

STUDIES ON THE FAUNA OF CURAÇAO AND OTHER
CARIBBEAN ISLANDS: No. 24.

FOUR NEW TANYSTYLUM SPECIES, AND OTHER
PYCNOGONIDA FROM THE WEST INDIES

by

J. H. STOCK

(Zoölogisch Museum, Amsterdam)

While engaged on working out the beautiful pycnogonid material dredged by Dr TH. MORTENSEN in shallow waters near the Virgin Islands, I thought it useful to compare this *dredged* material with material collected *between the tide marks*, or just below the low tide line. So I was very glad to meet Dr P. WAGENAAR HUMMELINCK, who has made extensive collections of littoral marine animals during his various trips to the West Indies, and who kindly entrusted me with about 50 lots of pycnogonids which had already been sorted from his material.

A definitive paper will be published as soon as his entire marine material has been searched for the presence of sea spiders.

My best thanks are due to Dr HUMMELINCK for his kind co-operation, and for his permission to retain all specimens, including the types, for the Zoological Museum of Amsterdam.

Most of the localities are shortly described in the 17th paper of this series (vol. IV, 1953, p. 56-68, with maps and photographs).

CALLIPALLENIDAE

Callipallene brevirostris brevirostris (Johnston, 1837)

C. br. brevirostris, STOCK, 1952a, p. 5 (literature!).

BONAIRE: Sta. 1070B, Lagoen, 2.XI.1930, *Rhizophora* in sandy mud (1 ♂ ov., 3 ♀♀). VENEZUELA mainland: Sta. 1203, Puerto Santo, near Carúpano, 12.VI.1936, sandy debris, 1-2 m deep (1 juv.).

The species is new to the West Indies and the Venezuelan coast. The southernmost record hitherto was that of HEDGPETH (1948) from Tampa Bay, Fla.

Callipallene phantoma phantoma (Dohrn, 1881)

C. ph. phantoma, STOCK, 1952a, p. 4 (literature!).

BIMINI (Bahamas): Sta. 1150A, N. lagoon of South Bimini, 17.VIII.1949, *Rhizophora* in mud (2 ♂♂).

This subspecies was already known from the Florida Key region, several localities in the western Mediterranean, Black Sea(?), and Japan.

Callipallene spec.

BIMINI (Bahamas): Sta. 1150A, N. lagoon of South Bimini, 17.VIII.1949, *Rhizophora* in mud (1 juv.).

This juvenile cannot be identified with *C. ph. phantoma* as the auxiliaries are a little too long. It probably represents another *Callipallene* species from this region.

AMMOTHEIDAE

Eurycyde raphiaster Loman, 1912

E. raphiaster, HEDGPETH, 1948, p. 260 (literature!).

BONAIRE: Sta. 1049B, Landing at Klein Bonaire, 13.IX.1948, sandy reef debris (1 ♀). Sta. 1056A, Paloe Lechi, 4.IX.1948, rocky beach (1 juv.).

An amphi-atlantic species, known from Dakar (FAGE, 1952), Cape Verde (type loc.), Tortugas, Bahamas (HEDGPETH, 1948), and the West Indies.

Ascorhynchus latipes (Cole, 1906)

A. latipes, HEDGPETH, 1948, p. 256 (literature!).

BONAIRE: Sta. 1056A, Paloe Lechi, 4.IX.1948, rocky beach (1 ♀). ST. EUSTATIUS: Sta. 1117, Downtown, 13.VII.1949, sandy beach with rocks (1 ♀).

Occurring at both sides of the Atlantic: Dakar (FAGE, 1952), Bahamas, and the West Indies (HEDGPETH, 1948).

Ammothella appendiculata (Dohrn, 1881)

A. appendiculata, MARCUS, 1940, p. 88 (literature!).

ARUBA: Sta. 1001A, Punta Braboe, 18.XII.1936, sandy reef (1 ♂). BONAIRE: Sta. 1049B, Landing at Klein Bonaire, 13.IX.1948, debris on sandy beach (1 juv.); Sta. 1059B, Punt Vierkant, 9.IX.1948, sandy reef, 1-2 m deep (1 juv.). ST. MARTIN: Sta. 1127, Great Bay, 16.V.1949, rocky beach with muddy sand (1 ♀, 1 juv.).

This, and the following, are uneasy species, which require further research. In author's opinion (1954, in the press) the two forms of this species found in the West Indies are merely age-stages. — Known from the Mediterranean and the American coast from the Virgin Islands to Brazil.

Ammothella rugulosa Verrill, 1900

A. rugulosa, MARCUS, 1940, p. 92 (taxonomic discussion, larval stages); HEDGPETH, 1948, p. 247 (literature!).

BONAIRE: Sta. 1049B, Landing at Klein Bonaire, 13.IX.1948, debris on sandy beach (1 ♂, 2 ♀♀); Sta. 1070B, Lagoen, 2.XI.1930, *Rhizophora* in sandy mud (1 juv.).

The present material of *rugulosa* can be separated from *appendiculata* by the more robust proboscis, the shorter chelifores, the lower eye tubercle, the armature with spines of the lateral processes, the shorter abdomen, and the more robust legs. — An American species, ranging from the Bahamas to Brazil.

***Achelia sawayai* Marcus, 1940**

A. sawayai MARCUS, 1940, p. 81; FAGE, 1949, p. 28.

CURAÇAO: Sta. 1031, Zaquito, 1.II.1949, pool in porous wall (loc. not quite certain, but surely Curaçao) (1 ♂ ov.). BONAIRE: Sta. 1049, Landing at Klein Bonaire, 10.IX.1930, debris on sandy beach (2 ♂♂); Sta. 1049B, as before, but 13.IX.1948 (1 ♂ ov., 1 ♂, 2 ♀♀, 2 juv.); Sta. 1055, Paloe Lechi, 4.IX.1948, rocky beach with muddy sand (1 juv.). ISLOTE AVES (W. of Dominica): Sta. 1114, N. lagoon, 12.V.1949, sandy shore with some debris (2 ♂♂, 1 juv.). BIMINI (Bahamas): Sta. 1151, Laboratory Dock at North Bimini, 20.VIII.1949, wooden piles in sandy mud (1 juv.).

All these specimens belong to the typical shore form, which will be described in a paper on the MORTENSEN collection (STOCK, 1954, in the press), and which occurs on the eastern and western shores of the tropical Atlantic.

***Achelia gracilis* Verrill, 1900**

A. gracilis, HEDGPETH, 1948, p. 244 (literature!).

VENEZUELA mainland: Sta. 1202, Guanta, near Barcelona, 15.VIII.1936, wooden piling in mud (1 ♂, 1 juv., 2 larvae).

This record extends the range of the species as far south as Venezuela. Previously it has been recorded from Bermuda (type locality), Bahamas (GILTAY, 1934b, may be a lapsus calami), and Port Everglades, Fla. (HEDGPETH, 1948).

***Tanystylum orbiculare* Wilson, 1878**

T. orbiculare, STOCK, 1952b, p. 184 (principal literature).

LOS FRAILES (Ven.): Sta. 1215, La Pecha, 19.VI.1936, sandy debris (3 ♂♂ ovig., 2 ♀♀, 1 juv.). ST. BARTHÉLEMY: Sta. 1121, Public, near Gustavia, 4.VI.1949, rocky shore (1 juv.). ST. MARTIN: Sta. 1130, Simson Bay Lagoon, outlet, 27.V.1949, *Rhizophora* in sand, tidal flow (1 juv.).

This material, and the specimens of this species in the MORTENSEN collection, are the first that have been recorded from the West Indies, though the species is common in adjacent areas.

***Tanystylum tubirostre* n. sp.**

[Fig. 24, 25]

CURAÇAO: Sta. 1029A, Piscadera Bay, swimming pool, 29.I.1949, rocky shore with sand, on fence (1 ♀ paratype). BONAIRE: Sta. 1059A, Punt Vierkant, 9.IX.1948, rocky shore with debris (1 ♂ holotype).

Description:

Body circular to ovate in outline, without segmentation lines. Lateral processes in contact with each other; in ♂ with 1 to 2 tubercles, often spine-tipped; in ♀ with more feebly developed tubercles. Cephalic segment with a slightly projecting ridge, which covers the bases of the chelifores; armed with a few minute spinules. Ocular tubercle cylindrical, pointed over the eyes; eyes well-pigmented. Abdomen in dorsal view longer than the 4th lateral process; armed with 2 pairs of spinules.

Proboscis of characteristic shape: conical in its basal third, tube-shaped in its distal two-thirds, which is curved downward.

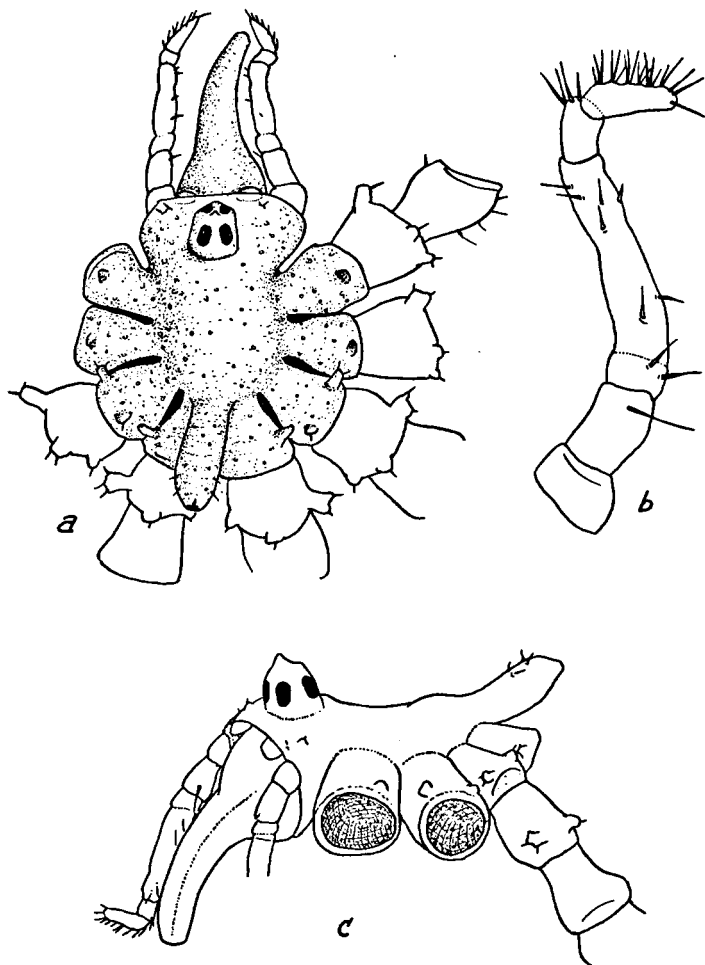


Fig. 24. *Tanystylum tubirostre* n. sp., male holotype from Bonaire: *a* trunk in dorsal view; *b* palp; *c* trunk in lateral view.

Chelifores strongly reduced, partly hidden by the projecting frontal edge of the cephalic segment, rectangular in outline, without spinules.

Palpi 6-jointed, 3rd and 4th joint tend to be fused, at any rate, their articulation does not seem to be functional.

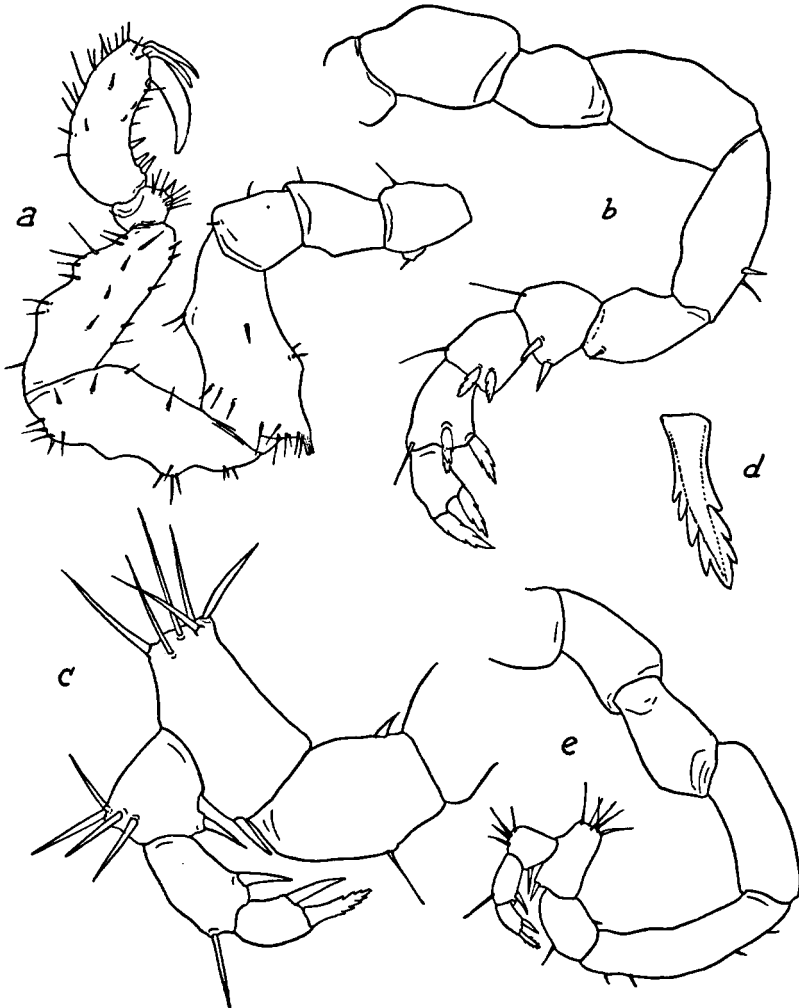


Fig. 25. *Tanystylum tubirostre* n. sp., *a c d e* of male holotype from Bonaire, *b* of female paratype from Curaçao; *a* first leg; *b* oviger of female; *c-e* oviger of male, *c* distal joints, *d* terminal compound spine.

Ovigers 10-jointed in both sexes, in ♀ much smaller than in ♂. Fifth joint (♂) slender, curved; 7th joint (♂) with a reversed spine near the base, and with a strong distal apophysis, armed with setae. In ♀, the distal 3 joints bear compound spines; in ♂ apparently only the last joint.

Legs robust, spiny. Coxa 1 with 3 spine-bearing tubercles. Tibiae with 2 to 3 spinose bumps. Propodus heavy, curved, with 3 basal spines, and a few irregularly placed distal spinules. Auxiliary claws half as long as the main claw.

Remarks:

There is no other *Tanystylum* species in which the proboscis is as definitely tube-shaped as in the species described above. This type of proboscis makes the animal particularly well adapted to poke its nose into another animal's affairs, i.e., into the tissues of its host.

T. tubirostre shows a remote relation to *T. calicicrostre* Schimkewitsch, which has also a tube-shape distal part in its proboscis, and which possesses also smooth chelifore stumps. *T. calicicrostre* differs, however, in distinct details, such as the shorter proboscis, and the totally different relative length of the joints of the palp.

Measurements of the ♂, holotype, in mm:

<i>Length</i> (frontal margin cephalic segment to tip abdomen)		0.95
<i>Width</i> across 2nd lateral processes		0.92
<i>Length</i> abdomen		0.28
<i>Palp</i> :	joint 1	0.10
	joint 2	0.15
	joint 3 & 4	0.40
<i>First leg</i> :	coxa 1	0.25
	coxa 2	0.25
	coxa 3	0.23
	femur	0.62
	tibia 1	0.50
	tibia 2	0.53
	propodus	0.47
	claw	0.27
	auxiliary claw	0.13

Tanystylum geminum n. sp.

[Fig. 26.]

St. MARTIN: Sta. 1132, Simson Bay Lagoon, Flamingo Pond, 8.VI.1949, muddy lagoon with rocky shore, mangroves (1 ♂ paratype, 1 ♀ holotype).

Description:

Body circular in outline, without segmental lines, not distinctly pitted. Lateral processes in contact with each other, unarmed. Neck very short, without spinules. Eye tubercle cylindrical with obtusely conical tip; eyes distinctly pigmented. Abdomen reaching to the tip of the first coxa of the 4th leg, practically unarmed.

Proboscis tapering, rather slender.

Chelifores $\frac{1}{4}$ of the proboscis, armed distally with 3 spinules; bases of the chelifore stumps in contact with each other.

Palpi 4-jointed. First joint short; 2nd joint far the longest, showing no traces of segmentation lines, though it is evident that the joint originally was made up of 3 joints, which have been fused now, the original 3 joints are marked now only by

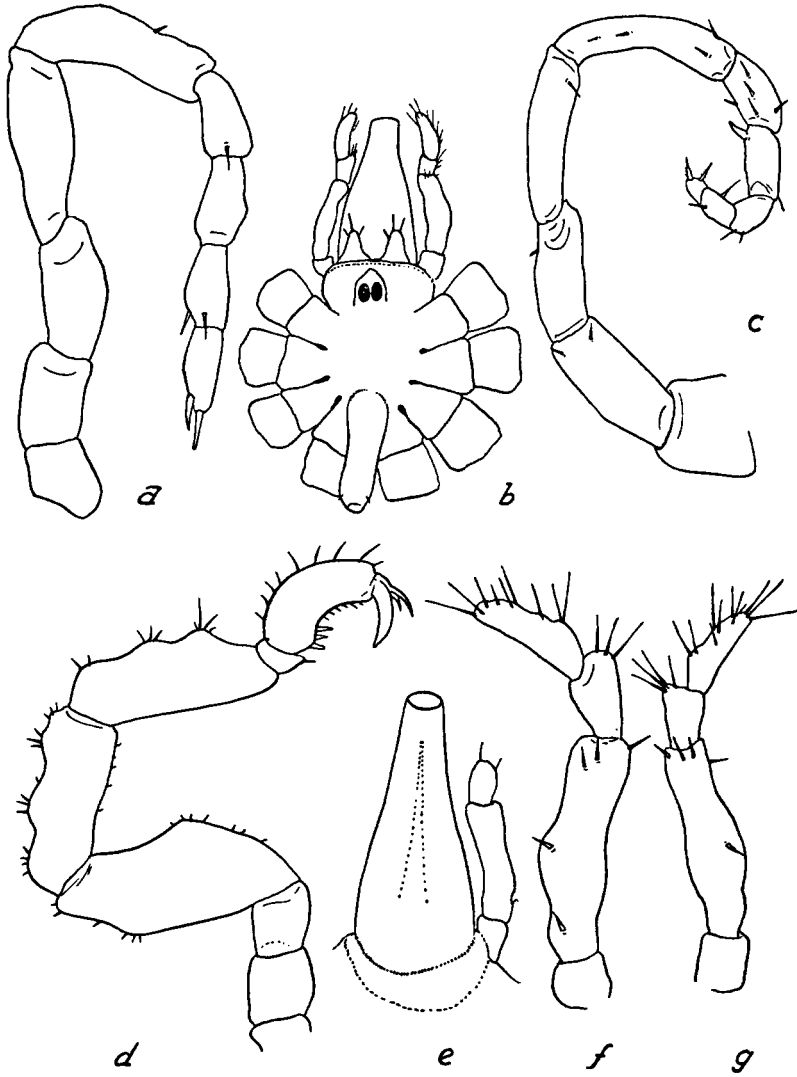


Fig. 26. *Tanystylum geminum* n. sp., *a b d f* of female holotype, *c e g* of male paratype, both from St. Martin; *a* oviger of female, *b* dorsal view of trunk, *c* oviger of male, *d* third leg, *e* proboscis in ventral view, *f* palp of female, *g* palp of male.

slight constrictions. The 3rd joint twice as long as wide, setose distally; 4th joint implanted excentrically, slender, setose.

Ovigers 10-jointed, in ♀ much shorter than in ♂. The 4th and 5th joint are in both sexes the longest. The distal two joints bear slender, indistinctly denticulated spines, according to the formula 1 : 2 (♂), or 2 : 2 (♀). The 7th joint bears in male a strong reversed spine near the base.

Legs robust. Coxae practically unarmed. Femur the longer joint, considerably distorted in ♀, bearing 1 spinose bump dorsally. Tibia 1 with 3 dorsal bumps, and a smaller distal one. Tibia 2 slightly longer than tibia 1, with 3 spinose bumps. Propodus heavy, curved, with 3 basal spines, and 5-7 distal spinules. Claw short; auxiliaries $\frac{1}{3}$ - $\frac{1}{2}$ as long as the claw.

Remarks:

T. geminum n. sp. is very close to *T. oculospinum* HILTON, 1942e, and to a new species from the Pacific side of the Isthmus of Panama, to be described in a paper by the author on the MORTENSEN pycnogonids. *T. geminum* apparently is a twin-species of this new isthmian species ¹⁾.

The differences between the West Indian form and *T. oculospinum* are: (1) the integument, which is not deeply pitted; (2) the lack of an articulated, short 2nd palp-joint; (3) the absence of tubercles on the lateral processes and coxae; (4) the still more circular appearance of the trunk; (5) the ocular tubercle, which is (instead of conical) cylindrical with rounded tip.

The differences between *T. geminum* and its new isthmian twin are: (1) the shorter chelifore stumps; (2) the absence of an intersegmental line between trunk segments 1 and 2; (3) the palpi, which are 4-jointed, instead of 5-jointed; (4) the absence of tubercles on lateral processes and coxae.

Measurements of the ♀, holotype, in mm:

<i>Length</i> (frontal margin cephalic segment to the tip of the 4th lateral process)		0.62
<i>Width</i> across 2nd lateral processes		0.60
<i>Length abdomen</i>		0.37
<i>Length proboscis</i> (in ventral aspect)		0.50
<i>Basal diameter of proboscis</i>		0.25
<i>Distal diameter of proboscis</i>		0.08
<i>Length chelifore</i>		0.13
<i>Third leg</i> : coxa 1	0.12	tibia 1 0.53
coxa 2	0.20	tibia 2 0.55
coxa 3	0.18	propodus 0.40
femur	0.58	claw 0.20

Tanystylum hummellncki n. sp.

[Fig. 27, 28]

LOS FRAILES (Ven.): Sta. 1215, La Pecha, 19.VI.1936, sandy debris, 1-2 m deep (1 ♂ holotype).

¹⁾ I regret that this discussion necessitates mention of this species before its formal description in *Vidensk. Meddels. Dansk Naturh. Foren.*

Description:

Body circular in outline, very compact. No suture lines. Integument feebly pitted. Lateral processes in contact with each other, armed with a low dorsal tubercle, which is absent on the 4th lateral process, and which is tipped with 2 spinules on the 3rd lateral process. The 3rd lateral process, and — in a lesser degree — the 2nd lateral process, moreover with a tubercle on the anterior margin. Anterior margin of the cephalic segment with 1 or 2 spinules. Ocular tubercle conical, strongly pointed, in frontal view showing a slight constriction just over the eyes. Eyes well-developed. Abdomen in dorsal view practically not extending behind the margin of the lateral processes, armed with 3 pairs of spinules.

Proboscis elongately ovate, truncated at tip. Margins with 2 slight constrictions, one at about $\frac{2}{3}$ of its length, another a small distance from the tip.

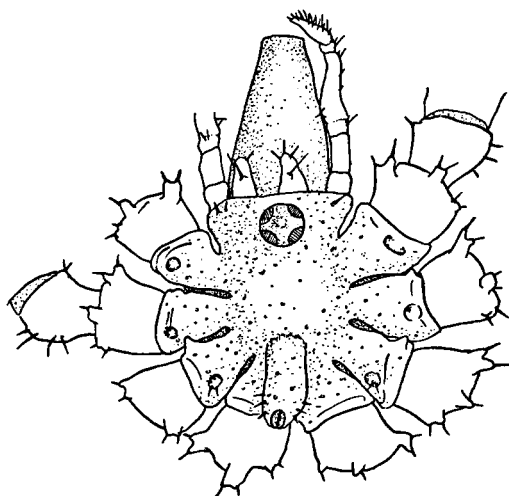


Fig. 27. *Tanystylum hummelincki* n. sp., male holotype from Los Frailes, in dorsal view.

Chelifores 1-jointed, comparatively long, armed with 3 to 4 strong spines, their bases not confluent.

Palpi 6-jointed; articulation between joint 3 and 4 indistinct, certainly not functional. Fourth joint bears, at the inner margin, near the base, a spine-tipped prominence. Distal joint unusually slender, about 2.5 times as long as the penultimate joint.

Ovigers 10-jointed, well-developed. Fifth joint distinctly longer than the fourth, armed laterally with 4 curved spinules. Joint 7 with a recurved spine near its base, and with a strong distal apophysis, bearing 3 setae. Joints 8 and 9 each with 1 simple spine at the inner margin, joint 10 with 2 compound spines, which each bear 4 to 5 pairs of denticulations.

Legs robust, spinose. Coxa 1 with 3 spine-bearing tubercles, 2 dorsal ones, and a smaller ventro-posterior one. The anterior of the two dorsal tubercles is usually

bifurcated at tip, and bears a spine on each branch of the bifurcation. Some of the posterior tubercles show a tendency towards bifurcation, too. Remaining coxal joints spinose, but without such strong tubercles. Femur without spinose bumps, only armed with some scattered spines. Femoral cement gland duct short, robust. Tibia 1 with 4 spine-bearing bumps, tibia 2 with 2 such bumps. Propodus unusually slender in comparison with other species of the genus; with 3 basal teeth. Claw short, curved. Auxiliaries half as long as the claw.

Remarks:

The principal characters which distinguish this species from the other members

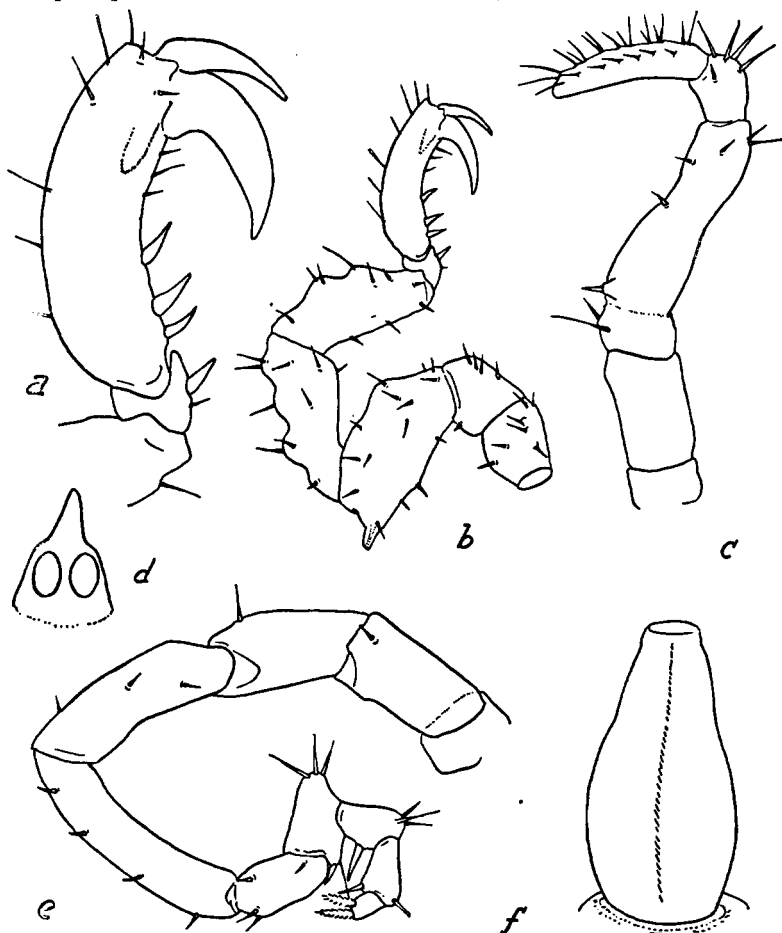


Fig. 28. *Tanystylum hummelincki* n. sp., male holotype from Los Frailes: *a* distal joints of fourth leg; *b* fourth leg; *c* palp; *d* frontal view of eye tubercle; *e* oviger; *f* proboscis in ventral aspect.

of the genus are: (1) the shape of the proboscis; (2) the relatively long chelifores, armed with strong spines; (3) the armature of the coxae; (4) the short abdomen; (5) the distal expansion of the 7th oviger joint; (6) the slender propodus.

Measurements of the holotype, in mm:

<i>Length</i> (frontal margin cephalic segment to tip of 4th lateral process) . . .	0.75
<i>Width</i> across 2nd lateral processes	0.78
<i>Length proboscis</i> (in dorsal view)	0.47
<i>Length proboscis</i> (in ventral view)	0.57
<i>Length chelifore</i>	0.15
<i>Fourth leg</i> : coxa 1 0.17	tibia 1 0.42
coxa 2 0.25	tibia 2 0.47
coxa 3 0.18	propodus 0.42
femur 0.50	claw 0.25

***Tanystylum acuminatum* n. sp.**

[Fig. 29]

ST. BARTHÉLEMY: Sta. 1121, Public, near Gustavia, 4.VI.1949, rocky shore (1 ♀ holotype).

Description:

Body ovate in outline, without intersegmental lines. Cephalic segment with a low tubercle armed with a microscopical spine at the fronto-lateral corners. Lateral processes armed dorsally with 1 to 2 tubercles, which may bear an inconspicuous spinule. Eye tubercle rounded, about as tall as wide; a low, rounded conical point is present above the eyes, which are feebly pigmented. Abdomen reaching to the end of the 1st coxae of the 4th leg, armed with 1 or 2 pairs of spinules.

Proboscis broadly conical in its basal part; distal fifth, however, narrowly tube-shaped.

Chelifores rounded, as long as wide, partly hidden by the overhanging frontal margin of the cephalic segment, armed with 1 spinule, or smooth.

Palpi 6-jointed, but suture between segment 3 and 4 indistinctly developed. Base of 4th joint with a strong spine, directed towards the proboscis.

Ovigers unusually small, even for the female sex. Fourth joint, for instance, only 0.1 mm long. The oviger is 10-jointed; the inner margins of joints 6 to 9 bear a spine; joint 10 bears 2 spines distally. Only the spines of joints 9 and 10 bear each 1 pair of denticulations, the remaining spines have smooth margins.

Legs relatively smooth. Coxa 1 with 2 low, rounded, dorsal tubercles, and a smaller ventro-posterior one, each of which is tipped with a spinule. Coxae 2 and 3 without tubercles. Femur with 2 spinose bumps, tibia 1 with 4, tibia 2 with 3 similar bumps. Propodus heavy, with 3 robust basal teeth. Claw short, about half as long as the propodus. Auxiliaries about $\frac{2}{5}$ of the main claw.

Remarks:

T. acuminatum n. sp. (the proposed trivial name applies on the shape of the proboscis) is close to *T. isabellae* Marcus, in which the proboscis shows, however, only a slight constriction distally, instead of a well-defined tube-shaped part. The shape

of the proboscis is intermediate between that of *T. isabellae* and *T. calicirostre*. The practically unarmed chelifore stump also resembles *T. calicirostre*, from which the new species can be separated at once by the different structure of the palp. The short oviger seems to be a good characteristic of the new species.

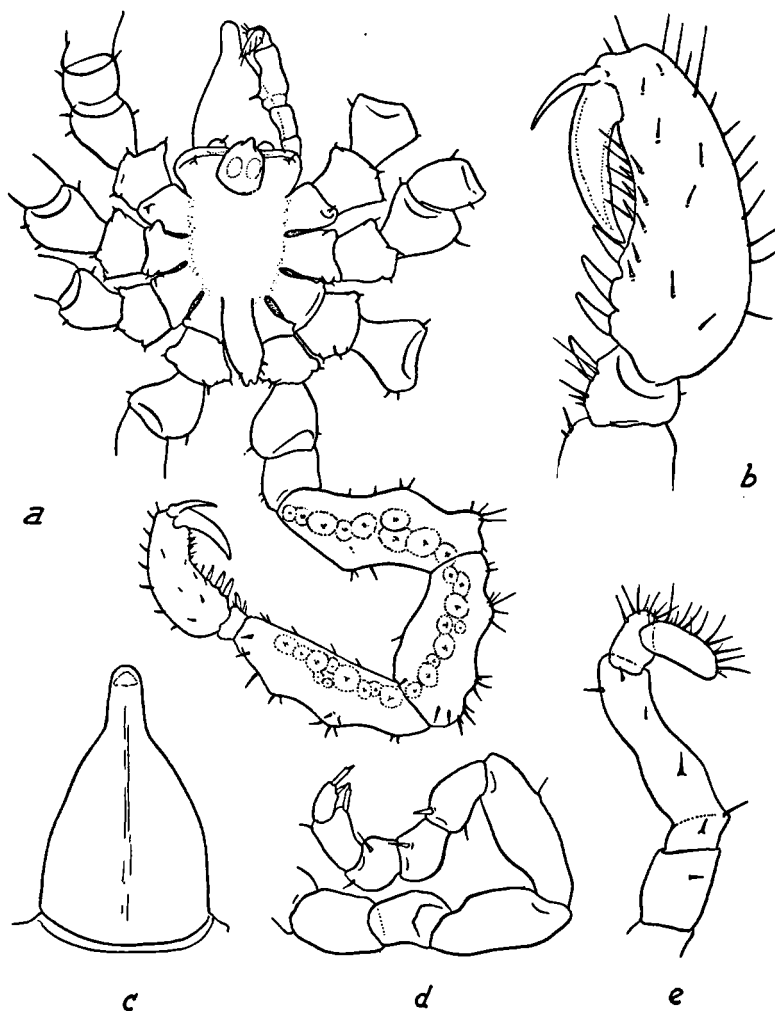


Fig. 29. *Tanystylum acuminatum* n. sp., female holotype from St. Barts: *a* dorsal view of trunk and fourth leg; *b* distal joints of second leg; *c* proboscis in ventral view; *d* oviger; *e* palp.

Measurements of the holotype, in mm:

<i>Length</i> (frontal margin cephalic segment to tip of 4th lateral process) . . .	0.65
<i>Width</i> across 2nd lateral processes	0.57
<i>Length abdomen</i>	0.30
<i>Length proboscis</i> (in dorsal view)	0.40
<i>Length proboscis</i> (in ventral view)	0.50
<i>Basal diameter of proboscis</i>	0.27
<i>Distal diameter of proboscis</i>	0.05
<i>Fourth leg</i> : coxa 1 0.15	tibia 1 0.50
coxa 2 0.22	tibia 2 0.50
coxa 3 0.13	propodus 0.42
femur 0.53	claw 0.20

PHOXICHILIDIIDAE

Anoplodactylus parvus Giltay, 1934

A. parvus, STOCK, 1951, p. 13 (literature!).

CURAÇAO: Sta. 1016A, Boca Grandi, Savonet, 2.V.1930, on floating *Sargassum*, cast ashore (2 larvae). BONAIRE: Sta. 1057a, Kralendijk, 15–20.IX.1930, rocky beach (1 ♀). LOS FRAILES (Ven.): Sta. 1215, La Pecha, 19.VI.1936, sandy debris (1 ♂ juv.). ATLANTIC OCEAN: 25°N–48°W, 1.IV.1930 (1 ♂, 1 ♀); 29°N–44°W, 31.III.1930 (2 ♂♂, 1 ♀, 1 juv.); 35°N–63°W, 4.XII.1930 (2 ♂♂, 1 ♀, 1 larva); 39°N–41°W, 19.XII.1930 (4 ♂♂, 3 ♀♀, 20 juv. and larvae); 44°N–31°W, 2.XII.1930 (3 ♀♀, 8 juv. and larvae); all records on floating *Sargassum*.

There are several other records from *Sargassum* (viz., STOCK, 1951, 1954). Moreover, the species is known from Bermuda, Chesapeake Bay, and the Virgin Islands. The present records extend the range of the species as far south as Venezuela.

Anoplodactylus trispinosus Stock, 1951

A. trispinosus STOCK, 1951, p. 14.

CURAÇAO: Sta 1023 (or 1023a), Plaja Hulu, near St. Kruis Bay, 28.X.1948 (or 19.III.1949), sandy reef debris (1 ♀).

New to the western Atlantic. Recorded only once before: from Rufisque (Senegal).

Anoplodactylus insignis (Hoek, 1881)

A. insignis, HEDGPETH, 1948, p. 226 (literature!).

CURAÇAO: Sta. 1039, Fuik Bay, Newport Bath, 20.XI.1948, rocky shore of muddy lagoon (1 ♀). VENEZUELA mainland: Sta. 1202, Guanta, near Barcelona, 15.VIII.1936, wooden piling in mud (1 ♂ juv., 2 ♀♀ juv., 1 larva).

A common species in the western Atlantic, from Cape Hatteras to Brazil.

Anoplodactylus batangense (Helfer, 1938)

A. batangense, STOCK, 1953, p. 39 (redescription of type). — *A. stylirostris* HEDGPETH 1948, p. 232 (new synonymy!). — *A. tenuirostris* LEBOUR, 1949, p. 929 (new synonymy!).

LOS FRAILES (Ven.): Sta. 1215, La Pecha, 19.VI.1936, sandy debris (1 ♀).

The present record, and the proposed synonymy, establish the amphi-atlantic distribution of this species.

Anoplodactylus portus Calman, 1927

A. portus, STOCK, 1954 (synonymy, literature!).

ST. EUSTATIUS: Sta. 1117, Downtown, 13.VII.1949, sandy beach with rocks (2 ♂♂ ov., 1 ♂, 1 ♀, 1 juv.).

A circumtropical species.

Anoplodactylus robustus (Dohrn, 1881)

Halosoma robustum, HEDGPETH, 1948, p. 218 (literature!).

BONAIRE: Sta. 1057, Kralendijk, 3-5.IX.1930, rocky beach (1 ♂, 2 ♂♂ juv., 3 ♀♀); Sta. 1057a, as before, but 15.IX.1930 (1 ♂ ov., 2 ♀♀); Sta. 1158, S. of Kralendijk, 17.V.1930, sandy debris (1 ♂ ov., 2 ♀♀). BIMINI (Bahamas): Sta. 1151, Laboratory Dock at North Bimini, 20.VIII.1949 (1 ♂ ov.).

Known from the tropical and subtropical shores of both sides of the Atlantic.

Anoplodactylus spec.

ATLANTIC OCEAN: 44°N-31°W, 2.XII.1930, on floating *Sargassum* (1 ♂ ov.).

The single specimen is in a fragmentary condition, but appears to represent a new species, which is identical in nearly all respects with *A. parvus*, but which differs from that species in possessing strong dorsal spurs on the first coxae.

Anoplodactylus (Labidodactylus) evelinae Marcus, 1940

A. evelinae, HEDGPETH, 1948, p. 232 (literature!).

ST. MARTIN: Sta. 1126, Great Bay, 11.VI.1949, rocky beach with debris, tide pools (2 ♀♀).

This curious shallow water species differs in at least 2 characteristics from the other species of *Anoplodactylus*, viz., in the 2nd tibia, which is as long as wide, and in the presence of a row of dorsal elevations in the median line of the trunk. GILTAY's manuscript name *Labidodactylus*, published by HEDGPETH, 1948, may be used for this species, though I prefer using it in a subgeneric sense, instead of in the generic sense proposed by GILTAY. — A shallow water species, ranging from the Florida Key region to Brazil.

ENDEIDAE

Endeis spinosa (Montagu, 1808)

E. spinosa, HEDGPETH, 1948, p. 238 (literature!).

ATLANTIC OCEAN: 39°N-41°W, 19.XII.1930 (3 ♂♂); 44°N-31°W, 2.XII.1930 (1 ♂ ov.); both records from floating *Sargassum*.

Widely distributed in the Atlantic and the Mediterranean.

PYCNOGONIDAE

***Pycnogonum cessaci* Bouvier, 1911**

P. cessaci, FAGE, 1952, p. 531 (literature; synonymy!).

LOS FRAILES (Ven.): Sta. 1215, La Pecha, 19.VI.1936, sandy debris, 1–2 m deep (1 ♂ ov.).

In the African specimens of *P. cessaci* examined by FAGE, and in the type of *P. leticiae* Mello-Leitão (which is, according to FAGE, the same species), no auxiliary claws were observed. The present West Indian specimen possesses, however, extremely reduced, hardly observable auxiliaries. Similar strongly reduced auxiliaries have been found in *P. pamphorum* Marcus, which shows also in other respects a close relation to *P. cessaci*, and may be even identical with it.

***Pycnogonum reticulatum* Hedgpeth, 1948**

P. reticulatum HEDGPETH, 1948, p. 279.

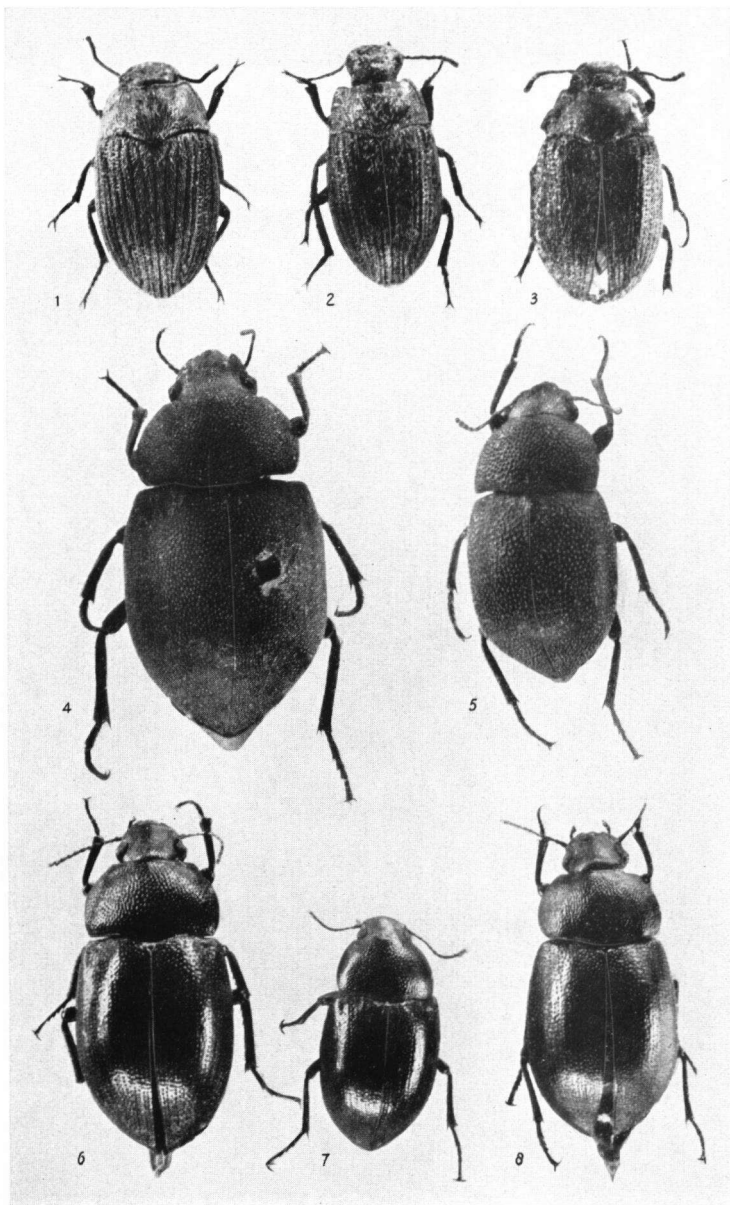
ISLOTE AVES (W. of Dominica): Sta. 1114, N. lagoon, 12.V.1949, sandy shore with some debris (2 ♂♂).

This species occurs at both sides of the Isthmus of Panamá. It has been recorded from El Salvador in the Pacific, and from Florida to Venezuela in the Atlantic.

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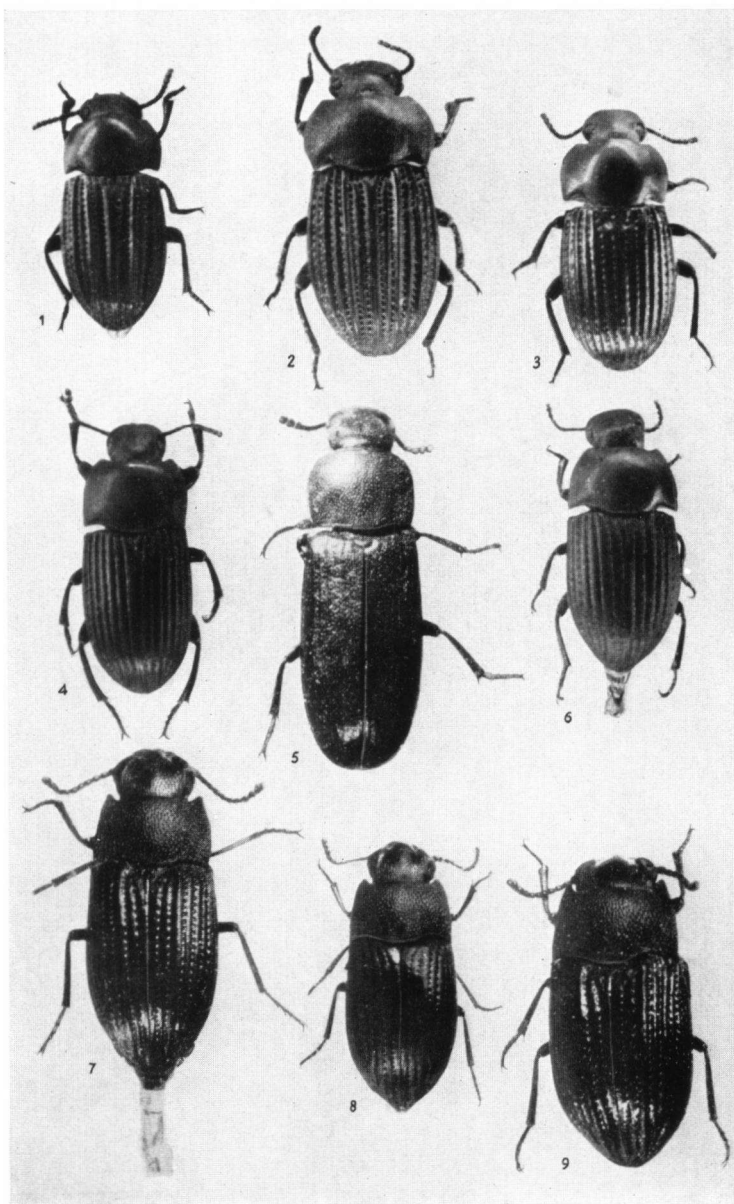
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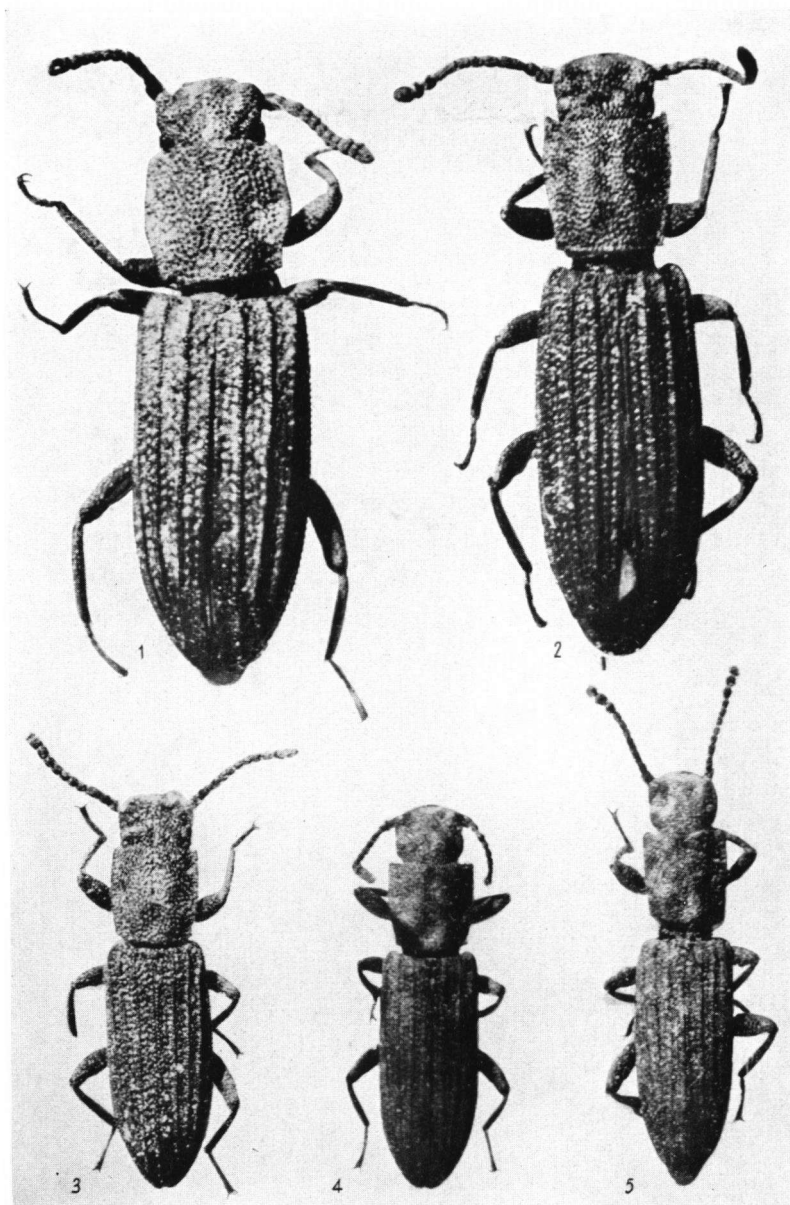


I. 1-2 *Ulus margaritensis* n.sp. from Margarita (paratypes). 3 *Ulus venezuelensis* n.sp. from Venezuelan mainland, Dto. Fed. (type). 4 *Tapinocomus subnudus* Geb. from Aruba. 5 *Tapinocomus relictus* n.sp. from La Goajira, Col. 6-7 *Stictoderia subseriata* Geb. from Bonaire (6) and Las Aves (7). 8 *Stictoderia gridelli* n.sp. from Aruba (type). — All figures $\times 5$.

PLATE II

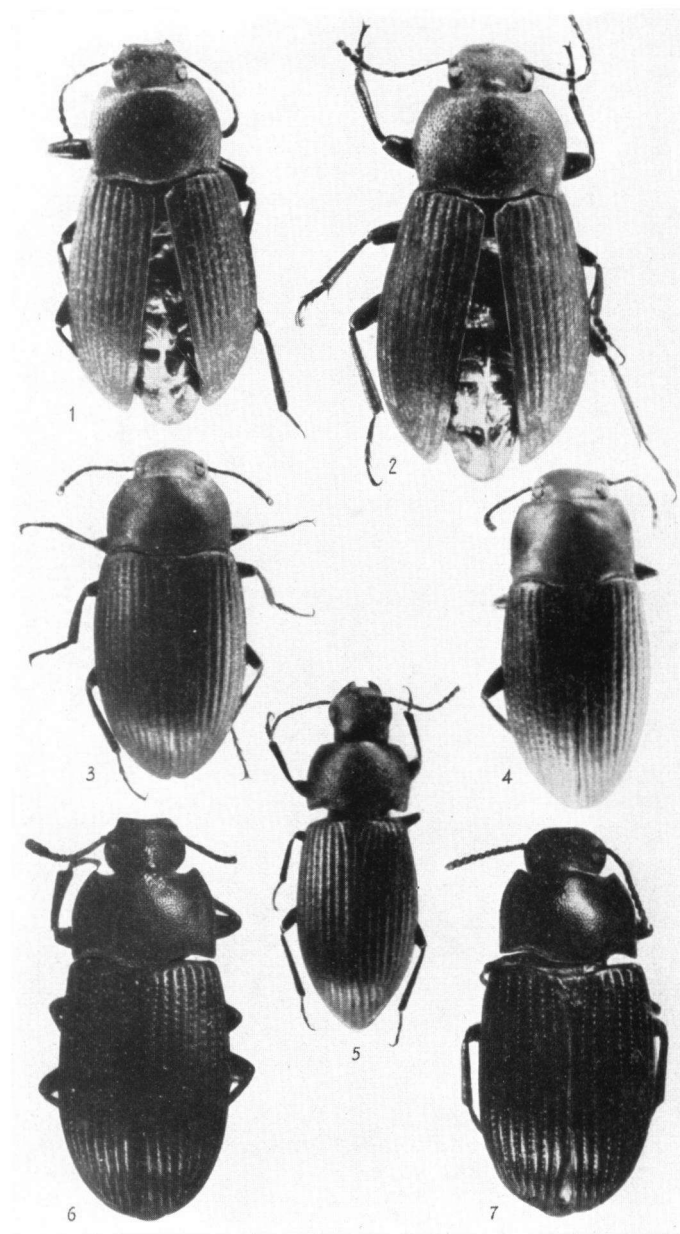


II. 1 *Diastolinus hummelincki* Marc. from Paraguaná, Ven. (topotype). 2 *Diastolinus margaritensis* Marc. from Venezuelan mainland, Sucre. 3 *Diastolinus fairmairei* Marc. from Margarita, Isla Blanca. 4 *Diastolinus curtus goajirus* n. subsp. from La Goajira, Col. (type). 5 *Tribolium castaneum* Herbst from Curaçao. 6 *Diastolinus curtus curtus* M. et R. from Aruba. 7 and 9 *Paraguania relicta* Marc. from La Goajira, Col. (7) and Paraguaná, Ven. (9, topotype). 8 *Paraguania hummelincki* n.sp. from Paraguaná, Ven. (type). — 1-4, and 6, $\times 5$; 5, $\times 11\frac{1}{2}$; 7-9, almost $\times 5\frac{1}{4}$.

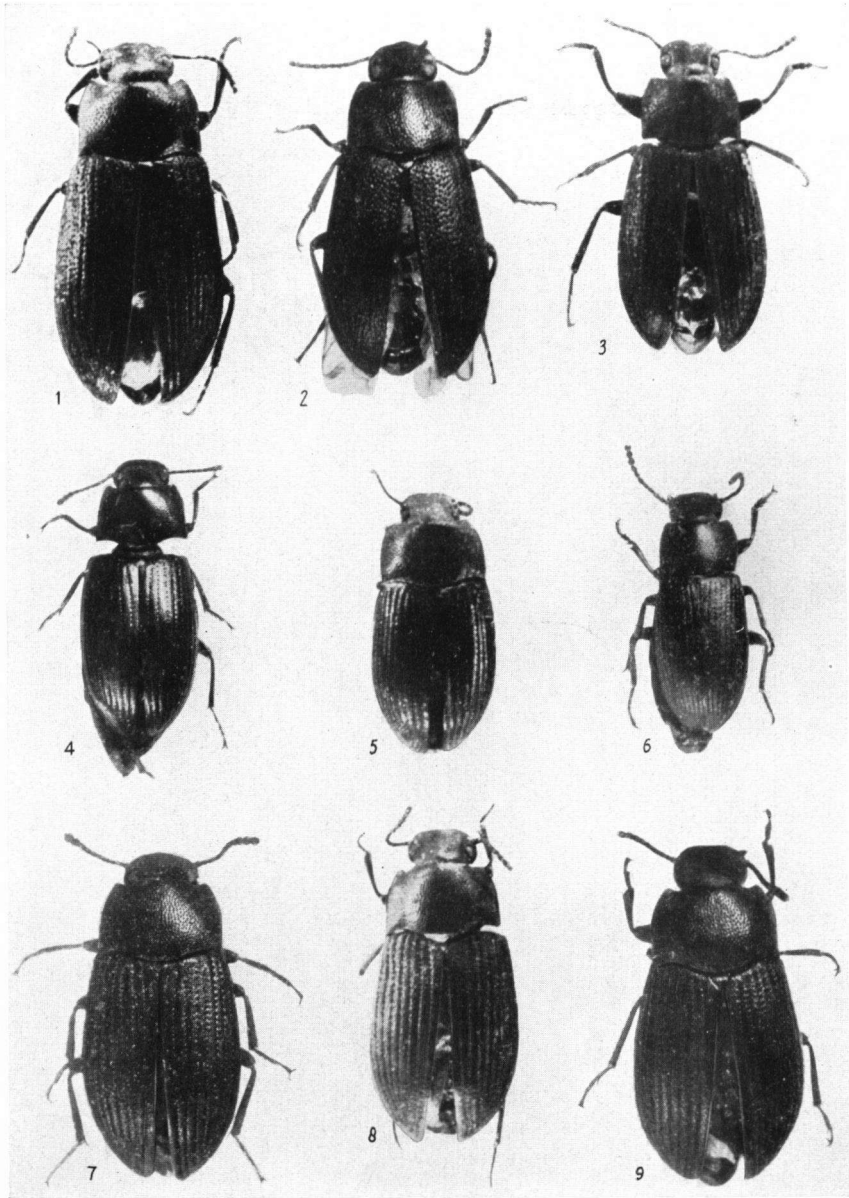


III. 1 *Rhyasma trinitalis* Marc. from Trinidad (topotype). 2 *Rhyasma maria-gratae* Marc. from Bonaire (paratype). 3-5 *Rhyasma venezuelense* Marc. from Orchila, Huespén (3), Los Testigos, Chiwo (4) and Los Frailes, La Pecha (5, type). — All figures $\times 12$.

PLATE IV

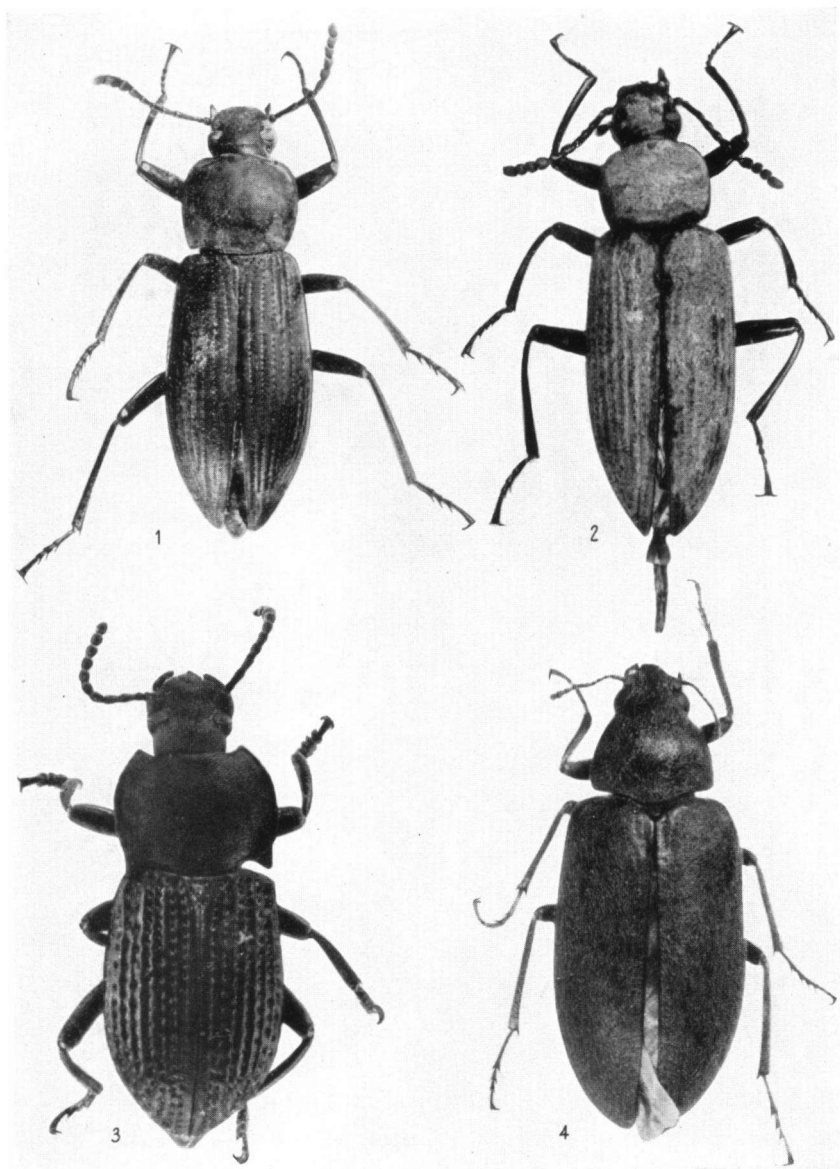


IV. 1-2 *Blapstinus curassavicus* n.sp. from Curaçao (1, type). 3 *Blapstinus paraguanae* from Paraguaná, Ven. (topotype). 4 *Blapstinus simulans* n.sp. from Isla de Caribes, Sucre, Ven. (type). 5 *Blapstinus hummelincki* n.sp. from Curaçao (paratype). 6-7 *Austrocaribius venezuelensis* n.gen. n.sp. from La Goajira, Col. (6) and Paraguaná, Ven. (7, paratypes). — All figures almost $\times 9$.

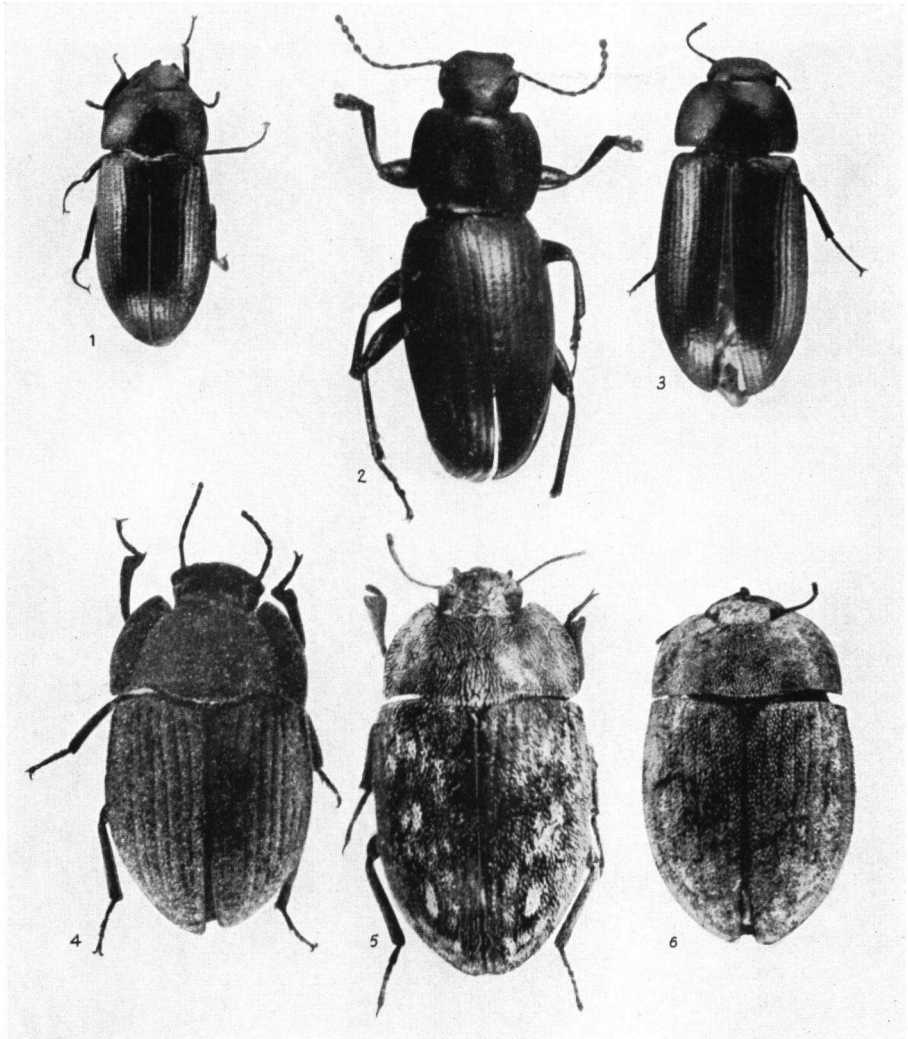


V. 1-3 *Blapstinus buqueti* Cha. from Aruba (1), Curaçao (2) and Paraguaná, Ven. (3). 4 *Blapstinus relictus* Marc. from Margarita (type). 5 *Blapstinus humboldti* n.sp. from Venezuelan mainland, Dto. Fed. (type). 6 *Blapstinus margaritensis* Marc. from Margarita (type). 7 *Blapstinus orchilensis orchilensis* Marc. from Orchila, Huespén (type). 8-9 *Blapstinus orchilensis occidentalis* n.subsp. from Curaçao (8) and Bonaire (9, paratypes). — All figures almost $\times 9$.

PLATE VI



VI. 1 *Zophobas* spec. from Bonaire. 2 *Zophobas* cfr. *atratus* Fab. from Margarita. 3 *Opatrinus gemellatus* Ol. from Los Testigos, Morro de la Iguana. 4 *Ecnomosternum vermiculatum* Geb. from Curaçao. — 1-2, almost $\times 2\frac{1}{2}$; 3, a good $\times 5$; 4, a good $\times 5\frac{1}{2}$.



VII. 1 and 3 *Armalia chiriquensis* Cha. from La Goajira, Col. (1) and Isla de Caribes, Sucre, Ven. (3). 2 *Hummelinckia caraibica* n.gen.n. spec. from Los Hermanos, Morro Pando (type). 4 *Trichoton lapidicola* Cha. from Morro de Esmerarda, Sucre, Ven. 5-6 *Trichotoides hintoni* (Kaszab) from Venezuelan mainland, Sucre (5, described ♂) and La Goajira, Col. (6). — 1, 3-4 and 6, $\times 5\frac{3}{4}$; 2, almost $\times 9\frac{1}{2}$; 5, $\times 6$.