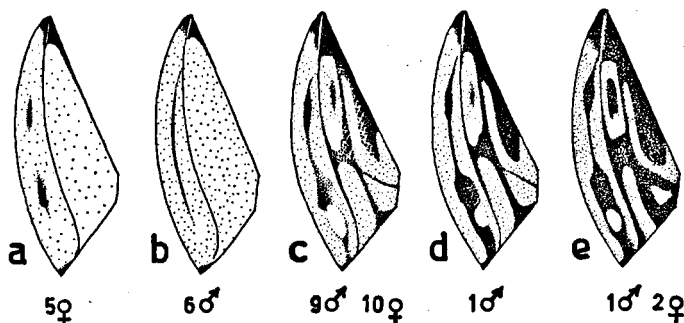


Fig. 34. *Saldula* '*palustris* (Douglas)', from St. Martin, hemelytra without clavus and membrane; eunomy of dark marking.

here under *palustris* because the processus sensualis of the paramere bears short hairs, pre-eminently the character by which, in Europe, *palustris* is distinguished from *pallipes* (COBBEN 1960). In Europe, *S. palustris* is pronouncedly halophilous and highly variable, all according to the geographical latitudes in which it is found. The Antillean form is bigger than the European one. The body length and width of 14 ♂♂ amount to 3.68–4.00 and 1.76–1.88 mm, with a mean of 3.88 and 1.82 respectively; the same dimensions of 17 ♀♀ amount to 4.13–4.57 and 2.03–2.20, with means of 4.36 and 2.13 respectively. The ratio: mean length / mean width is 2.13 for the males, and 2.05 for the females.

Up till now the only specimens we have seen from the Nearctic region, and which might belong to the *palustris* complex, have come from Alaska and Newfoundland (coll. C. H. Lindroth). These may be reckoned as belonging to the *palustris* complex on account of the short hairs of the processus sensualis of the paramere and the eunomy of the wing pigment, which is identical with that of the European form. On the other hand, the populations mentioned differ from the European *palustris* in their greater dimensions; the

presence of some erect hairs on the head; and their apparently not halophilous occurrence.

By reason of the differences mentioned the name *palustris* is placed between quotation marks here. Experience with variable

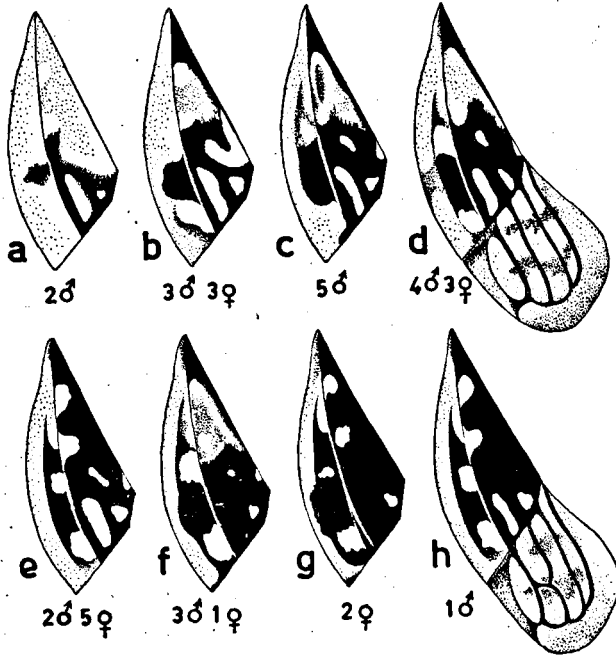


Fig. 35. *Saldula dentulata* (Hodgden), from Curaçao, hemelytra, eunomy of dark marking; h, membrane with anomalous cell nervature.

species from Europe has taught that, though clear indications can sometimes be noticed which point to subspeciation, the geographical pattern of those differentiations is often still so vague, and is so much attended by morphological transitional phases, that no taxonomical criteria can be found which justify a division into subspecies or species. There is evidence that the *palustris*-*pallipes* complex in the New World is much more complicated than in Europe. Only an investigation embracing specimens from the whole Nearctic distribution area can elucidate the situation.

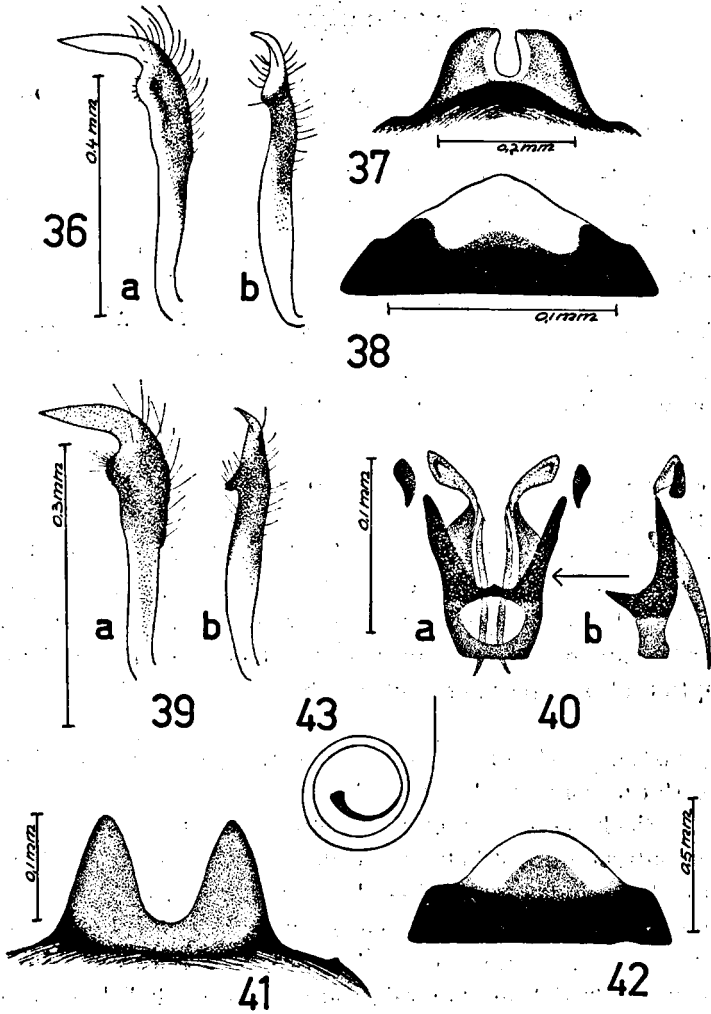


Fig. 36-38. *Saldula palustris*. — 36, left paramere. — 37, parandria. — 38, subgenital plate. Fig. 39-43. *Saldula dentulata*. — 39, left paramere. — 40, median sclerotized structure of penis. — 41, parandria. — 42, subgenital plate. — 43, base of penis filum.

Saldula dentulata (Hodgden) 1949

(Fig. 35, 39-43)

West Indies (Grenada), Brazil (DRAKE & HOTTES 1951, sub. *S. denticulata*).

CURAÇAO: Seroe Christoffel, rivulet at Knip side, 21.X.1956 (3 ♂♂, 1 ♀, larvae). Seroe Christoffel, rivulet at Savonet side, Rooi Beroe, 22.III.1957 (1 ♂, 2 ♀♀). Santa Cruz - Knip, bank alongside pool, 3.II.1957 (2 ♂♂, 1 ♀). Malpais, fresh-water puddle near dam, 8.II.1957 (5 ♂♂, 2 ♀♀). Klein St. Martha, fresh-water rivulet, together with *Ochterus perbosci*, 10.II.1957 (2 ♂♂, 1 ♀). Groot St. Martha, bank of inner bay, on green algae layer, together with *Pentacora sphacelata* and *Micracanthia drakei*, 1.III.1957 (1 ♀). Willemstad, tanki at Wishi, 11.II.1957 (2 ♂♂, 1 ♀). Savonet, 22.III.1957 (4 ♂♂). Hofje Goot Piscadera, dried-up fresh-water puddle in mango grove, 14.II.1957.

BONAIRE: Onima, on fresh-water mud flats, 20.V.1957 (3 ♂♂, 4 ♀♀); 21.V.1957 (2 ♀♀).

From these localities it appears that this species occurs only exceptionally on salty shores.

The species corresponds most closely with the description of *Salda dentulata* Hodgden. Since we have not seen type specimens from Grenada, and since HODGDEN (1949, p. 151-153) describes neither the eunomy nor the inner genital structures, a more detailed description of our specimens will not be out of place here.

Description of specimens from Curaçao and Bonaire (for measurements see Table 2).

Head: Black, vertex roughly sculptured, ocelli conspicuous and almost contiguous, spot between ocellus and eye testaceous, labrum and all clypeal sclerites yellowish in male, brownish in female; rostrum reaching well beyond base of hind coxae.

Thorax: Almost totally black, shiny, clothed with very fine pale pubescence. Pronotum: lateral margins very slightly concave, proximal corner in light specimens with rubiginous spot laterally. Posterior margins of precoxal sternites pale.

Hemelytra: Clavus with light spots near apex, otherwise dull black with golden pubescence; corium clothed with short light and dark hairs. All available 35 specimens are macropterous; membrane with two transverse dark bands. Eunomy of dark marking is given in Fig. 35 a-g; the darkening follows a specific pattern, beginning at the distal margin of the mesocorium.

Abdomen: Black with fine light pubescence, hind margins of sternites pale; parandria of male (Fig. 41) deeply excavated; posterior margin of subgenital plate of female broadly rounded, sclerotized as shown in Fig. 42.

Genitalia: Processus hamatus of paramere of the male is short, broad and acuminate (Fig. 39a); processus sensuais pronounced, provided with a tooth directed obliquely downward (Fig. 39b). The median sclerotized structure of the penis differs from that in any of the 70 *Saldula* species studied so far in having a great gap in the base body (Fig. 40). The base of the penis filum is colled like a watch spring two and a half times, just as in *S. confluenta*, *illinoiensis* and *setulosa*, i.e. a little more than is usual in the genus *Saldula*.

Extremities: Antennae: segments 1 and 2 light-coloured or red-brownish, in dark specimens dark-brownish, with black short pubescence; segments 3 and 4 dark-brownish or black fuscous, shortly black pilose and with scattered long black hairs.

Legs: pale, apex of tibiae and second half of third tarsal segment dark-brownish; in dark specimens the knee becomes darker and the tibiae show a distinct brown ring on the middle.

***Micracanthia humilis* (Say) 1832**

(Fig. 44, 50, 54)

Canada, United States, Mexico, West Indies, Brazil.

CURAÇAO: Piscadera, inner bay, near stone quarry, 23.X.1956 (3 ♂♂, 4 ♀♀).

ST. EUSTATIUS: Manahega Cistern, Downtown, Sta. 505, 7.VII.1949 (numerous; leg. P. Wagenaar Hummelinck).

ST. MARTIN: Simson Bay Bridge, 20.XI - 9.XII.1956 (numerous). Simson Bay Lagoon, Koolbaai-Marigot, 1.XII.1956 (1 ♂). Low Lands, 30.XI.1956 (numerous). Little Bay, 30.XI.1956 (1 ♂).

Apart from the locality on St. Eustatius (a brackish well near shore, 2300 mg Cl/1), all habitats mentioned are salty places. This small saldid appears to be a little less hygrophil than the other species mentioned in this paper. At Simson Bay bridge it occurred only on the somewhat higher and drier-situated zones of the bank of the lagoon - a locality pre-eminently suitable for shore bugs; there its biotope bordered that of *Saldula 'palustris'*, *Pentacora sphacelata* and *P. signoreti*. The specimens from Curaçao are wholly

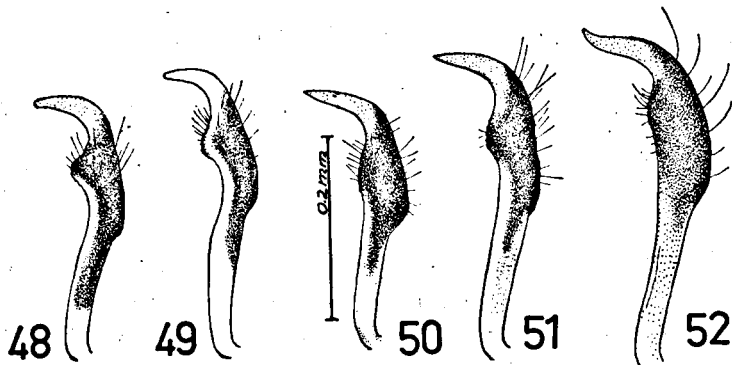
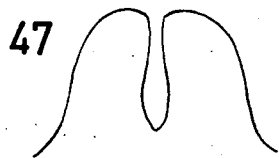
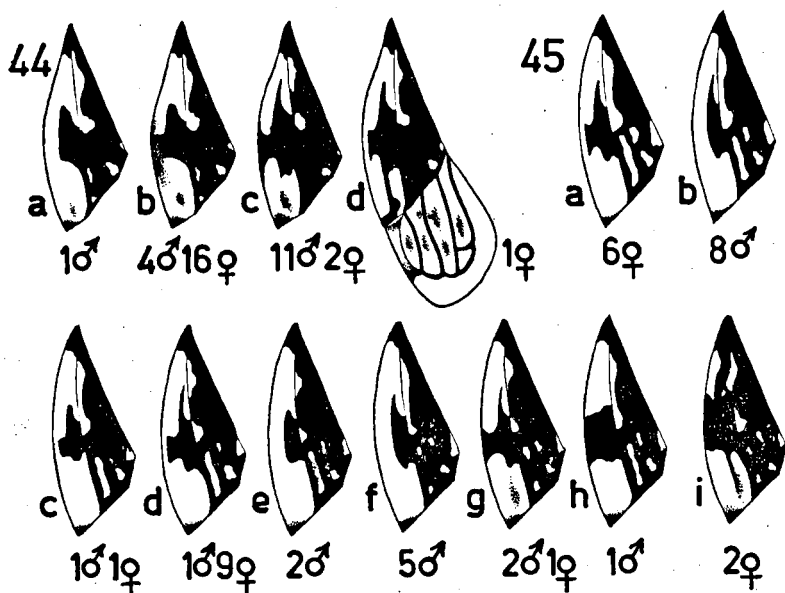


Fig. 44. *Micracanthia humilis* (Say), hemelytra, economy of dark marking; d, membrane with anomalous cell nervature.

Fig. 45. *Micracanthia drakei* n. sp., hemelytra, economy of dark marking.

Fig. 46-48. *Micracanthia husseyi* Drake & Chapman. — 46-47, parandria. — 48, left paramere.

Fig. 49-52. *Micracanthia*, left paramere. — 49, *M. pumpila*. — 50, *M. humilis*. — 51, *M. drakei*. — 52, *M. floridana*.

identical with those of St. Martin and St. Eustatius as regards the male genitalia. For the morphological differences between this and the following species, reference should be made to the descriptions of the latter. The eunomy of the wing pigment of our specimens is made clear in Fig. 44a-d; admittedly, the range as shown here does not represent the complete spectrum of variation.

The paramere of the male is at its broadest below the processus sensuialis (Fig. 50); the latter is not distinctly processed; the processus hamatus is acuminate.

Micracanthia drakei sp. nov.

(Fig. 45, 51, 53)

ARUBA: Rooi Tamboe, brackish rivulet, 9.IV.1957 (3 ♂♂, 2 ♀♀). Picaron, brackish rivulet, together with *Pentacora sphaelata* and *Ochterus perbosci*, 17.IV.1957 (2 ♂♂, 3 ♀♀). Santa Cruz, brackish rivulet, 20.IV.1957 (2 ♀♀).

CURAÇAO: Piscadera, inner bay, mud flats along north side, 22.X.1956 (1 ♀); 23.X.1956 (1 ♂). Seroe Christoffel, rivulet at Knip side, 21.X.1956 (3 ♂♂). Seroe Christoffel, rivulet at Savonet side, Rooi Beroe, 22.III.1957 (1 ♀). Zapateer, tanki, 23.X.1956 (1 ♀). Santa Cruz - Knip, tanki, 3.II.1957 (1 ♂). Malpais, fresh-water puddle near dam, 8.II.1957 (3 ♂♂, 3 ♀♀). Malpais, brackish marsh, among *Cyperus articulatus*, 24.II.1957 (1 ♀). Groot St. Martha, along inner bay on layer of green algae, together with *Pentacora sphaelata* and *Saldula dentulata*, 1.III.1957 (2 ♂♂, 2 ♀♀). Savonet, bank of fresh-water puddle with *Nymphaea*, 22.III.1957 (1 ♂).

BONAIRE: Hofje Fontein, 21.V.1957 (1 ♂). Rooi Americano, rivulet, 26.V.1957 (1 ♂). Goto, open place among salt grass, *Sporobolus*, 30.V.1957 (2 ♂♂, 1 ♀).

The occurrence on Curaçao is roughly analogous with that of *Saldula dentulata*.

Description (for measurements see Table 2)

Head: Black, roughly sculptured, with short golden pubescence and the three pairs of long, dark, upright trichobothria characteristic of all saldids; rounded yellow spot between ocellus and eye; labrum, anteclypeus, mandibular and maxillary plates yellow in male and testaceous or brownish in female. Rostrum reaching the base of trochanter 2.

Thorax: Pronotum and scutellum deep black, sculptured, slightly shiny; with short, decumbent, golden pubescence, hairs along hind margin a little longer. Underside of thorax totally black, hind margin of coxae 3 lighter; trochanters and basal half of femora whitish.

Hemelytra (Fig. 53): All specimens macropterous; clavus dull black with a wedge-shaped subapical light spot; decumbent silver hairs, especially along the sides and on the longitudinal ridge. Corium with dark-brownish and whitish-yellow markings; eunomic expansion of dark pigment as shown in Fig. 45 a-i; entirely clothed with short, backward-directed black hairs; inner field of meso-corium with decumbent silver hairs.

Abdomen: Black, hind margins of sternites pale; densely clothed with decumbent greyish hairs. Subgenital plate of female distally broadly rounded, basally dark; median region fuscous, sometimes extending to hind margin, sometimes not. Parandria of male totally dark, lighter medially around inlet. Paramere of male (Fig. 51) broadest at the level of the broadly projecting processus sensualis; processus hamatus acuminate. Base of penis filum coiled almost two and a half times. Median sclerotized structure of penis not different from that of the other *Micracanthia* species discussed here (Fig. 57).

Extremities: Antennae: segment 1 light-brownish, segment 2 light- or dark-brownish, distally darker, shortly black pilose; segments 3 and 4 black, clothed with short pale hairs and with scattered long black hairs.

Legs: yellowish-brown with short pale hairs and the normal dark spines on tibiae 3; femora distally lighter; tibiae brownish with two light bands; end half of third tarsal segment brownish.

Mean length of 15 ♂♂ : 2.79 mm (max. 3.13; min. 2.56)

Mean length of 15 ♀♀ : 3.19 mm (max. 3.50; min. 2.90)

Mean width of 15 ♂♂ : 1.29 mm (max. 1.46; min. 1.20)

Mean width of 15 ♀♀ : 1.52 mm (max. 1.68; min. 1.38)

Type (♂) and *allotype* (♀), CURAÇAO, Malpais, 8.II.1957, provisionally in the collection of the Laboratorium voor Entomologie, Wageningen. Paratypes in the same collection and in the Drake Collection, U.S. National Museum, Washington.

Named in honour of Professor C. J. DRAKE, who has contributed so much towards a better knowledge of the *Saldidae*.

In habit and marking this species closely resembles *M. humilis*. However, it can easily be distinguished from the latter by the silver hairs on the clavus; in *M. humilis* these hairs are gold-coloured. The paramere is sturdier and narrower; the inner side is more bent

outwards than the rear side (i.e. the opposite of *M. humilis*). The new species is in general somewhat bigger (see Table 2, p. 45). The eunomy of the wing pigment runs parallel in the two species (Fig. 44 and 45); the number of light spots in the distal part of the meso-corium is always greater in *drakei* than in *humilis*, at least in the specimens available (compare the dark extreme of *drakei*, Fig. 45 i, with the lightest form of *humilis*, Fig. 44a).

Micracanthia husseyi Drake & Chapman, 1952

(Fig. 46–48, 56–58)

Known from Florida and Mississippi.

ST. MARTIN: Devil's Hole Swamp, strongly brackish pool, 28.XI.1956 (2 ♂♂, 1 larva); 4.XII.1956 (3 ♂♂, all semi-brachypterous).

The locality of Devil's Hole Swamp, SE of Simson Bay bridge, is defined as follows by Wagenaar Hummelinck (Studies fauna Curaçao 4, 1953, p. 54, Sta. 542): 25 × 15 × 1 m; stagnant; permanent (tidal movements); in sinkhole of at least 40 × 20 m (about 150–200 m from shore); limestone in neighbourhood; bottom consisting of mud, plant decay, and rock; vegetation of algae with Bathophora, and Avicennia; water turbid, greenish brown. – Salinity on 4.VIII.1949 13,800 mg Cl/l; on 26.VII.1955 10,900 mg Cl/l.

The above-mentioned 5 males were met with on the leaf mould between the numerous vertical respiratory roots of *Avicennia nitida*. Owing to the shadiness of the spot, and the very low population density of this insect, combined with its small size (2–3 mm), it took hours to capture only a few specimens. Its habits of jumping up against the respiratory roots causes it to be easily lost sight of. On 10.I.1957 the same locality was visited once more, but in spite of a very careful examination not a single specimen was seen.

DRAKE & CHAPMAN (1952) founded their description on many specimens. From the stated lengths: 2.50–3.00 mm, and widths: 1.25–1.40 mm, it may be concluded that all their individuals were macropterous specimens.

Our five bugs from St. Martin are semibrachypterous, and consequently smaller; their lengths and widths amount to 2.00–2.23 and 0.91–1.10 mm respectively. Just as is the case with *M. husseyi* of St. Martin, the semibrachypterous form of *M. pumpila* is sometimes found in deep shade (DRAKE & CHAPMAN, 1952).

For morphological details, reference should be made to the original description, in which the differences between *M. husseyi* and *pumpila* Blatchley, 1928, are also given. Professor DRAKE was so

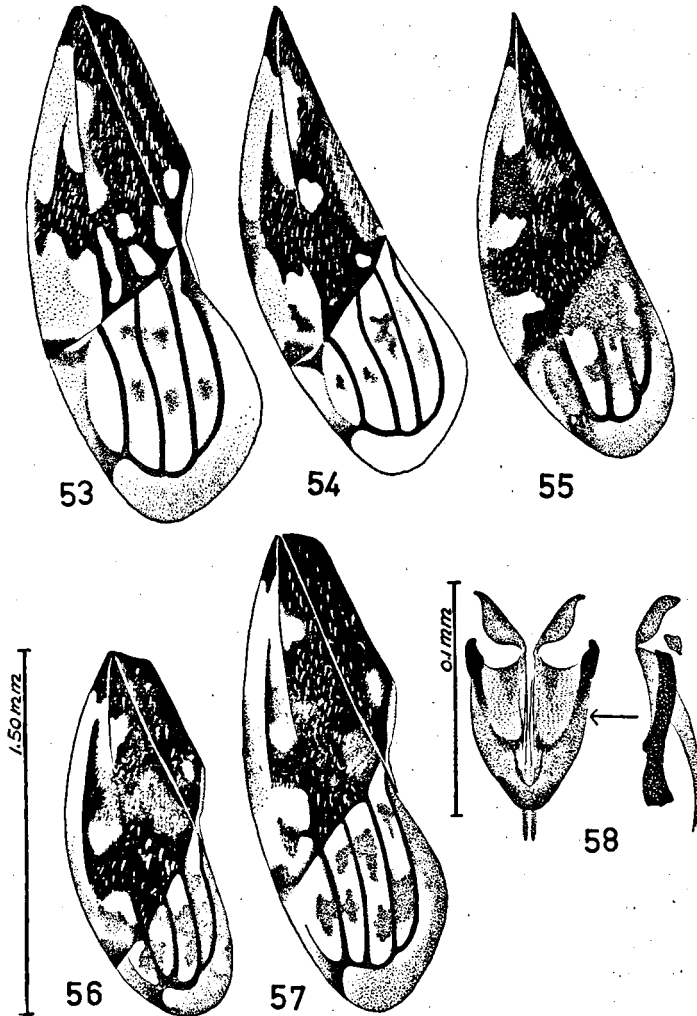


Fig. 53-55. *Micracanthia*, hemelytron of male. — 53, *M. drakei*. — 54, *M. humilis*.
— 55, *M. pumpila*.

Fig. 56-58. *Micracanthia husseyi*. — 56, hemelytron of brachypterous male. — 57, hemelytron of macropterous male. — 58, median sclerotized structure of penis.

kind as to place at our disposal 1 ♂ and 1 ♀ of paratypes of *M. husseyi*, macropterous form, and 1 ♂ of *M. pumpila*. The hemelytron of both these, and that of the semibrachypterous form of *husseyi*, are illustrated (Fig. 55–57). The shape and sclerotization of the parameres (Fig. 48–51) also show that *husseyi* and *pumpila* are more closely related to each other than to the duo *humilis-drakei*; the processus hamatus is more curved and not acuminate. For measurements see Table 2.

It is a pleasure for me to record my indebtedness to Professor C. J. DRAKE for his help in identification and for his kindness in making American Saldidae available to us for comparative study.

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