

STUDIES ON THE FAUNA OF CURAÇAO, ARUBA,
BONAIRE AND THE VENEZUELAN ISLANDS: No. 9.

SCORPIONS

by

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This survey of the scorpions of the Leeward Group is based on author's collection and therefore includes some mainland-records from northern Venezuela and northeastern Colombia. Material from Curaçao, deposited in the "Zoölogisch Museum, Amsterdam" (A) and the "Rijksmuseum van Natuurlijke Historie, Leiden" (L) has been included, and the few island-records which were found in literature mentioned. Important new localities are indicated by an exclamation-mark.

A description of the localities may be found in the 1st and the 4th paper of this series.

The newly collected material has been presented to the Zoological Museum of Amsterdam, the Netherland State Museum, Leiden, and the Zoological Museum of the State-University in Utrecht.

Rhopalurus Thorell (1877), Meise (1933) emend.

= *Centruroides* Pocock (1902) + *Rhopalurus* Thorell (1877) + *Heteroctenus* Pocock (1893). [*Centrus* Hemprich et Ehrenberg (1828) *nomen nudum*; nec *Centrus* C. Koch (1838)]

Rhopalurus gracilis (Latreille, 1804) Meise, 1933

Kraepelin, 1891, p. 170, 273 (sub *Centrus*); Kraepelin, 1899, p. 92 (sub *Centrus*); Pocock, 1902 (Biol.), p. 32, tab. 7 fig. 3-4 (sub *Centruroides*); Hoffmann, 1932, p. 294, fig. 73-76 (sub *Centruroides*); Meise, 1933, p. 30. — [?] *Buthus europeus*, Sánchez, 1921, p. 67 (Margarita).

LA GUAIRA, 19.VIII.1936 (3 specimens). CARACAS, Blandín, 1935 (2 sp.; don.). MARGARITA, Porlamar, St. 155 (10 sp.); Porlamar, 3.VI.1936, in houses (4 sp.); Porlamar, 27.VI.1936, in house (2 sp.); Porlamar, 5.VII.1936 (2 sp.); Porlamar, 17.VII.1936; Porlamar, 13.VIII.1936.

Escorpión, scorpión, alacrán (collective noun for scorpion in Spanish).

25 Specimens, adults, 9 males, 16 females. Longest male, from Margarita, 104 mm (cauda 71 mm); longest female 98 mm (cauda 59 mm). Average length and width of 5th caudal segment in adult males 14(-15) and $3\frac{1}{2}$ (-4) mm, in adult females 12(-12 $\frac{1}{4}$) and 4(-4 $\frac{1}{2}$) mm. Pectines with (28-)29-30,2-31(-34) teeth.

Widely spread from Texas to Brasil, Antilles; Margarital, obviously introduced.

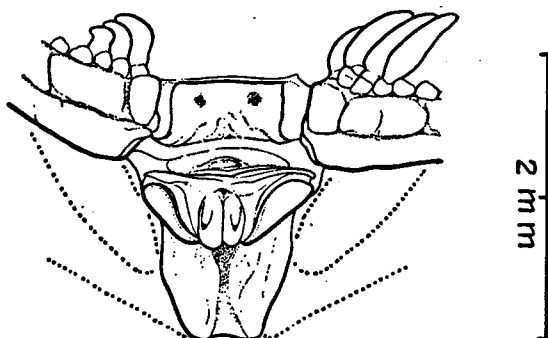


Fig. 16. Male *Rhopalurus hasethi* from Aruba, St. 250, 53 mm in length (cauda 33 mm); showing base of pectines, genitals and sternum of cephalothorax. [pres. alcohol]

Rhopalurus laticauda Thorell, 1876

Thorell, 1876, p. 9; Kraepelin, 1891, p. 279 (sub *Centrurus*); Kraepelin, 1899, p. 95 (sub *Centrurus*); Kraepelin, 1911, p. 73 (sub *Centruroides*); Lutz, 1928, p. 72, figs., non viso; Meise, 1933, p. 32 (sub *testaceus latic.*).

GOAJIRA, El Cardón, St. 291; El Cardón, 27.I.1937; Uribia, St. 288 (observed); Tucacas, St. 286 (obs.). PARAGUANA, Carirubana, St. 279 (2 specimens); Cerro Transverso, St. 280 (3 sp.); Moruy, St. 283. CARÚ-PANO, Esmerarda, St. 124; Puerto Santo, St. 125 (4 ad., 18 juv.); Puerto Santo, St. 126. ARAYA, Chacopata, St. 127 (obs.); Isla de Caribes, St. 128 (2 sp.). COCHE, St. 129 (2 sp.). CUBAGUA, St. 130. MARGARITA, La Asunción, St. 148 (6 sp.); Punta Mosquito, St. 152; Porlamar, 26.V. 1936; Porlamar, 2.VI.1936 (5 sp.). TESTIGOS, Morro de la Iguana, St. 157; Chiwo, St. 159 (2 sp.); Angoletta, St. 160 (2 sp.); Tamarindo, St. 162 (2 sp.); Tamarindo, St. 163; Isla de Conejo, St. 165. FRAILES, Puerto Real, St. 166; La Pecha, St. 168 (2 sp.). HERMANOS, Morro Pando, St. 170. TORTUGA, St. 173.

Alacrán, escorpión; yaúru (Goaj.).

64 Specimens, 21 adults. Table 20. Average length and width of 5th caudal segment in adult males 5(-5 $\frac{1}{2}$) and 4(-4 $\frac{1}{4}$) mm, in adult females 6(-7) and 4(-4 $\frac{1}{4}$) mm. Pectines with (20-) 21-23,4-24 (-25) teeth.

Colombia, Venezuela, Guayana, Brasil, Trinidad; Margarital, Cochel. Cubagua, Los Testigos, Los Frailes, Los Hermanos, Tortugal.

TABLE 20.

Variation in *Rhopalurus laticauda*
from Sucre(s), Margarita(m) and Los Testigos(t); males in thick type.

	length of truncus, in mm										
	14	15	16	17	18	19	20	21	22	23	24
length of cauda, in mm											
21											
21½											
22				t							
22½		m	t		m						
23		t	m								
23½											
24			t	m							
24½											
25											
25½											
26								s	t		
26½											
27						s	s	m	m		
27½									m		
28							m	t			m
28½										t	
29							s				
29½											
30										t	

Rhopalurus hasethi (Pocock, 1902) Meise, 1933

Centrus granosus Thor., Kraepelin, 1891, p. 269, p.p. [Curaçao, excl. Panamá et Mexico]; Kraepelin, 1899, p. 88, 90, p.p. [excl. Panamá et Barbados]; Werner, 1925, p. 540 [Bonaire, excl. Barbados et Panamá]; Hummelinck, 1938, p. 209, fig. p. 49. [non *C. granosus* Thorell, nec *C. bertholdi* Thorell; cf. Pocock, 1902 (Biol.), p. 32]

Centruroides hasethi Pocock, 1902 (Ann.), p. 375 [Curaçao, cf. Kraepelin, 1891]; Kraepelin, 1911, p. 69, fig. 2.

Rhopalurus testaceus hasethi (Poc.) Meise, 1933, p. 32.

CURAÇAO, Seroe Ronde Klip, St. 201; S. di Boca, St. 202A; S. Mainsje, St. 203 (4 specimens); Newport, St. 207; Caracas Baai, 20.V. 1920 (A, 3 sp.; C. J. van der Horst coll.); Scherpenheuvel, 14.I.1934 (fraters coll.); Scherpenheuvel, III.1934 (3 sp.; fraters coll.); Willemstad, III.1934 (7 sp.; fraters coll.); Negropont, 1929 (A, 3 sp.; V. H. van den Bergh coll.); Plantersrust, 20.IX.1923 (A, 5 sp.; G. J. H. Molengraaff coll.); S. Pretoe, St. 213 (3 sp.); Piscadera, 20.X.1936; Piscadera, 8.IX.1936 (2 sp.); Piscadera, 5.XI.1936; San Pedro, St. 226; Savonet, 1.V.1930; S. Djerimi, St. 242; S. Pieter, Lagoen, 22.IV.1930 (6 sp.); St. Kruis, 23.IV.1930 (3 sp.); Hofje St. Kruis, 24.IV.1930 (3 sp.); S. Wara Wara, 24.IV.1930; Curaçao

(Brit. Museum, male type, female paratype; C. G. de Haseth coll.; teste Pocock, 1902 (Ann.)); Curaçao (A, 2 sp., ex Mus. Hamburg, 1896); Curaçao, 1888 (L, 5 sp.; Epp coll.); Curaçao (L; Epp coll.); Curaçao (L, A. J. van Koolwijk coll.); Curaçao (A, 2 sp.; P. C. de Ruyter don.); Curaçao, 1922 (A, 22 sp.; H. Lamp coll.). BONAIRE, Zuidpunt, St. 182 (ad., 12 juv.); Kralendijk, 2.VII.1930; Spelonk, Bolivia, 23.XI.1930; Fonteijn, 22.V.1930; Fonteijn, St. 191 (2 sp.); Dos Pos, 24.V.1930 (9 sp.); Dos Pos, 1.VI.1930 (7 sp.); Brandaris, 31.V.1930; Bronswinkel, St. 198 (2 sp.); Bonaire, 1925 (Mus. Wien, numerous sp.; Alfons Gabriel coll.; teste Werner). KLEIN BONAIRE, St. 199b. AVES, Ave de Barlovento, St. 179A (4 sp.). ARUBA, Root Prins, St. 246 (5 sp.); Quadirikiri, St. 250 (2 sp.); Vader Piet, St. 252; Fonteijn, St. 252A; Savaneta, St. 256; Baranca Alto, St. 260; Baranca Alto, St. 260A; Hooiberg, St. 268; Jamanota, St. 270; Aruba, 1936 (4 sp.); Boekoeti, St. 278.

Scorpioen, schorpioen (collective noun for scorpion in Dutch).

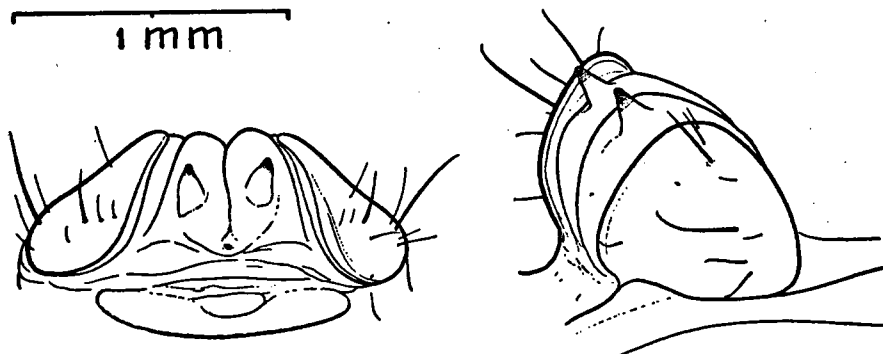


Fig. 17. Male *Rhopalurus hasethi* from Aruba, same specimen; showing protruded genitals from behind and from the right.

146 Specimens, 45 adults or more. Table 21. Fig. 16-17, tab. XIIb. Subaculear-tooth in the greater part of the specimens weakly or rather weakly developed, in adults often lacking or practically lacking. Average length and width of 5th caudal segment in adult males 10 (-12) and 3 (-3 1/4) mm, in adult females 8 (-10 3/4) and 3 (-4) mm. Pectines of the specimens from

Curaçao	1	1	2	24	40	31	46	23	2				
with (22-)25-27,0-29(-30) teeth,													
Bonaire			7	11	14	24	18	2					
with 24-26,6-28(-29) teeth,													
Ave de Barlovento			2	2	3	1							
with 24-25,4-27 teeth,													
Aruba	2	10	12	10	4								
with 21-23,1-25 teeth.													
				21	22	23	24	25	26	27	28	29	30

Curaçao, Aruba, Bonaire, Klein Bonaire, Las Aves!

TABLE 21.

Variation in *Rhopalurus hasethi*
from Curaçao(c), Bonaire(b) and Aruba(a); males in thick type.

	length of truncus, in mm																		
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
length of cauda, in mm	24	c	a			c													
	25	c	c	c	c														
	26	ab	cb	cb															
	27	b	a	b															
	28	c			a	cb													
	29	c		a	c		c												
	30						c	c											
	31		b	cc		a	c	c											
	32				a	c	a	c							c				
	33					a	c	c											
	34			c			c												
	35							c											
	36								c	c									
	37					b	c	c		c	c								
	38				c	c	c	cb						c					
	39			cb	c	c	c	c											
	40							c	c										
	41					c	c												
	42					c			c	c	c			c	c				
	43					c	b												
	44																		
	45				b	b													
	46								c		c								
	47									c									c
	48																		
	49																		
	50														c				
	51													c					
	52															c	c		
	53																		

Diplocentrus hasethi Kraepelin, 1896

Diplocentrus hasethi Kraepelin, 1896, p. 130, fig. 11 [Curaçao]; Kraepelin, 1899, p. 100; Werner, 1925, p. 540 [Bonaire]; Hummelinck, 1938, p. 209, fig. p. 49.

CURAÇAO, Rooi Manzalienja, St. 205; Tafelberg, St. 206; Newport, St. 207; Newport, St. 208 (2 specimens); Kabrietenberg, St. 210 (2 sp.); Caracas Baai, 28.IV.1920 (A., 5 sp.; C. J. van der Horst coll.); Plantersrust, 20.IX.1923 (A., 3 sp.; G. J. H. Molengraaff coll.); Seroe Pretoe, St. 213 (4 sp.); Piscadera, 5.XI.1936; Hato, St. 216 (2 sp.); Hato, St. 217 (2 sp.);

Tanki Rincón, 11.X.1936; Seroe Mameter, Porto Marie, 26.IV.1930; San Pedro, St. 226; S. di Cueba, St. 228 (3 sp.); Seroe Christoffel, St. 234; Seroe Christoffel, St. 235; Boshi Westpunt, St. 238; S. Djerimi St. 242 (3 sp.); Plaja Chikitoe, St. 244; Curaçao (Mus. Hamburg, type!; C. G. de Haseth coll.; teste Kraepelin, 1896); Curaçao, 1922 (A., 5 sp.; H. Lamp don.), BONAIRE, Lima, St. 184; Spelonk, St. 188; Fontein, St. 191 (3 sp.); Bonaire, 1925 (Mus. Wien, 16 sp.; Alfons Gabriel coll.; teste Werner). KLEIN BONAIRE, St. 199b.
Scorpión.

48 Specimens, 10 adults or more. Table 3. Fig. 18, tab. 12b. Average length and width of 5th caudal segment in adult males $4\frac{1}{2}$ ($-5\frac{1}{2}$) and 2 ($-2\frac{1}{4}$) mm, in adult females 5 (-6) and 2 ($-2\frac{1}{4}$) mm; average width of hand in adult males $3\frac{1}{2}$ ($-4\frac{3}{4}$), in adult females $4\frac{1}{2}$ ($-5\frac{1}{4}$) mm. Pectines with (7-) 9-9,2-10 teeth.

Curaçao, Bonaire, Klein Bonaire!.

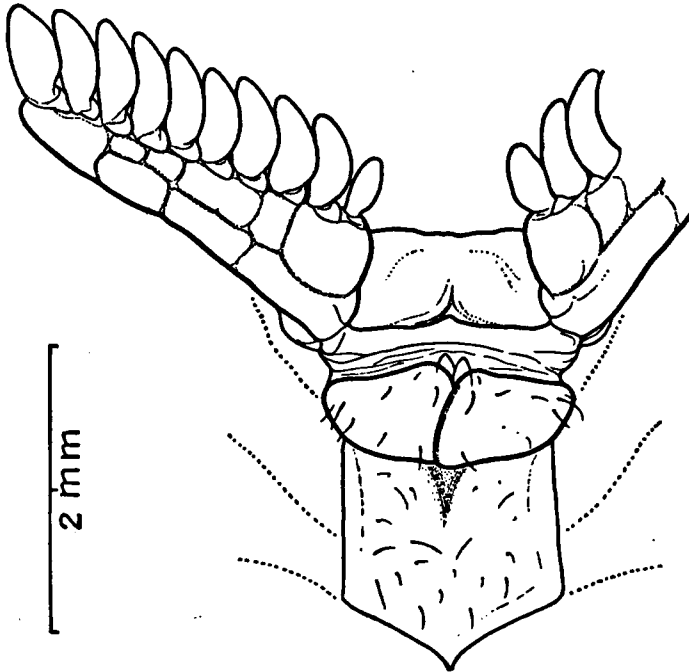


Fig. 18. Male *Diplocentrus hasethi* from Curaçao, St. 216, $41\frac{1}{2}$ mm in length (cauda $22\frac{1}{2}$ mm); showing left pectine, genital operculae and sternum of cephalothorax; the hairs indicated on sternum and operculae only. [pres. alcohol]

TABLE 22.
Variation in *Diplocentrus hasethi*
from Curaçao(c) and Bonaire(b); males in thick type.

	length of truncus, in mm													
	12	13	14	15	16	17	18	19	20	21	22	23	24	25
12	c	c	c	c										
12½	c													
13	c													
13½	c			b										
14		c		c										
14½						c								
15		c						c						
15½			c											
16					c			c						
16½						b		c						
17					c			c						
17½														
18				c	c									
18½							c		c					
19														
19½														
20						c								
20½												c		
21								c		c				
21½										c				
22								c						
22½										c				
23											c			
23½														
24														c
24½														
25														
25½											c			

Ananteris cussinii Borelli, 1910

Borelli, 1910, p. 1.

GOAJIRA, Rio Hacha, St. 293.

1 Specimen, young female, 16 mm in length (cauda 10 mm). Pectines practically without fulcra; 3 dorsal-lamellae, 7-8 intermediate-lamellae; 18 teeth. 5th Caudal segment with 5 distinct keels. Palpi granulated above; hand light-yellowish, finger with a broad brownish or blackish zone above the base. — Possibly not specifically separable from *A. balzani* Thor.

Venezuela; northeastern Colombia. [*A. balzani*: Paraguay, Paraná]

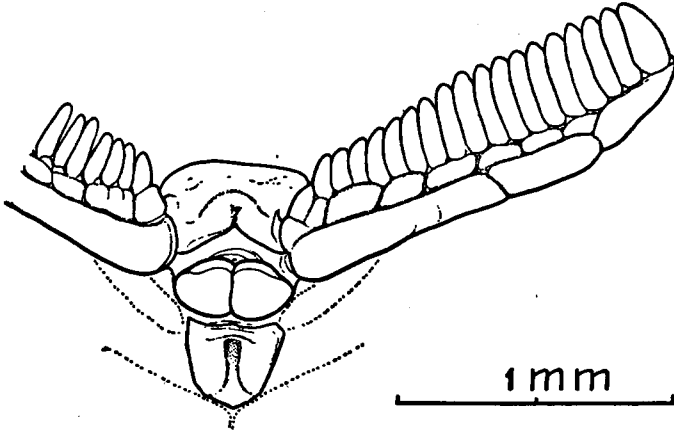


Fig. 19. Rather young female *Ananteris cussinii* from Rio Hacha, Colombia, St. 293, 16 mm in length (cauda 10 mm); showing right pectine, genital operculae and sternum of cephalothorax. [pres. alcohol]

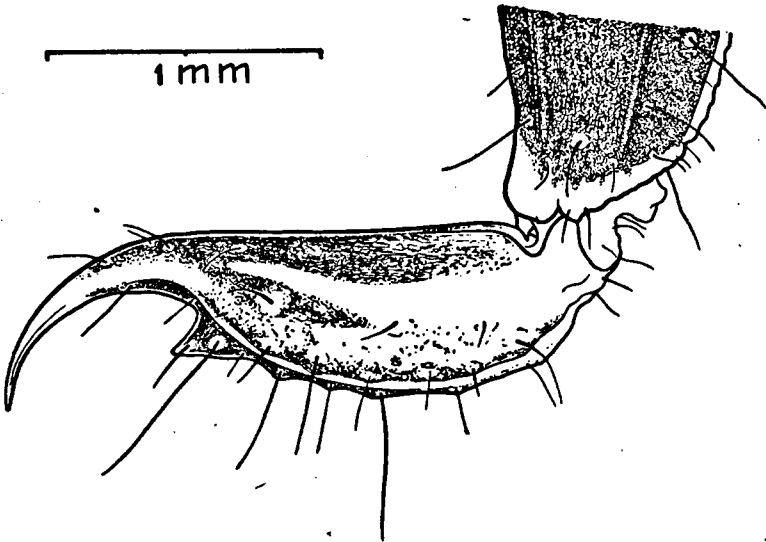


Fig. 20. Rather young female *Ananteris cussinii* from Rio Hacha, Colombia, same specimen; showing extremity of tail from the right, variegated with very dark brown.

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