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SPIDERS (ARANEAE)
FROM WEST GREENLAND

BY

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WITH 103 FIGURES AND 1 TABLE
IN THE TEXT

KØBENHAVN

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Abstract

The spider fauna of West Greenland has been the subject of an investigation based up on a material of spiders collected by the author mainly in the Godthåb area and in Disko. Most of the material was collected by means of sifting and with pitfall traps. A list of 50 West Greenland species of spiders is given with notes on their taxonomy, ecology, and distribution. In a table 64 species and subspecies of spiders hitherto known from Greenland are listed with particulars about their Arctic distribution. A zoogeographical analysis of the spider fauna of Greenland gave the result that it comprises 41% Holarctic, 20% Palaearctic, and 39% Nearctic forms and that no difference in this respect exists between East and West Greenland.

Three new species has been described, belonging to the genera *Sciastes*, *Praestigia*, and *Bathyphantes*. For the species *Typhochrestus borealis* JACKS. the new genus *Conigerella* has been established. Several new synonyms of Greenland spiders have been stated.

CONTENTS

	Page
Abstract	2
Introduction	5
Synopsis of the species	7
Remarks on the distribution of the species	89
Summary	96

INTRODUCTION

The material submitted here was collected in West Greenland from June 26 to July 26, 1962, mainly at Godthåb (about lat. $64^{\circ}10' N$) and at Godhavn (about lat. $69^{\circ}15' N$). Some collections were also made in Søndre Strømfjord (lat. $67^{\circ} N$) and during excursions from Godthåb to Itivdleq at the inner end of Lysefjord (lat. $64^{\circ} N$) and from Godhavn to Atâ on Arveprinsens Ejland (lat. $69^{\circ}46' N$), Ege at Eqp sermia glacier ($69^{\circ}46' N$), and Kangerdluarssuk, Disko Fjord (lat. $69^{\circ}30' N$).

The spider material collected in these localities consists of about 4000 identifiable specimens and the present paper is a report on the species with notes on their taxonomy, ecology, and distribution.

The material comprises 47 species, whereas 9 species previously recorded from West Greenland have not been found in the areas investigated. The latter species are the high-arctic *Collinsia spetsbergensis* (THORELL), *Erigone psychrophila* THORELL, *Diplocephalus barbatus* (L. KOCH), and *Tarentula exasperans* CAMBR. and the subarctic—boreal species *Erigone atra* BL., *Linyphia peltata* WID., *Araneus cornutus* CL., *Araneus ocellatus* CL., and *Araneus quadratus* CL. Three of these species are, however, included in the synopsis of the species since I have had opportunity to examine West Greenland specimens of them.

The collecting was made mainly by sifting and with pitfall traps, the latter consisting of plastic jars, 10 cm in diameter and 5 cm high and containing 1% formalin or 10–20% NaCl-solution with a “wetting agent” added. 5–10 such traps were placed in each locality and were inspected once a week. Especially in snow-beds and herb-covered slopes excellent results were obtained with this method. Some of the species were exclusively or mainly collected in this way.

The major part of the collection is preserved in the Zoological Museum of the University of Uppsala. Specimens of all the species have also been supplied to the Zoological Museum of the University of Copenhagen.

Acknowledgments

The investigation was made possible by grants from Stiftelsen Lars Hiertas Minne and Statens naturvetenskapliga Forskningsråd (Swedish natural Science Research Council) and to these institutes I offer my respectful thanks.

I am greatly indebted to the Board of Directors of universitetets Arktiske Station, Godhavn, for placing at my disposal all the facilities at this station, and especially I owe a great dept of gratitude to the late Professor RAGNAR SPÄRCK for his kind interest and help by planning my journey and stay in Greenland. I wish to express my sincere thanks to Professor THE SVEDBERG, Uppsala, for a great deal of good advice and help, e.g. by supplying me with maps of West Greenland. To Dr. phil. ERIK SMIDT, Copenhagen, I am much obliged for kind permission to spend a time at Fiskeribiologisk Station, Godthåb, and to Mr. KLAUS REINDEL at the same institute and to Mr. SIMON LÆGAARD, M.Sc., scientific leader of the Arctic Station, Godhavn, I also owe a dept of gratitude for kind help in various ways.

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SYNOPSIS OF THE SPECIES

Fam. Theridiidae

1. *Enoplognatha intrepida* (SØRENSEN)

(Fig. 1)

♀ *Theridium intrepidum* SØRENSEN 1898, Vid. Medd. Naturhist. Foren., p. 190.

Synonyms: see LEVI 1957, p. 17.

West Greenland records:

1. SØRENSEN 1898, p. 190 (*Theridium i*).
2. JACKSON 1930, p. 642.
3. HOLM 1958b, p. 526.

Localities:

- 59°55' Ilua (1).
60° Frederiksdal (3).
60°45' Julianehåb (3).
61° "Eid" (3).
64°09' Store Malene, 150 m, July 1, 1962: 1 ♂ 2 ♀♀.
64°10' Ameragdla (3).
64°40' Godthåbsfjord (2).
66°55' Holsteinsborg (1).
67° Søndre Strømfjord, July 1962: 8 ♂♂ 2 ♀♀ 14 juv.
69°15' Disko, Godhavn, July 9-26, 1962: 7 ♂♂ 26 ♀♀ 12 juv.
69°16' Disko, Fortunebay, 100 m, July 12, 1962: 4 ♀♀ 4 juv.
69°46' Arveprinsens Ejland, Atâ, July 24, 1962: 5 ♀♀ 11 juv.
Ege at Eqip sermia (glacier), July 24, 1962: 3 ♀♀ 11 juv.

Distribution:

East Greenland (from lat. 60°05' to 60°25' N), West Greenland, Canada, Alaska, United States.

Taxonomical remarks:

Only females of this species have previously been recorded from Greenland. The male, however, was described as early as 1909 as *Enoplognatha rugosa* by EMERTON from specimens collected in Massachusetts, United States (see LEVI 1957 where there is also a complete list of synonyms of this species).

Fig. 1 below shows the male palp drawn from a specimen from Disko. The epigyne has been depicted by JACKSON (1930), BRÆNDEGÅRD (1946), and LEVI (1957).

Ecology:

The species seems to be mostly sublapidicolous. Most of the specimens were found in dry heaths. In one locality (Ege) a few specimens

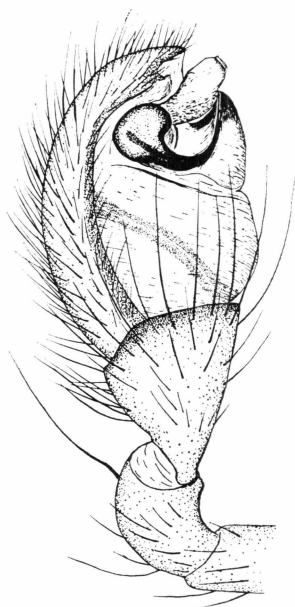


Fig. 1. *Enoplognatha intrepida* (SOERENSEN), right male palp, lateral view. $\times 85$.

(1 ♀, 9 juv.) were obtained by sifting litter in a *Salix* thicket. As shown in the following table no females were caught in pitfall traps. On the other hand the proportion of males found under stones was very small.

	Under stones					In pitfall traps		
	27.VI	1.VII	9.VII	12.VII	24.VII	27. VI– 27. VII	19–19. VII	19–26. VII
♂♂ ad.	–	1	2	–	–	8	3	2
♀♀ ad.	6	2	26	4	8	–	–	–
juv.	9	–	9	4	22	5	2	–

Females with egg cocoons were found from July 7. The egg cocoons are white, spherical, and 3–4.5 mm in diam. Four cocoons contained 24, 46, 51, and 64 white eggs respectively. The cocoons are attached to

the under side of stones and are always watched by the female. The wall of the cocoon consists of an outer layer of coarse curled threads and an inner layer of fine also curled threads around the eggs.

2. *Theridion ohlerti lundbecki* SOERENSEN

♂♀ *Theridium Lundbeckii* SØRENSEN 1898, Vid. Medd. naturhist. Foren. København, p. 191.

♀ *Theridium lundbecki* SOERENSEN, JACKSON 1930, Ann. Mag. Nat. Hist. (10) 6, p. 642, pl. 17, fig. 10.

Theridium umbraticum L. KOCH, JACKSON 1938, Proc. Zool. Soc. London (B) 107, p. 548.

♂♀ *Theridium ohlerti* THORELL, LEVI 1957, Bull. Amer. Mus. Nat. Hist. 112, p. 98, figs. 324, 325, 332-334, map 32 (*ad partem*).

♂♀ *Theridium ohlerti lundbecki* SOERENSEN, HOLM 1958, Ark. Zool. (2) 11, p. 525, figs. 1-3.

West Greenland records:

1. SØRENSEN 1898, p. 191 (*Th. Lundbeckii*).
2. JACKSON 1930, p. 642 (*Th. Lundbecki*).
3. JACKSON 1938, p. 548 (*Th. umbraticum*).
4. HOLM 1958 b, p. 525.

Localities:

- 61° "Eid" (4).
 61°10' Ivigtut (1).
 64°02' Itivdæg, Eqalugialik, July 2, 1962: 1 ♀ 1 juv.
 64°40' Godthåbsfjord, Qugssuk (2).
 67° Søndre Strømfjord and Amerdloq fjord, Utorqait (3).
 68°45' Kangarsuneq (1).
 69°46' Arveprinsens Ejland, Atâ, July 24, 1962: 1 juv.
 Ege at Eqip sermia (glacier), July 24, 1962: 2 juv.

Distribution:

This subspecies seems to be restricted to West Greenland.

Taxonomical remarks:

The Greenland specimens of *Theridium ohlerti* THORELL are slightly different from the nominate form with regard to the shape of the bulbus and the interior structure of the epigyne (HOLM 1958 b) and therefore *Theridium lundbecki* described by SØRENSEN from West Greenland specimens can be sustained as a subspecies. According to LEVI (1957) the distribution of *Th. ohlerti* in North America comprises Alaska, the Rocky Mountains, the Cascades and eastern Canada. Presumably this species is there represented by an intermediate form between the Palaearctic and the Greenland subspecies. On the other hand the epigyne of a female specimen of *Th. ohlerti* from Jermakova, Siberia (lat. 66°25' N) in the collection determined by L. KOCH (1879) is exactly like that of

European specimens. The nominate form thus occurs not only in the mountains of Scandinavia and Central Europe but also in western Siberia.

Ecology:

The only adult specimen in the present collections was found together with a young one on *Alnus crispa*. The remaining juvenils were collected under stones or among litter in willow thickets.

3. *Theridion oleatum* L. KOCH

(Figs. 2-4)

♂♀ *Theridium oleatum* L. KOCH 1879, Kungl. Vet. Akad. Handl. 16:5, p. 81, pl. 3, fig. 2, 2 a. Type locality: Möller Bay, Novaya Zemlya.

♀ *Theridium petrense* SØRENSEN 1898, Vid. Medd. Naturhist. Foren. København, p. 188.

♀ *Theridium oleatum* L. KOCH, KULCZYNSKI 1916, Mém. Acad. imp. St. Petersb. 28 (11), p. 4, pl. 1, figs. 3-5.

♀ *Theridium oleatum* L. KOCH, M. DAHL 1928, Rep. Sci. Res. Norweg. Exp. N. Zemlya 36, p. 4, figs. 1-4.

♀ *Theridion petrense* SØRENSEN, LEVI 1957, Bull. Amer. Mus. Nat. Hist. 112, p. 81, figs. 272, 282, 283, map 24.

West Greenland records:

1. SØRENSEN 1898, p. 188 (*Th. petrense*).

Localities:

69°15' Disko, Godhavn, July 7, 1962: 6 ♀♀ 2 juv.

69°16' Disko, Fortunebay, 100 m, July 12, 1962: 2 ♀♀ 3 juv.

69°31' Disko Fjord, Kangerdluarssuk, July 17, 1962: 5 ♀♀ 2 juv.

69°46' Ritenbenk (1).

Eqe at Eqip sermia (glacier), July 24, 1962: 1 ♂ subad.

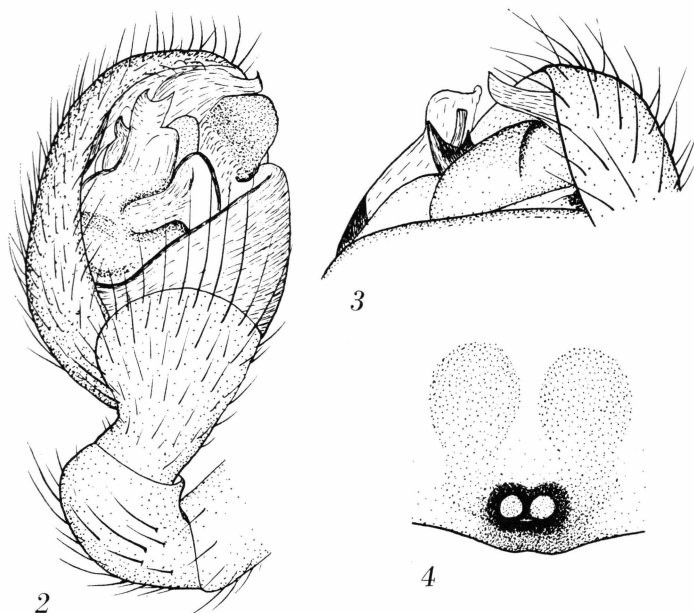
Distribution:

West Greenland, British Columbia (Yoho National Park), Novaya Zemlya, West Siberia, Kamchatka.

Taxonomical remarks:

Specimens from West Greenland were compared to the type material of this species, two males and one female from Möller Bay, Novaya Zemlya, and to some specimens collected by the Swedish Yenisei expedition 1875-76 and determined by L. KOCH as well. The adult females have an average cephalothorax length of 1.01 mm and on the dorsal side of the abdomen there are two rows of separate small black patches. The specimens from Novaya Zemlya and Siberia are bigger (average cephalothorax length 1.22 mm) and darker, the abdominal patches being larger and connected with one another. Figs. 2 and 3 of the male

palp is from a specimen from Novaya Zemlya. The epigyne of the females from the Palaearctic localities has a somewhat larger septum between the two small grooves, a trait also reported by LEVI (1957) in two females from British Columbia. As seen from the table the relative length of the legs of the specimens from this locality considerably exceeds that of females from West Greenland, Novaya Zemlya and Siberia.



Figs. 2-4. *Theridion oleatum* L. Коч. Fig. 2. Right male palp, lateral view. From a specimen from Novaya Zemlya. $\times 75$. - Fig. 3. Terminal part of right bulb, ventral view. $\times 135$. - Fig. 4. Epigyne. $\times 100$.

Locality	Ceph. length in mm	Leg I, length in mm of					Fe I M Ceph.
		Fe	Pt + Ti	Mt	Ta	Total	
Yoho Nat. Park, Br. Col. (LEVI 1957)	0.91	1.94	2.05	1.62	0.73	6.34	2.1
Kangerdluarssuk, West Greenland	0.97	1.4	1.52	1.23	0.65	4.8	1.44
Möller Bay, Novaya Zemlya ...	1.24	1.83	1.92	1.47	0.77	5.99	1.48
West Siberia (Yenisei Exp.) ...	1.2	1.73	1.88	1.45	0.73	5.29	1.44

Most probably the specimens from British Columbia represent a separate race. Whether the same is the case concerning the Greenland

specimens must remain an open question until adult males from this region have been investigated.

Ecology:

All the specimens were collected under stones both in moist and dry heaths. No egg cocoons were observed.

Fam. Erigonidae

4. *Cochlembolus alpinus* (BANKS)

(Figs. 5-9)

♂ *Dismodicus alpinus* BANKS 1896, Canad. Ent. 29, p. 63. Type locality: Mt. Washington, New Haven, United States.

♀ (nec ♂) *Gongylidium lapidicola* SØRENSEN 1898, Vid. Medd. Naturhist. Foren. København, p. 204.

♂ *Gonatium inflatum* SØRENSEN 1898, Ibid., p. 206.

♂♀ *Lophocarenum alpinum* (BANKS) EMERTON 1909, Trans. Conn. Ac. Sci. 14, p. 190, pl. 3, figs. 3-3 f.

Tortembolus alpinus (BANKS), CROSBY in CHAMBERLIN 1925, Calif. Ac. Sci. Proc. 14, p. 115.

♂♀ *Cochlembolus alpinus* (BANKS), CROSBY 1929, Ent. News 40, p. 79, pl. 4, figs. 1-4.

♀ *Scotinotylus ungavensis* JACKSON 1933, Proc. Zool. Soc. London, p. 150, pl. 2, fig. 9.

♀ (nec ♂) *Coryphaeolana lapidicola* (SØRENSEN), BRÆNDEGAARD 1937, Medd. Grønland 108:4, p. 10, fig. 6.

Coryphaeolana lapidicola (SØRENSEN), BRÆNDEGAARD 1946, Ibid. 121:15, p. 45.

Scotinotylus lapidicola (SØRENSEN), HOLM 1958, Ark. Zool. (2) 11:31, p. 526.

West Greenland records:

1. SØRENSEN 1898, p. 204 (*Gongylidium lapidicola*, part.).
2. SØRENSEN 1898, p. 206 (*Gonatium inflatum*).
3. HOLM 1958 b, p. 526 (*Scotinotylus lapidicola*).

Localities:

60°55' Qagssiarssuk (1).

61° Tunugdliarfik fjord (2).

64°09' Kobbefjord, southeast shore, June 30, 1962: 1 ♂ 3 ♀♀.

64°10' Ny Herrnhut (3).

Southwest of Lille Malene, July 1, 1962: 9 ♀♀ ad, 2 ♂♂ subad.

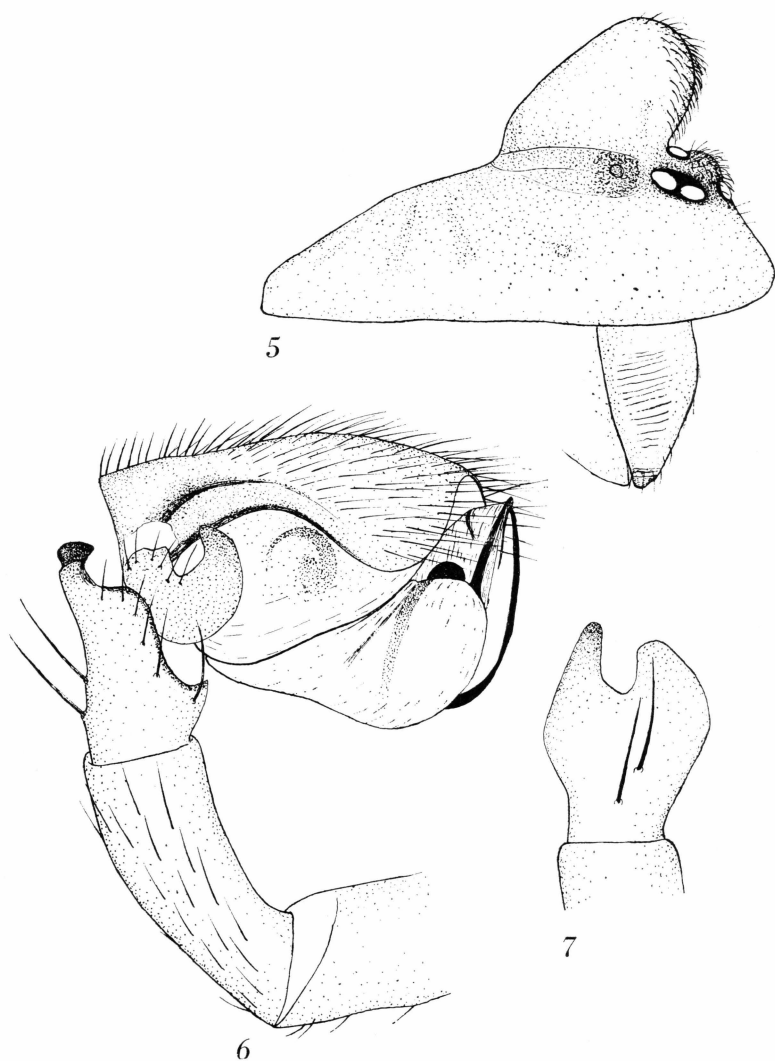
66°55' Holsteinsborg (1).

68°45' Egedesminde (1).

Kangersuneq (1).

69°15' Disko, Godhavn, July 9, 1962: 2 ♂♂ 12 ♀♀.

69°16' Disko, Lyngmarksfjeld, 100-250 m, July 7-14, 1962: 4 ♂♂ 2 juv.



Figs. 5–7. *Cochlembolus alpinus* (BANKS), ♂. Fig. 5. Cephalothorax from the side. $\times 65$. – Fig. 6. Right palp, lateral view. $\times 135$. – Fig. 7. Tibia of right palp, dorsal view. $\times 135$.

69°45' Ritenbenk (1).

Taserssuaq (1).

69°46' Arveprinsens Ejland, Atâ, July 24, 1962: 5 ♀♀ 11 juv.

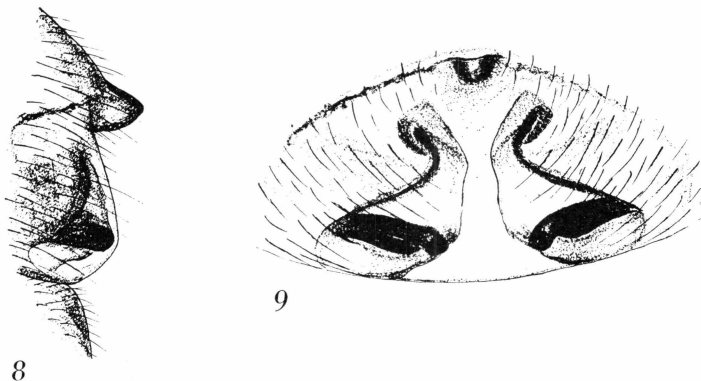
Ege at Eqip sermia, glacier, July 24, 1962: 3 ♀♀ 11 juv.

Distribution:

East Greenland (Sydøstkyst area from lat. 60°15' to 61°25' N), West Greenland, United States (Mt. Washington, New Hampshire; Mt. Washburn, Wyoming), Canada (Akpatok, Labrador; Banff National Park).

Taxonomical remarks:

From the list of synonyms above it appears that SØRENSEN (1898) has described this species under two different names, the male under *Gongylidium inflatum* and the female together with the male of *Rhaebothorax paetulus* (CAMBR.) under *Gongylidium lapidicola*. BRÆNDEGÅRD (1946) was certainly right when he made *Scotinotylus ungavensis* JACKSON, described from a female from Labrador (Akpatok), a synonym of this



Figs. 8, 9. *Cochlembolus alpinus* (BANKS). Fig. 8. Epigyne from the side. — Fig. 9. Epigyne from below. — $\times 170$.

species, but he did not discover the identity of the male of *Gongylidium lapidicola* and wrongly placed the species in the genus *Coryphaeolana*.

Cochlembolus alpinus is closely related to another member of the genus also occurring in West Greenland, *C. sacer* CROSBY. From the latter it is distinguished by a higher cephalic lobe in the male (Fig. 5) and a different shape of the male palpal tibia (Figs. 6, 7) and by shorter clavus of the epigyne (Figs. 8, 9).

Ecology:

Unlike *Cochlembolus sacer* CROSBY, described below, *C. alpinus* seems to be sublapidicolous. All the specimens of the present collection were obtained under stones except one female, which was caught in a pitfall trap in a heath on Lyngmarksfjeld. The species occurs on very dry, wind-eroded heaths as well as on moss-covered soil of snow beds.

5. *Cochlembolus sacer* CROSBY

(Figs. 10–15)

♂ *Lophocarenum alpinum* (BANKS), EMERTON 1915, Trans. Conn. Ac. Sci. 20, p. 150, pl. 2, fig. 7.

(non *Dismodicus alpinus* BANKS 1896, Canad. Ent. 28, p. 63).

♂ *Cochlembolus sacer* CROSBY 1929, Ent. News 40, p. 82, pl. 4, figs. 8-10. Type locality: Lake Louise, Alberta, Canada.

Localities:

69°15' Disko, Godhavn, July 7-26, 1962: 9 ♂♂ 12 ♀♀.

69°16' Disko, Engelskmandens Havn, July 9, 1962: 12 ♂♂ 47 ♀♀.

Distribution:

West Greenland; Canada (Alberta).

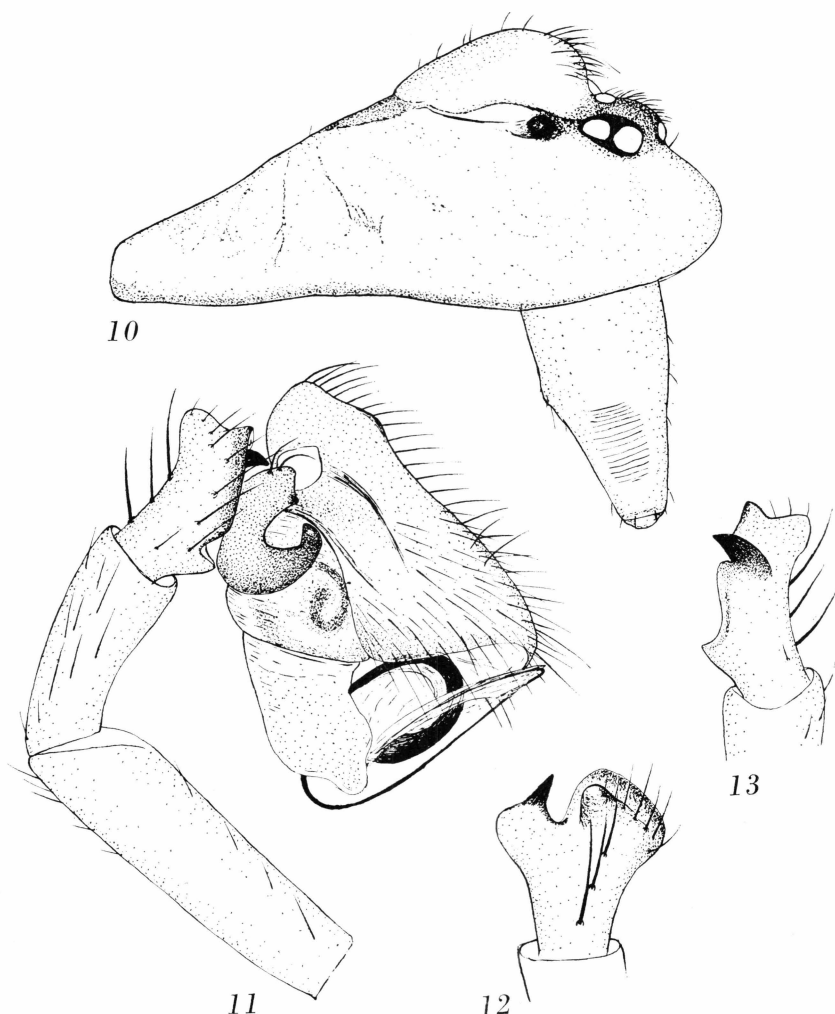
Description:

Of this species only the male is previously known. Below both male and female are described from specimens collected at Engelskmandens Havn, Disko.

MALE. Total length 1.7 mm, carapace 0.82 mm long, 0.6 mm wide, sternum 0.46 mm long, 0.46 wide. Leg I 1.92 mm (Fe 0.53, Pt 0.21, Ti 0.47, Mt 0.39 Ta 0.32 mm), leg IV 2.07 mm (Fe 0.61, Pt 0.2, Ti 0.54, Mt 0.42, Ta 0.3 mm).

Carapace greyish yellow with a dark pentagonal marking on the cephalic portion behind the lobe, a narrow dark seam at the margins and faint radiating lines on the thoracic portion; sternum greyish, darker towards the margins, legs yellow, chelicerae yellowish brown, and abdomen black.

Carapace (Fig. 10) in dorsal view elongate oval, narrowly rounded in front and evenly rounded on the sides; cephalic portion with a post-ocular lobe as long as its anterior width and somewhat wider in front than posteriorly (9:7). Dorsal profile line almost straight from the posterior margin to the top of the lobe, then strongly convex down to the posterior median eyes. Anterior side of the lobe densely covered with long hairs directed forward and downward. Interocular area convex with numerous short hairs. Clypeus very strongly convex. Eyes: Anterior row straight, median eyes much smaller than laterals, separated by the radius, from laterals by almost twice the diameter. Posterior eyes in a straight line, equal, median eyes separated by more than the diameter (4:3), from laterals by the diameter. Chelicerae straight, with a stridulating organ; anterior margin of fang groove with 5 teeth. Legs: Tibiae I-III with 2 dorsal spines, tibia IV with one spine the position of which is 0.21. Spines somewhat longer than the diameter of the tibia. Metatarsi I-III with a trichobothrium, its position on metatarsus I = 0.56. Palp: (Figs. 11-13) Patella gently curved, hardly dilated distally, its length 2/3 of that of femur. Tibia shorter than patella, apical margin produced on the dorso-lateral side into a chitinized straight edge, and on the dorso-mesial side into a stout black tooth, curved forward. Dorsal side of tibia near the apical margin with a blunt conical lobe and be-



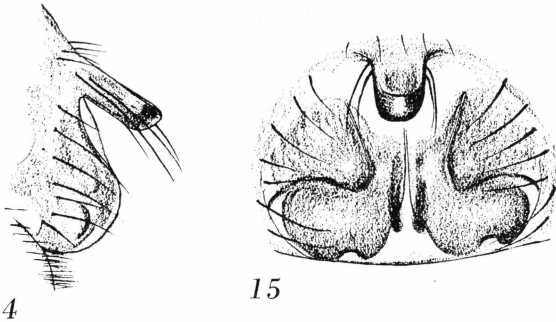
Figs. 10–13. *Cochlembolus sacer* CROSBY, ♂. Fig. 10. Cephalothorax from the side. $\times 100$. – Fig. 11. Right palp, lateral view. $\times 135$. – Fig. 12. Tibia of right palp, dorsal view. $\times 135$. – Fig. 13. Tibia of right palp, mesial view. $\times 135$.

tween this and the base a row of three stout black spines. Paracymbium and bulbus similar to that of the preceding species.

FEMALE. Total length 1.83 mm, carapace 0.82 mm long, 0.6 mm wide, sternum 0.47 mm long, 0.47 mm wide, Leg I 1.94 mm (Fe 0.58, Pt 0.23, Ti 0.45, Mt 0.36, Ta 0.32 mm), leg IV 2.13 mm (Fe 0.64, Pt 0.22, Ti 0.54, Mt 0.42, Ta 0.31 mm).

Carapace greyish yellowish brown with a dark median patch, faint radiating lines and a narrow dark seam at the margins; palpi and legs yellowish brown, abdomen dark grey. Carapace rather elongate

(length: width = 1.37), cephalic portion rather broad (0.44 mm at the level of the eyes), evenly and rather strongly convex from fovea over to the eyes. Clypeus 0.13 mm high, vertical, very slightly convex. Eyes: Anterior row slightly recurved, median eyes smaller than laterals, separated by the radius, from laterals by the diameter. Also posterior eyes in a slightly recurved line, equal, separated by a little less than the diameter. Median ocular quadrangle somewhat shorter than its posterior width. Chelicerae with 6 teeth on the anterior margin of the fang groove, lateral border straight with stridulating ridges. Legs: Spines



Figs. 14, 15. *Cochlembolus sacer* CROSBY. Fig. 14. Epigyne from the side. — Fig. 15 Epigyne from below. — $\times 140$.

as in the male; position of the trichobothrium of metatarsus I = 0.4. Epigyne as shown in Figs. 14 and 15, similar to that of *C. alpinus* (BANKS) but the clavus from the anterior margin of the epigyneal plate about twice as long as broad.

Taxonomical remarks:

The species is closely related to the preceding *Cochlembolus alpinus* (BANKS) but easily distinguished from this by the lower cephalic lobe of the male, the shape of the male palpal tibia and the epigyne of the female.

Another closely related species is *Cervinargus prominens* VOGEL-SANGER (1944) from Zermatt, Switzerland, of which only the male is known. It is distinguished from the present species mainly by the lack of the black tooth of the mesial apophysis of the tibia. The carapace is quite similar and the two species are undoubtedly congeneric. *Cervinargus prominens* must therefore be transferred to the genus *Cochlembolus* CROSBY (1929) which has priority over *Cervinargus* VOGELSANGER (1944).

Ecology:

Contrary to the preceding species, *Cochlembolus alpinus* (BANKS), *C. sacer* was mostly caught in pitfall traps and by sifting of litter. Only

twice were some specimens found under stones, viz. on the border of the willow thicket in Engelskmandens Havn, Disko, and in the herb cover on a slope near the Arctic Station, Godhavn. In the former locality the species was abundant in the litter under *Salix*, and in the Godhavn locality several specimens were also collected in traps. The species was also found in *Empetrum-Vaccinium*-heath and in *Carex* bogs.

6. *Collinsia holmgreni* (THORELL)

West Greenland records:

1. LENZ 1897, p. 75 (*Erigone groenlandica*).
2. SØRENSEN 1898, p. 209 (*Walckenaera similis*).
3. JACKSON 1938, p. 544 (*Coryphaeolana h.*).

Localities:

- 64°10' Store Malene, 780 m, July 1, 1962: 1 ♂ subad.
Southwest of Lille Malene, 20 m, July 1, 1962: 1 ♀.
69°15' Disko, Godhavn, Østerlien, July 6-26, 1962: 224 ♂♂ 235 ♀♀.
69°16' Disko, Lyngmarksfjeld, 100-250 m, July 10-22, 1962: 5 ♂♂ 13 ♀♀.
68°45' Egedesminde (2).
69°45' Taserssuaq (2).
70°32' Nûgssuaq peninsula, Agssakak (1).
72°50' Upernivik (3).

Distribution:

East Greenland (from lat. 60°40' to 74°05' N), West Greenland, Canada, Alaska, Iceland, Jan Mayen, the Faroes, Scotland, Switzerland, Erzgebirge, the Scandinavian Fjells, Spitzbergen, Bear Island, Novaya Zemlya, Siberia, Kamchatka.

Ecology:

In West Greenland as in the Scandinavian Fjells *Collinsia holmgreni* is typical of the snow beds, probably because it likes the humidity of the soil and the long-lasting snow-cover of this type of locality. Like some other Erigonids living in moist localities this species tolerates prolonged submergence in water; on one occasion it was seen to survive a submergence of two days. BRÆNDEGÅRD (1946) points out that in East Greenland it occurs almost exclusively in humid areas. It is the dominating species of the spider fauna of Jan Mayen (BRISTOWE 1925) and Bear Island (BRISTOWE 1933) which both have a very moist climate. In Spitzbergen it is rather rare in the part around the inner Icefjord, where the precipitation is low (HOLM 1958 a).

The species belongs to the Arctic region and occurs elsewhere only above the forest-limit. In the Scandinavian Fjells it is found about from 700 m up to the lichen zone, on Iceland from 340 to 1000 m a.s.l. (BRÆN-

DEGÅRD 1958). On the Faroes it is recorded from the top of Slaettara-tindur, 892 m, and in Scotland from heights of 1230 and 1340 m on Ben Nevis.

From the 6th to 26th of July 224 adult males and 235 females were caught in pitfall traps in Østerlien at Godhavn next to a snow-patch, where the soil was gradually covered by a dense mat of *Salix herbacea*. As seen from the following table the males predominated (62.6%) during the first fang period, July 6–10, after which they diminished in number, during the second period, July 10–19, to 42% and during the last period, July 19–26, to only 31.4%.

	6–10. VII	10–19. VII	19–26. VII	Total number
♂	134	52	38	224
♀	80	72	83	235

In the same locality also great numbers of *Rhaebothorax paetulus* (CAMBR.) were caught.

C. holmgreni was also found on the Lyngmarksfjeld at 100–250 m in snow-beds, on moist moss-covered ground in heaths and among mosses bordering a small brook.

7. *Collinsia spetsbergensis* (THORELL)

West Greenland record:

1. THORELL 1872, p. 154 (*Erigone spetsbergensis*).

Locality:

69°30' Disko Fjord, Kuánerssuit, June 24, 1871: 1 ♀ 3 juv. (Collectio THORELL, no. 119: 528 e) (1).

Distribution:

East Greenland (from lat. 65°35' to 68°05' N), North Greenland (Peary Land), West Greenland, Alaska (Thetis Island), Canada (Grant Land), Iceland, Spitzbergen, the Scandinavian Fjells, Novaya Zemlya, New Siberian Islands, Siberia (from lat. 69°15' to 77°34' N).

Ecology:

Collinsia spetsbergensis is only living under extreme arctic conditions and in the Scandinavian Fjells it is found exclusively in the lichen zone above 1500 m.

8. *Conigerella* n. gen. *borealis* (JACKSON)

(Figs. 16–18)

♂ (nec ♀) *Typhochrestus borealis* JACKSON 1930, Ann. Mag. Nat. Hist. (10) 6, p. 642, 649, pl. 17, figs. 11–14. Type locality: Godhavn, Disko, West Greenland.

For synonyms, see HOLM 1958 a, p. 40.

West Greenland record:

1. JACKSON 1930, p. 642 (*Typhochrestus* b.).
2. DENIS 1955, p. 65 (*Rhaebothorax* b.).

Localities:

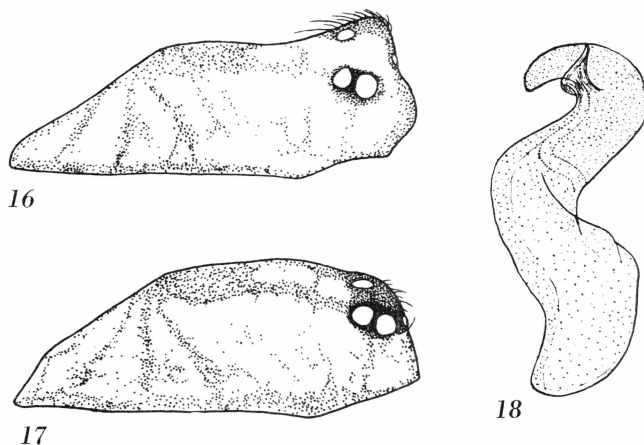
- 69°15' Disko, Godhavn (1).—Godhavn, July 10–19, 1962: 1 ♀.
 69°16' Disko, Fortunebay, July 12, 1962: 1 ♂ 3 ♀♀.
 Disko, Engelskmandens Havn, July 9, 1962: 1 ♀, July 26, 1962: 2 ♂♂ 1 ♀.
 Disko, Lyngmarksfjeld, 50–250 m, July 7–21, 1962: 3 ♂♂ 4 ♀♀.
 69°31' Disko Fjord, Kangerdluarssuk, July 17–18, 1962: 15 ♂♂ 30 ♀♀.
 69°46' Ege at Eqip sermia, glacier, July 24, 1962: 2 ♂♂.
 Ege, Port Victor (2).

Distribution:

East Greenland (from lat. 65°50' to 75°10' N), West Greenland, Canada (Labrador), Spitzbergen, Iceland, Northern Fennoscandia.

Taxonomical remarks:

JACKSON (1930) described this species, referring it rather hesitantly to the genus *Typhochrestus* SIMON. In 1943 I transferred it to *Rhaebo-*



Figs. 16–18. *Conigerella* n. gen. *borealis* (JACKSON). Fig. 16. Cephalothorax of the male from the side. $\times 100$. — Fig. 17. Cephalothorax of the female from the side. $\times 100$.
 — Fig. 18. Embolic division of right palp. $\times 450$.

thorax SIMON mainly because of the shape of its embolic division. However, its elongate carapace, in the male with a conical elevation of the interocular area and the fact that the anterior metatarsi are shorter than the tarsi clearly distinguish it from both these genera. As no Nearctic Erigonid genus seems to fit this species either, I have now decided to establish for it a new genus, *Conigerella*, with the following diagnosis:

Tibiae I–III with two dorsal spines, the spines about as long as the diameter of the tibia; position of the spine of tibia IV = 0.2. Metatarsus IV without a trichobothrium. Position of trichobothrium of metatarsus I = 0.41–0.52. Metatarsus I slightly shorter than tarsus I (ratio 0.9–0.98). Tibia IV considerably longer than metatarsus IV (ratio 1.25–1.3). Coxae IV with an inconspicuous stridulating point. Carapace elongate (length: width = 1.38–1.45 in the female), in the male with the interocular area conically elevated (Fig. 16). In the female the carapace is slightly and evenly convex between ocular area and posterior slope (Fig. 17). Embolic division (Fig. 18) consists of an elongate, S-curved plate, anteriorly continuing into a short, distally widened and truncate embolus and a stout, short and curved apophysis.

Type-species: *Typhochrestus borealis* JACKSON 1930.

Ecology:

Most specimens were obtained by sifting mosses and lichens in different types of heaths. With pitfall traps only males were collected.

9. *Cornicularia karpinskii* (O. P.-CAMBRIDGE)

(Figs. 19–22)

♂♀ *Erigone Karpinskii* O. P.-CAMBRIDGE 1873, Proc. Zool. Soc. London, p. 447, pl. 41, fig. 12. Type locality: Kuttuk on the southern point of Lake Baikal.

♂♀ *Walckenaera insolens* SØRENSEN 1898, Vid. Medd. Naturhist. Foren. København, p. 207 (ad part.).

♂(♀?) *Cornicularia karpinskii* (CAMBRIDGE), CROSBY & BISHOP 1931, J. N. Y. Ent. Soc. 39, p. 365, pl. 26, figs. 18–23.

♂ *Cornicularia karpinskii* (CAMBRIDGE), SCHENKEL 1934, Naturwiss. Unt. Sarekgeb. 4, Zool. 10, p. 960, figs. 4 a, b.

Records from West Greenland:

1. SØRENSEN 1898, p. 207 (*Walckenaera insolens*, ad part.).
2. HOLM 1958 b, p. 528.

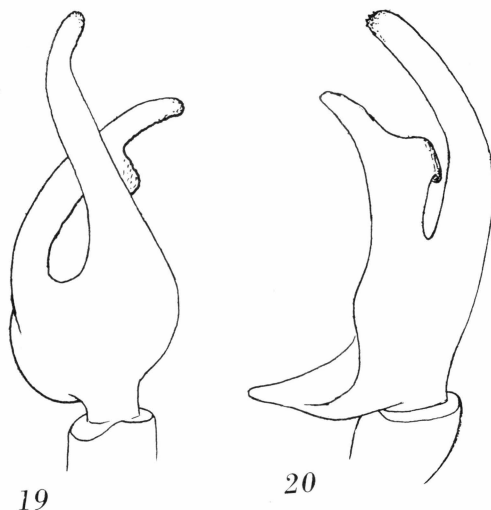
Localities:

- 62°20' Nigerdleq (1).
 64°09' Kobbefjord, SE side, June 30, 1962: 3 ♀♀.
 SW Store Malene, 80 m, July 1, 1962: 2 ♀♀.
 64°10' SW Lille Malene, 80 m, July 1, 1962: 3 ♀♀.
 Godthåb, June 30–July 3, 1962: 1 ♀.
 Ny Herrnhut (2).

Distribution:

East Greenland (Ũmánaq on Griffenfelds Ø, lat. 62°55' N), West Greenland, United States, Alaska, the Scandinavian Fjells, Siberia (south of Lake Baikal).

Records of this species from Iceland (BRÉNDEGAARD 1958) and Newfoundland (HACKMAN 1954) can be referred to *Cornicularia clavicornis* EMERTON as well. BONNET (1956) records *C. karpinskii* also from the Karpathian Mountains, but this is due to a misinterpretation of KOLOSVÁRY (1939).



Figs. 19, 20. *Cornicularia karpinskii* (CAMBRIDGE), ♂. Fig. 19. Tibia of right palp, dorsal view. – Fig. 20. Tibia of right palp, mesial view. – $\times 135$.

Ecology:

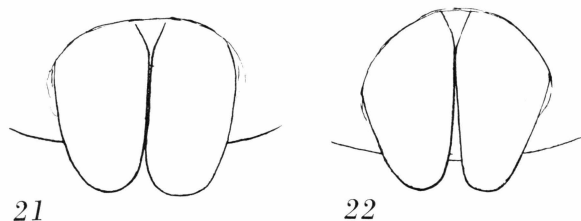
The specimens of the present collection were obtained among moss and under stones on rather moist dwarf-bush heaths and by sifting *Sphagnum* in a mire.

Taxonomical notes:

As pointed out in a previous paper (HOLM 1958 b) the name *Cornicularia karpinskii* (CAMBR.) covers two forms. In one the two tibial apophyses of the male cross each other at almost right angles, in the other they are nearly parallel. The first form agrees in this respect with the male specimen from Siberia described by O. P.-CAMBRIDGE (1873) under the name *Erigone karpinskii*. The second tallies with EMERTON's (1882) description of *Cornicularia clavicornis* from Mt. Washington, United States, this, too, based on one single male. CROSBY and BISHOP (1931) considered the two species synonymous, but their drawings of the male palp show that they based their description on specimens agreeing with the Siberian species. BRÉNDEGAARD (1946) has encountered both forms on Greenland, and says that they fall within the normal range of variation in *Cornicularia karpinskii*. In his opinion there is a

connection with size, the tibial apophyses being crossed in big males and parallel in smaller ones. In 1958 I recorded both forms from Lapland (HOLM 1958 a) and from Greenland (HOLM 1958 b). In the former region the first form occurs in the birch forest belt and the lower arctic zone, while the second is confined to the upper arctic zone.

There are no transitions between the two forms in my Lapland material, which on the other hand is rather small. My Greenland collection is larger, consisting of 9 females from the Godthåb area and 19 males and 20 females from Disko and its surroundings. All the males are completely identical with *C. clavicornis* and there is hardly any variation concerning the shape and direction of the tibial apophyses. From the Godthåb area I have, however, previously (HOLM 1958 b) recorded a



Figs. 21, 22. *Cornicularia karpinskii* (CAMBRIDGE), epigynes of females from Godthåb. $\times 135$.

male with the crossed tibial apophyses typical of *C. karpinskii* s. str. (Figs. 19, 20). The 19 males from the Disko area have carapace lengths of between 0.82 and 0.94 mm. In the Godthåb male this length is 0.93 mm, i.e. no greater than that of the biggest Disko specimens. In spite of this the tibial apophyses have the characteristic *C. karpinskii* s. str. appearance.

A comparison between the females from Disko and those from Godthåb reveals considerable differences regarding the shape and length of the two tongue-shaped plates of the epigyne as well as the mean carapace length. In the Godthåb specimens the length of the epigyneal plates is between 0.18 and 0.19 mm in all specimens, and the length of the carapace varies between 0.92 and 0.98 mm, the mean length being 0.95 mm. In the 20 females from Disko the epigyneal plates are between 0.12 and 0.15 mm long, and the length of the carapace varies between 0.8 and 0.95 mm, the mean being 0.88 mm. Further, there is a clear difference between the Godthåb and Disko females regarding the shape of the two epigyneal plates. In the former the plates have almost parallel sides but in the latter there is a more or less demarcated lateral bulge near the base. The difference becomes apparent if Figs. 21 and 22 of the epigynes of two females from Godthåb are compared with Figs. 26 and 27 below, showing the epigynes of two Disko females.

The above-mentioned differences seem to justify the opinion that these forms are two separate though closely related species. Presumably they will twin out to have different geographical and vertical distribution, *C. karpinskii* occurring further south and at lower heights than *C. clavicornis*.

Of the West Greenland specimens of *Walckenaera insolens* in SØRENSEN's material only one, a female from Nigerdleq, belongs to *C. karpinskii* s. str. Its carapace length is 1.05 mm, and the epigyneal plates are 0.21 mm long. In both these respects it thus exceeds the Godthåb females, but the shape of its epigyneal plates is the same as in the latter. The difference in size is presumably connected with the fact that Nigerdleq, where the female comes from, is much further south — lat. 62°20' N.

10. *Cornicularia clavicornis* EMERTON

(Figs. 23–27)

♂ *Cornicularia clavicornis* EMERTON 1882, Conn. Ac. Sci. Trans. 6, p. 43, pl. 8, figs. 7, 7 a, 7 b. Type locality: Mt. Washington, New Hampshire, U.S.A.

♂♀ *Walckenaera insolens* SØRENSEN 1898, Vid. Medd. Naturhist. Foren. København, p. 207 (ad part.).

♂♀ *Cornicularia karpinskii* DE LESSERT 1910, Cat. Inv. Suisse 3, Araignées, p. 180, figs. 103, 104.

(non *Erigone karpinskii* O. P.-CAMBRIDGE 1873, Proc. Zool. Soc. London, p. 447).

♂♀ *Cornicularia karpinskii* BRÆNDEGAARD 1946, Medd. Grønland 121:15, p. 35, figs. 21–23.

♂♀ *Cornicularia karpinskii* LOCKET and MILLIDGE 1953, British Spiders 2, p. 207, figs. 126 C, D, G, J, 127 C.

West Greenland records:

1. SØRENSEN 1898, p. 207 (*Walckenaera insolens* ad part.).
2. JACKSON 1938, p. 544 (*C. karpinskii*).
3. BRÆNDEGAARD 1946, p. 35 (*C. karpinskii*)

Localities:

69°15' Disko, Godhavn, July 10–26, 1962: 1 ♂ 4 ♀♀.

Disko, Østerlien July 6–19, 1962: 10 ♂♂ 3 ♀♀.

69°16' Disko, Lyngmarksfjeld, 70–250 m, July 13–21, 1962: 5 ♂♂ 5 ♀♀.

69°30' Disko Fjord, Kangerdluarssuk, July 17–18, 1962: 2 ♂♂ 7 ♀♀.

69°46' Ritenbenk (1).

Arveprinsens Ejland, Atå, July 24, 1962: 1 ♀.

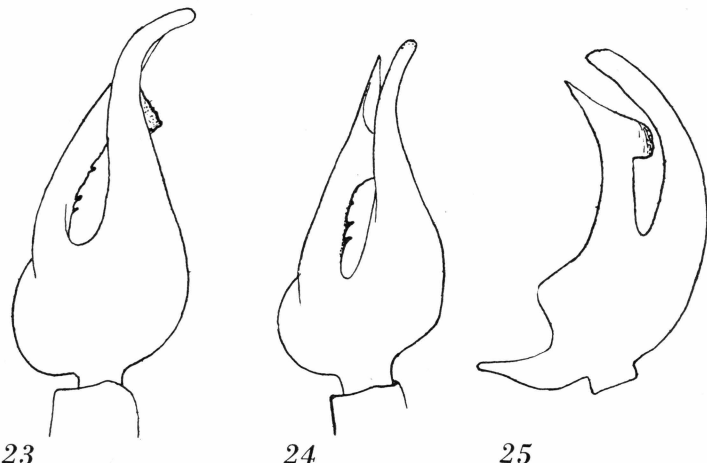
74°40' Ryders Øer (2).

Distribution:

East Greenland (from lat. 69°24' to 73°45' N), West Greenland, Canada, United States, (Mt. Washington, New Haven), Alaska, Spitzbergen, the Faroes, the Scandinavian Fjells, the British Isles, the Swiss Alps.

Taxonomical remarks:

This species was described by EMERTON (1882) from a male specimen from Mt. Washington, New Hampshire, U.S.A., but CROSBY and BISHOP (1931) considered it synonymous with *Cornicularia karpinskii* (CAMBR.). As I have pointed out above (p. 22) the two are indeed closely related, but there are such constant divergences regarding the palpal tibia in the male and the shape of the epigyne in the female that they must be considered separate species. There seems moreover to be



Figs. 23–25. *Cornicularia clavicornis* EMERTON, ♂. Fig. 23. Tibia of right palp, dorsal view. – Fig. 24. Tibia of right palp, dorsal view. – Fig. 25. Tibia of right palp, mesial view. – $\times 135$.

a difference in the mean size of each species. Briefly the following points may be said to distinguish *C. clavicornis* from *C. karpinskii*.

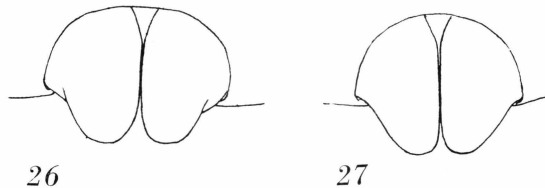
1) The carapace is somewhat smaller, in the male 0.82–0.94 mm, mean length 0.88 mm, in the female 0.8–0.95 mm, mean length 0.87 mm.

2) In the male the tibial apophyses of the palp both points forwards. Seen from above the two tips are either parallel (Fig. 24) or the outer (lateral) apophysis covers the terminal part of the inner (mesial) apophysis. (Fig. 23). Usually the lateral edge of the basal part of the inner apophysis is equipped with 2–3 black teeth (Figs. 23, 24), but these may also be absent altogether.

3) In the female the two tongue-shaped plates of the epigyne are shorter, 0.12–0.15 mm, and usually with a pronounced bulge laterally at the base. The lateral bulge is more or less pronounced in different specimens (Figs. 26 and 27).

The figures of the male palp and the epigyne presented in DE LESSERT (1910), BRÆNDEGÅRD (1946) and LOCKET and MILLIDGE (1958)

and under *Cornicularia karpinskii* are actually of the other species, *C. clavicornis*, since both the tibial apophyses of the palp and the epigyneal plates have the appearance typical of the latter. DE LESSERT (op. cit., Fig. 103) has a dorso-lateral view of a male palp where the tip of the inner apophysis emerges slightly laterally of the outer one. Seen from the same angle the palps of the Greenland specimens of *C. clavicornis* look exactly like this. LOCKET and MILLIDGE (op. cit., Fig. 128 C) show an epigyne typical of *C. clavicornis*, the epigyneal plates having a strong lateral bulge at base. Mr. G. H. LOCKET has kindly sent me some drawings of the palp of a male caught by Mr. A. A. DE LA TOUCHE on the summit of Helvellyn, Westmoreland, about 1000 m above sea level.



Figs. 26, 27. *Cornicularia clavicornis* EMERTON. Epigynes of females from Disko. $\times 135$.

This specimen has parallel tibial apophyses but the distal part of the inner apophyses is bent slightly inwards, a trait which it has in common with Swedish specimens of the species. Quite probably there is a tendency for separate geographical forms to appear in this species.

SØRENSEN'S material of *Walckenaera insolens* includes 1 ♂ and 4 ♀♀ from Ritenbenk, West Greenland. The male fully agrees with the Disko specimens concerning the length, shape and direction of the two tibial apophyses. (BRÆNDEGAARD'S (1946) statement that the apical part of the inner apophysis is absent is due to a mistake). Similarly the plates in the epigyne are 0.15 mm long in three of the females (in the fourth the abdomen is missing), just as in some of the females from Disko. The carapace length is 0.81 mm in the male and 0.83–0.87 mm in the four females.

JACKSON (1938) reported a female of *C. karpinskii* from the islands Ryders Øer (lat. 74°40' N). However, the northerly position of the find locality strongly suggests that the specimen belongs to *C. clavicornis*, and not to *C. karpinskii* s. str. whose northern limit in West Greenland ought to be somewhere between 64° and 69° N lat.

Ecology:

The species is found among mosses in bogs and preferably luxuriant heath. All the specimens were collected either in pitfall traps or by sifting.

11. *Cornicularia cuspidata* (BLACKWALL)

Localities:

69°15' Disko, Godhavn, July 15–19, 1962: 6 ♀♀.

69°16' Disko, Engelskmandens Havn, July 21–26, 1962: 2 ♂♂ 1 ♀.

Distribution:

West Greenland, Canada (Newfoundland), United States (Mt. Marcy, New York), Iceland, the Faroes, north and central Europe except Russia, Kamchatka.

Taxonomical remarks:

HACKMAN (1954) has pointed out that *Cornicularia breviscula* CROSBY & BISHOP is synonymous with this species, a fact verified by BRÉNDEGAARD (1958) by correspondance with the authors.

The males and females from Disko have been compared with Swedish specimens and no differences have been observed.

Ecology:

All the specimens were found in herb field on slopes. One of the female was caught under a stone, the remaining specimens in traps. In Sweden the species occurs in *Hylocomium* and *Spagnum* in forests and mires, in the mountains also in moist meadows above the forest limit. In the Alps the species is recorded up to 3000 m.

12. *Diplocentria replicata* HOLM

(Figs. 28–31)

♂♀ *Diplocentria replicata* HOLM 1950, Zool. Bidr. Uppsala 29, p. 139, Figs. 11 a–d.

Type locality: Kopparåsen, Torne lappmark, Sweden.

Localities:

64°10' Godthåb June 30–July 3, 1962: 2 ♂♂.

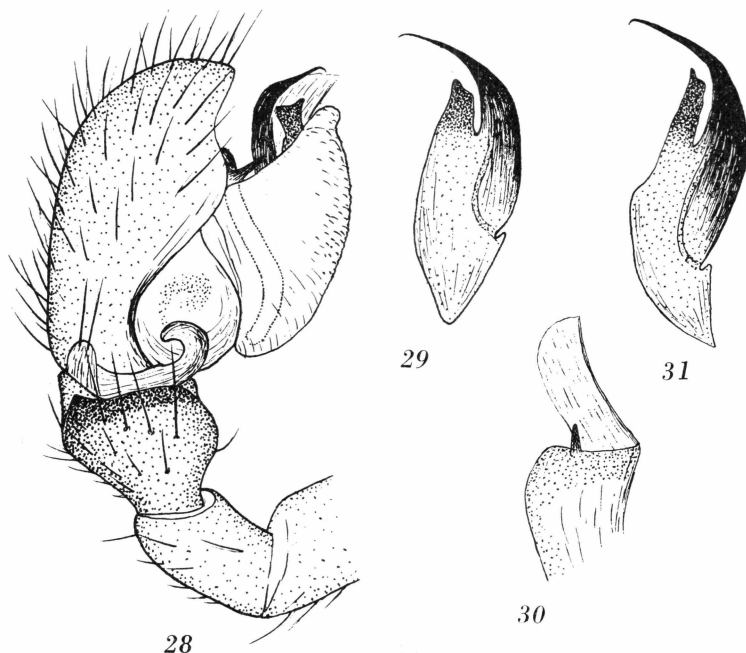
69°16' Disko, Lyngmarksfjeld, 70 m, July 21, 1962: 1 ♀.

Distribution:

West Greenland, Sweden, Finland.

Taxonomical remarks:

The embolic division is slightly different in Greenland and Swedish specimens of this species. In the former the ventral apophysis at the side of the embolus is about as long as broad at base, in the latter almost three times as long as broad; there is also a slight difference in the form of the basal part (scaphium) of the embolic division, the posterior tip being directed more upwards in Swedish specimens (cfr. Figs. 29 and 30).



Figs. 28-31. *Diplocentria replicata* HOLM, ♂. Fig. 28. Right palp, lateral view. - Fig. 29. Embolic division of a Greenland specimen. - Fig. 30. Median apophysis of right bulb. - Fig. 31. Embolic division of a Swedish specimen. $\times 190$.

Ecology:

This apparently rare species occurs both in very moist localities as *Sphagnum* bogs and dry localities like lichen heaths. On the slope of the Lyngmarksfjeld a single female was obtained by sifting of litter in a dense *Salix* thicket.

13. *Diplocephalus barbatus* (L. KOCH)

(Figs. 32-36)

♂ (♀?) *Erigone barbata* L. KOCH 1897, Kungl. Vet. Akad. Handl. 16:5, p. 60, pl. 2, figs. 13, 13 a, 13 b. Type locality: Alkfient, Besimonnaja Bay, Novaya Zemlya (male lectotype).

♀ *Erigone incerta* L. KOCH 1879, Ibid. 16:5, p. 52, pl. 2 figs. 6, 6 a.

♂♀ *Diplocephalus barbatus* (L. KOCH), KULCZYNSKI 1908, Mém. Ac. Imp. Sci. St. Petersb. (8) 18:7, p. 11, pl. 1, figs. 14-17, 21.

Lophocarenum barbata (L. KOCH), EMERTON 1921, Psyche 28, p. 165.

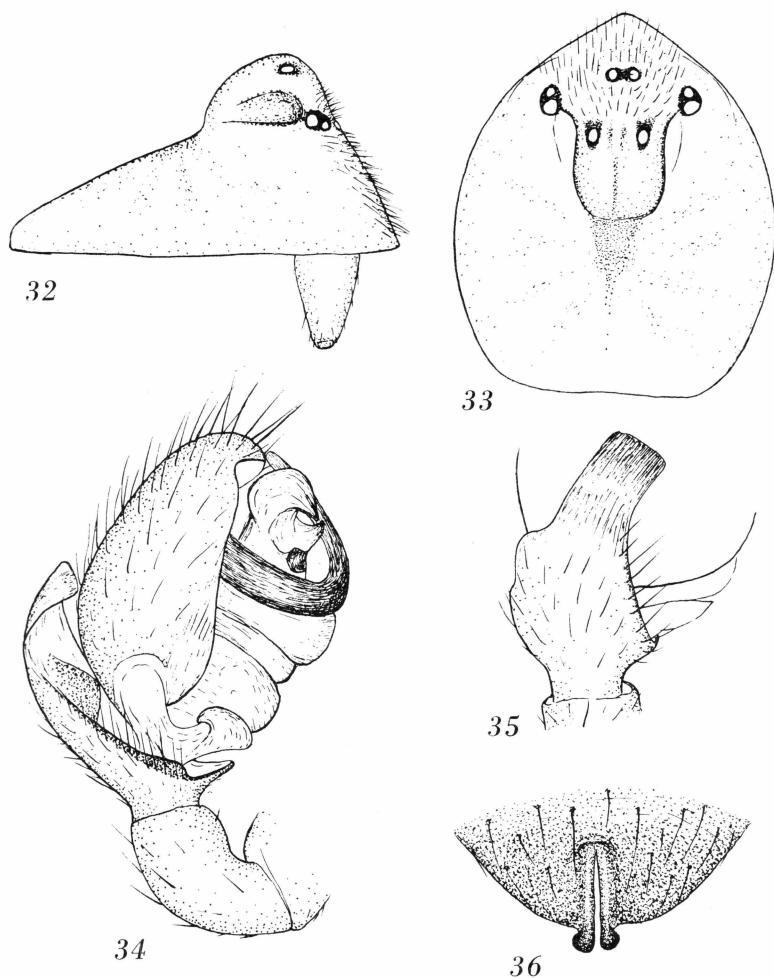
♀ *Savignia barbata* (L. KOCH), M. DAHL 1928, Rep. Sci. Res. Norw. Exp. N. Zemlya 1921, Zool. 33, p. 18, figs. 27, 28.

West (north) Greenland record:

EMERTON 1921, p. 165 (*Lophocarenum barbata*).

Locality:

78°24' Etah.



Figs. 32–36. *Diplocephalus barbatus* (L. Koch). Fig. 32. Cephalothorax of the male from the side. $\times 65$. – Fig. 33. Cephalothorax of the male, dorsal view. $\times 65$. – Fig. 34. Right male palp, lateral view. $\times 135$. – Fig. 35. Tibia of right palp, dorsal view. $\times 135$. – Fig. 36. Epigyne, ventral view. $\times 135$.

Distribution:

West (north) Greenland, Arctic Canada, West Siberia.

Taxonomical notes:

Dr. W. J. GERTSCH, American Museum of Natural History, kindly let me examine the male specimen of *Lophocarenum barbata* recorded from Etah by EMERTON (1924). A comparison with the type specimen of *Erigone barbata* L. KOCH (1879), a male from Alkfient, Novaya Zemlya (Figs. 32–35), showed a complete agreement regarding the shape of the cephalothorax and the structure of the palp.

It is somewhat doubtful whether the females described by KOCH as belonging to this species really are conspecific with the male. On the other hand a female from Gåskap, Novaya Zemlya, which L. KOCH (1879) described as *Erigone incerta* most probably belongs to *D. barbatus*. Its epigyne is exactly alike that of a female collected together with a typical male on Ellesmere Island (in the collections of the American Museum of Natural History).

14. *Dismodicus bifrons decemoculatus* (EMERTON)

(Fig. 37)

♂ *Lophocarenum decemoculatus* EMERTON 1882, Trans. Connect. Ac. Sci. 6, p. 46, pl. 12, fig. 4. Type locality: Mt. Washington, New Hampshire, U.S.A.

♀ *Lophocarenum decemoculatus* EMERTON, EMERTON 1911, Ibid. 16:4, p. 393, pl. 2, fig. 7.

♂♀ *Dismodicus decemoculatus* (EMERTON), CROSBY & BISHOP 1933, Ann. Ent. Soc. Amer. 26, p. 149, pl. 7, figs. 165-169.

♀ *Dismodicus variegatus* JACKSON 1938, Proc. Zool. Soc. London 107, p. 549.

♀ *Dismodicus modicus* CHAMBERLIN & IVIE 1947, Bull. Univ. Utah 37: 10, p. 35, pl. 2, fig. 32.

♂♀ *Dismodicus bifrons decemoculatus* (EMERTON), HACKMAN 1954, Acta Zool. Fenn. 79, p. 28, figs. 72, 74, 76.

Dismodicus bifrons decemoculatus (EMERTON), HOLM 1958, Ark. Zool. 11:31, p. 527.

West Greenland records:

1. JACKSON 1938, p. 549 (*D. variegatus*).
2. HOLM 1958 b, p. 527.

Localities:

- 61° "Eid" (2).
 64°09' Store Malene, 40-80 m, June 26-July 3, 1962: 2 ♀♀.
 64°10' Lille Malene, 80 m, July 1, 1962: 1 ♀.
 67° Amerdloq Fjord (1).
 64°21' Itivdleg, Eqalugialik, July 2, 1962: 7 ♀♀.
 69°15' Disko, Godhavn, July 9-26, 1962: 97 ♂♂ 41 ♀♀.
 69°16' Disko, Engelskmandens Havn, July 1962: 2 ♀♀ 4 juv.

Distribution:

West Greenland, Canada, United States (New England; New York), Alaska.

Taxonomical remarks:

Like HACKMAN (1954) I regard *Dismodicus decemoculatus* (EMERTON) as a subspecies of *D. bifrons* (BLACKWALL), since the two forms are distinguished only by their colour and a slight difference in the shape of the carapace of the male.

The Greenland specimens differ from European ones primarily by the lighter colour of their carapace: in the male orange yellow with the cephalic portion except the lobe dark, in the female pale greyish yellow with a black trident-shaped marking from the fovea to the ocular area. The most apparent difference between the two forms, however, is the shape of the cephalic lobe of the male, which in the nominate form rises at an almost right angle behind, in *decemoculatus* is only slightly set off

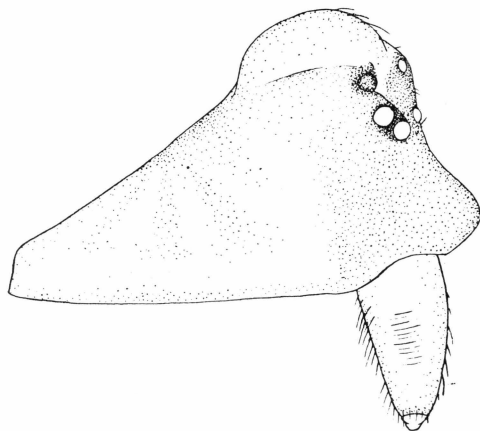


Fig. 37. *Dismodicus bifrons decemoculatus* (EMERTON), ♂. Cephalothorax from the side. $\times 65$.

from the steeply raising thoracic portion. (Fig. 37). Regarding the form of the tibial apophysis I see no difference in the two forms. HACKMAN (1954) found that this process in specimens from Newfoundland is wider and thinner than in *bifrons*.

Ecology:

The species is typical of the willow thickets, where it often occurs abundantly both on the leaves and among the litter.

15. *Erigone arctica soerenseni* HOLM

(Figs. 38–43)

♂ *Erigone arctica soerenseni* HOLM 1956, Ark. Zool. 9:20, p. 460, figs. 2 f, 3 a–d.

Type locality: Tunugdliarfik fjord, West Greenland.

West Greenland records:

1. SØRENSEN 1898, p. 201 (*E. arctica* ad part.).
2. HOLM 1956, p. 460.

Localities:

61° Tunugdliarfik fjord (1, 2).

64°10' Godthåb, June 30, 1962: 14 ♀♀ 1 juv.

Distribution:

West Greenland.

Taxonomical remarks:

To my description of the male of this subspecies I can now add that of the female from one of the specimens from Godthåb recorded above. All of these undoubtedly belong to the same form as the male holotype from Tunugdliarfik fjord.

FEMALE. Total length 2.99 mm, carapace 1.24 mm long, 0.92 mm wide, sternum 0.67 mm long, 0.69 mm wide.

Carapace dusky brown with black radiating lines on thoracic portion, sternum blackish brown, chelicere brown, legs pale greyish brown and abdomen black.

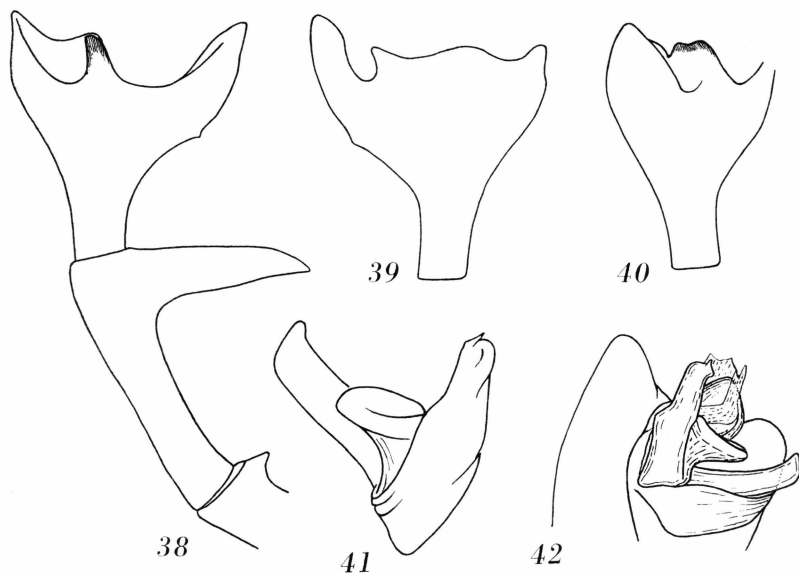
Carapace with margins on either side armed with about 20 small teeth. Clypeus 0.11 mm high, protruding, concave beneath the eyes, convex in the lower half. Eyes: Anterior eyes in procurved line, diameter of medians $\frac{3}{4}$ of that of laterals; medians separated by the radius, from laterals by the diameter. Posterior eyes in a straight (in some of the paratypes slightly recurved) line, equal, median interval equal to the diameter of the eyes, lateral interval somewhat wider (3:2). Legs: Spine armature as typical of the genus. Length of spine of tibia IV 1.5 times the diameter of the joint. Position of trichobothrium of metatarsus I = 0.52.

Leg	Fe	Pt	Ti	Mt	Ta	Total
I	0.92	0.35	0.76	0.7	0.47	3.2 mm
II	0.87	0.35	0.76	0.68	0.45	3.11 „
III	0.78	0.32	0.61	0.61	0.41	2.73 „
IV	1.03	0.34	0.93	0.81	0.47	3.58 „

Epigyne: 0.36 mm wide; in 13 other females from the same locality the width varies from 0.35 mm to 0.42 mm, the average being 0.38 mm. Posterior margin slightly and broadly indented. Dorsal (inner) surface of epigyne with a broad margin; width of the groove 3.6 times the width of the lateral parts of the margin. The median plate (vestibulum) narrower posteriorly than anteriorly. The triangular lobe on either side of the median plate covers the antero-lateral parts of the latter.

Distribution:

West Greenland from the south to probably about lat. 64° N.



Figs. 38–42. *Erigone arctica soerenseni* HOLM, ♂, right palp. Fig. 38. Patella and tibia, lateral view. – Fig. 39. Tibia, mesial view. – Fig. 40. Tibia, dorso-lateral view. – Fig. 41. Embolic division, ventral view. – Fig. 42. Bulb, lateral view. – $\times 80$.

Taxonomical remarks:

SØRENSEN (1898) recorded *Erigone arctica* WHITE from two localities in West Greenland, the male mentioned above from Tunugdliarfik fjord and a female from Ritenbenk. After having investigated the latter

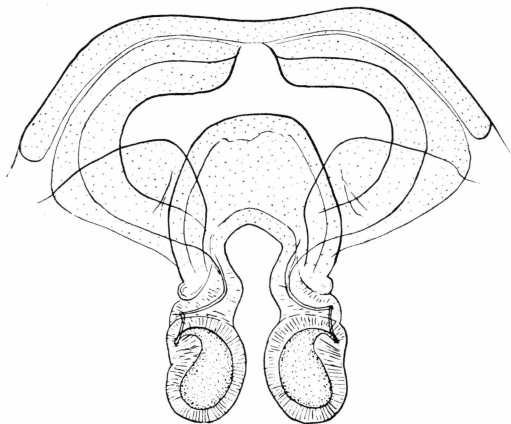


Fig. 43. *Erigone arctica soerenseni* HOLM, vulva. $\times 175$.

BRÆNDEGAARD (1946, p. 49) could state that it actually belongs to *Erigone whymperi* (CAMBR.). The epigynes of the females from Godthåb (Fig. 43) are distinctly smaller (cfr. HOLM 1956) and have a much broader

margin than those of the nominate form and of the other subspecies of *E. arctica* (WHITE) (*maritima* KULCZ., *palaeartica* BRÆND. and *sibirica* KULCZ.). Obviously the specimens belong to the subspecies *soerenseni* of which hitherto only the male was known. The male is distinctly different from *E. arctica* *maritima* and all the other races of this species by its small size, the shape of the embolic division and very long patellar apophysis of the palp (Figs. 38–42). As far as we know this form is restricted to the southwestern parts of Greenland.

Ecology:

The specimens recorded above were collected under stones on *Salix herbacea* covered soil near the sea shore.

16. *Erigone whymperi* O. P.-CAMBRIDGE

West Greenland records:

1. CAMBRIDGE 1877, p. 276.
2. LENZ 1897, p. 74 (*E. longipalpis*).
3. SØRENSEN 1898, p. 200.
4. SØRENSEN 1898, p. 201 (*E. arctica* ad part.).
5. JACKSON 1930, p. 642.
6. HOLM 1958 b, p. 527.

Localities:

- 60° Frederiksdal (6).
 60°50' Igaliko (3).
 61° "Eid" (6).
 64°02' Itivdleq. Eqalugialik, July 2, 1962: 4 ♂♂ 9 ♀♀ 25 juv.
 64°10' Ny Herrnhut (6).
 64°40' Godthåbsfjord (5).
 69°13' Jakobshavn (1, 3).
 69°15' Disko, Godhavn, July 5–26, 1962: 24 ♂♂ 134 ♀♀.
 Disko, Godhavn, Østerlien, July 6–26, 1962: 17 ♂♂ 42 ♀♀.
 69°16' Disko, Lyngmarksfjeld, 250 m, July 13–20, 1962: 3 ♀♀ 7 juv.
 69°45' Ritenbenk (4).
 69°46' Arveprinsens Ejland, Atâ, July 24, 1962: 1 ♀.
 70°32' Nûgssuaq peninsula, Agssakak (2).

Distribution:

East Greenland (70°50' N lat.), West Greenland.—From Labrador (Akpatok) JACKSON (1938) has described a subspecies, *E. whymperi minor*.

Taxonomical remarks:

STRAND (1907) has recorded *Erigone whymperi* from Ellesmere Land. His specimens, 2 females collected during the second "Fram" expedition, were examined by BRÆNDEGAARD (1936), who concurred with STRAND's determination. I have examined the same specimens and

after clearing found the epigynes to be slightly different from those of Greenland specimens and more in accordance with the epigyne of *Erigone metlakatla* CROSBY & BISHOP. As I have not yet been able to investigate all the other North American *Erigone* species in this respect, this determination is only preliminary.

Ecology:

The species occurs in moist and open localities like mires and moss cover adjoining brooks and tarns as well as on heaths with low *Salix* vegetation. At Eqaugialik numerous specimens were collected by sifting *Fucus* wrack on the seashore.

17. *Hilaira frigida* (THORELL)

♀ *Erigone frigida* THORELL 1872, Öfv. Vet. Akad. Förhand. 1872, 2, p. 152.

Type locality: Kuannersuit, Disko, West Greenland.

♂♀ juv. *Erigone modesta* THORELL 1872, Ibid. 2, p. 154.

West Greenland records:

1. THORELL 1872, p. 152 (*Erigone frigida*), p. 154 (*Erigone modesta*).
2. SØRENSEN 1898, p. 197 (*Tmeticus frigidus*).
3. JACKSON 1930, p. 643.
4. JACKSON 1938, p. 545.
5. HOLM 1958 b, p. 528.

Localities:

59°52' Qeqertasugssuk (2).

60°45' Julianehåb (5).

61° "Eid" (5).

64°09' Kobbefjord, southeastern shore, June 30, 1962: 6 ♀♀ 2 juv.

64°10' Ny Herrnhut (5).

Godthåb, June 30, 1962: 2 ♀♀ 1 juv.

Lille Malene, 80 m, July 1, 1962: 1 ♀.

Store Malene, 780 m, July 1, 1962: 2 ♀♀ 2 juv.

64°40' Godthåbsfjord (3).

69°15' Disko, Godhavn, July 6-26, 1962: 4 ♂♂ 10 ♀♀.

69°16' Disko, Fortunebay, July 12, 1962: 2 ♀♀ 2 juv.

Disko, Engelskmandens Havn, July 9-26, 1962: 3 ♀♀.

69°30' Disko Fjord, Kangerdluarssuk, July 12, 1962: 1 ♂ 9 ♀♀ 11 juv.

69°35' Disko Fjord, Kuannersuit (1).

69°46' Ritenbenk (2).

Arveprinsens Ejland, Atâ, July 24, 1962: 2 ♀♀.

Ege at the Eqip sermia glacier, July 24, 1962: 1 ♂ 8 ♀♀.

73°45' Upernivik (4).

Distribution:

East Greenland (from 59°50' to 72°50' N lat.), West Greenland, Baffin Land, Labrador, Northern Fennoscandia, the Murman coast, Great Britain, Ireland, the Shetland Isles, the Faroes, Iceland, Jan Mayen.

Taxonomical remarks:

After having examined the type specimens of *Erigone modesta* THORELL (1872) I arrived at the conclusion that this species most probably is a synonym of *H. frigida* (THORELL), (HOLM 1958 b, p. 528).

EMERTON (1921) recorded *Hilaira leviceps* (L. KOCH) from Angmagssalik (65°35' N) in the Sydøstkyst area of East Greenland. Most probably this record is to be referred to *H. frigida*, which is most common in this part of Greenland. BRÆNDEGAARD (1946) in his survey of East Greenland spiders does not mention *H. leviceps*.

Ecology:

This species was found under stones on snow beds with *Salix herbacea* and on moist dwarf-shrub heaths and meadows. It is often abundant among mosses in mires but also occurs in the litter layer of willow scrub. According to BRÆNDEGAARD (1946) it is restricted to areas with pronouncedly humid climates.

18. *Hilaira vexatrix* (O. P.-CAMBRIDGE)

♀ *Erigone vexatrix* O. P.-CAMBRIDGE 1877, Ann. Mag. Nat. Hist. (4) 20, p. 280, pl. 8, Fig. 6 Type locality: Discovery Bay, Ellesmere Land.

♂♀ *Erigone frigida* THORELL, LENZ 1897, Biblioth. Zool. 8, p. 74, Figs. 4, 5. (non *Erigone frigida* THORELL 1872, Öfv. Vet. Akad. Förhandl. 1872, p. 152).

♀ *Araconcus ruderalis* SØRENSEN 1898, Vid. Medd. naturhist. Foren. 50, p. 210.

♂♀ *Notioscopus* (?) *curvitorsus* SØRENSEN 1898, Vid. Medd. naturhist. Foren. 50, p. 211.

Hilaira glacialis (THORELL), EMERTON 1921, Psyche 28, p. 165.

(non *Erigone glacialis* THORELL 1872, Öfv. Vet. Akad. Förhandl. 1871, p. 694).

♂♀ *Hilaira whymperi* JACKSON 1933, Proc. Zool. Soc. London, p. 152, pl. 2, figs. 2, 4.

♂♀ *Arctilaira bellans* CHAMBERLIN 1922, J.N.Y. Ent. Soc. 29, p. 40.

Hilaira whymperi JACKSON 1934, Ann. Mag. Nat. Hist. (10) 14, p. 613.

Hilaira glacialis whymperi JACKSON, BRÆNDEGAARD 1934, Vid. Medd. Dansk Naturhist. Foren. 98, p. 48.

♂ *Hilaira vexatrix* (CAMBRIDGE), HOLM 1937, Ark. Zool. 29 A:18, p. 7, figs. 3 a, d, g.

♂♀ *Hilaira curvitorsis* (SØRENSEN), BRÆNDEGAARD 1940, Medd. Grønl. 125:8, p. 12, figs. 7-9.

Hilaira curvitorsis (SØRENSEN), BRÆNDEGAARD 1946, Ibid. 121:15, p. 38.

Hilaira glacialis (?) (THORELL), BRÆNDEGAARD 1946, Ibid. 121:15, p. 39.

Hilaira vexatrix (CAMBRIDGE), BRÆNDEGAARD 1960, Ibid. 159:6, p. 14.

West Greenland records:

1. LENZ 1897, p. 74 (*Hilaira frigida*).

2. SØRENSEN 1898, p. 210 (*Araconcus ruderalis*).

3. SØRENSEN 1898, p. 211 (*Notioscopus curvitorsus*).

4. EMERTON 1921, p. 165 (*Hilaira glacialis*).

Localities:

68°45' Egedesminde (3).

69°15' Disko, Godhavn, July 6-10, 1962: 1 ♂ 1 ♀, 10-19: 4 ♂♂ 8 ♀♀, 19-26: 1 ♂ 11 ♀♀.

69°16' Disko, Lyngmarksfjeld, S slope, 70 m, July 21, 1962: 1 ♀ 2 juv.

Disko, Fortunebay, July 12, 1962: 1 ♀ 5 juv.

69°30' Disko Fjord, Kangerdluarssuk, July 19, 1962: 2 ♂♂ 10 ♀♀ 23 juv.

69°46' Ege at Eqip sermia glacier, July 24, 1962: 2 ♀♀ 1 juv.

70°32' Nûgssuaq peninsula, Agssakak (1).

70°40' Nûgssuaq peninsula, "Kome" (Kûk) (1).

72°50' Upernivik (2).

76°40' Saunders Ø (4).

Distribution:

East Greenland (from 70°25' to 76°50' N lat.), North Greenland (Peary Land, ca. 82° N lat.), West Greenland, Arctic Canada, Alaska.¹⁾

Ecology:

In no locality was this species found under stones. It was collected both with pitfall traps in dwarf-bush heaths and willow scrub and by sifting moss and litter in heaths, mires and willow scrub. It seems to prefer moist places with a fairly luxuriant field layer. Males were rather rare during July and the whole material collected by sifting and pitfall traps from July 6 to 26 consisted of 34 females and only 8 males. 12 subadult males collected from July 12 to 24 all moulted during August.

19. *Hybocoptus gibbosus* (SØRENSEN)

(Figs. 44-50)

♂♀ *Minicia* (?) *gibbosa* SØRENSEN 1898, Vid. Medd. naturhist. Foren. København 50, p. 216. Type locality: Igaliko, West Greenland.

♂ *Lophocarenum dentipalpis* EMERTON 1915, Trans. Conn. Acad. Sci. 20, p. 149, Pl. 2, Fig. 9.

♀ (nec ♂) *Gongylidium tuberosus* EMERTON 1915, Trans. Conn. Acad. Sci. 20, p. 150, Pl. 2, Fig. 5.

♂♀ *Diplocephalus wamotsus* CHAMBERLIN 1919, Ann. Ent. Soc. Amer. 12, p. 251, Pl. 18, Figs. 7, 6.

♂♀ *Hybocoptus dentipalpis* (EMERTON), CROSBY and BISHOP 1933, Ann. Ent. Soc. Amer. 26, p. 157, Pl. 8, Figs. 186-193.

♀ *Hybocoptus denticulatus* (pro *dentipalpis* EMERTON), HACKMAN 1954, Acta Zool. Fenn. 79, p. 30, Fig. 68.

West Greenland record:

1. SØRENSEN 1898, p. 216 (*Minicia* (?) *gibbosa*).

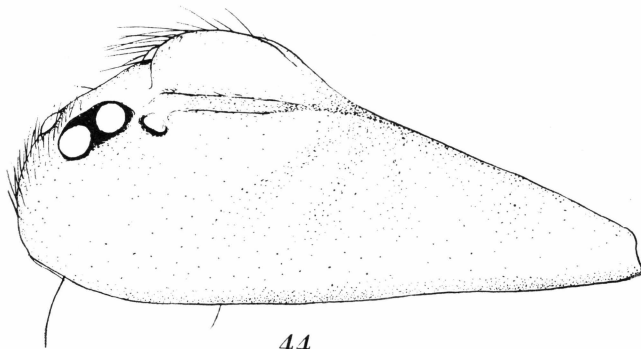
¹⁾ SCHENKEL (1950) recorded *Hilaira curvitaris* (Soer.) from Banff, Alberta. His specimens, 1 ♂ and 1 ♀, belong, however, to *Hilaira herniosa* (Thor.).

Localities:

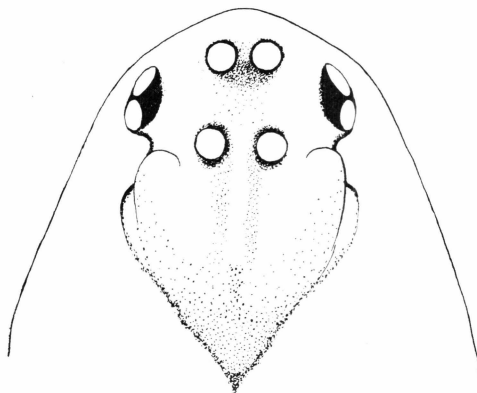
60°50' Igaliko, Aug. 31, 1889: 1 ♂ 3 ♀♀ (1).

61°35' Neria, July 29, 1889: 1 ♀ (1).

64°21' Itivdleq, Egoalugialik, July 2, 1962: 1 ♀.



44



45

Fig. 44, 45. *Hybocoptus gibbosus* (SØRENSEN), ♂. Fig. 44. Cephalothorax from the side. — Fig. 45. Cephalic portion, dorsal view. — $\times 70$.

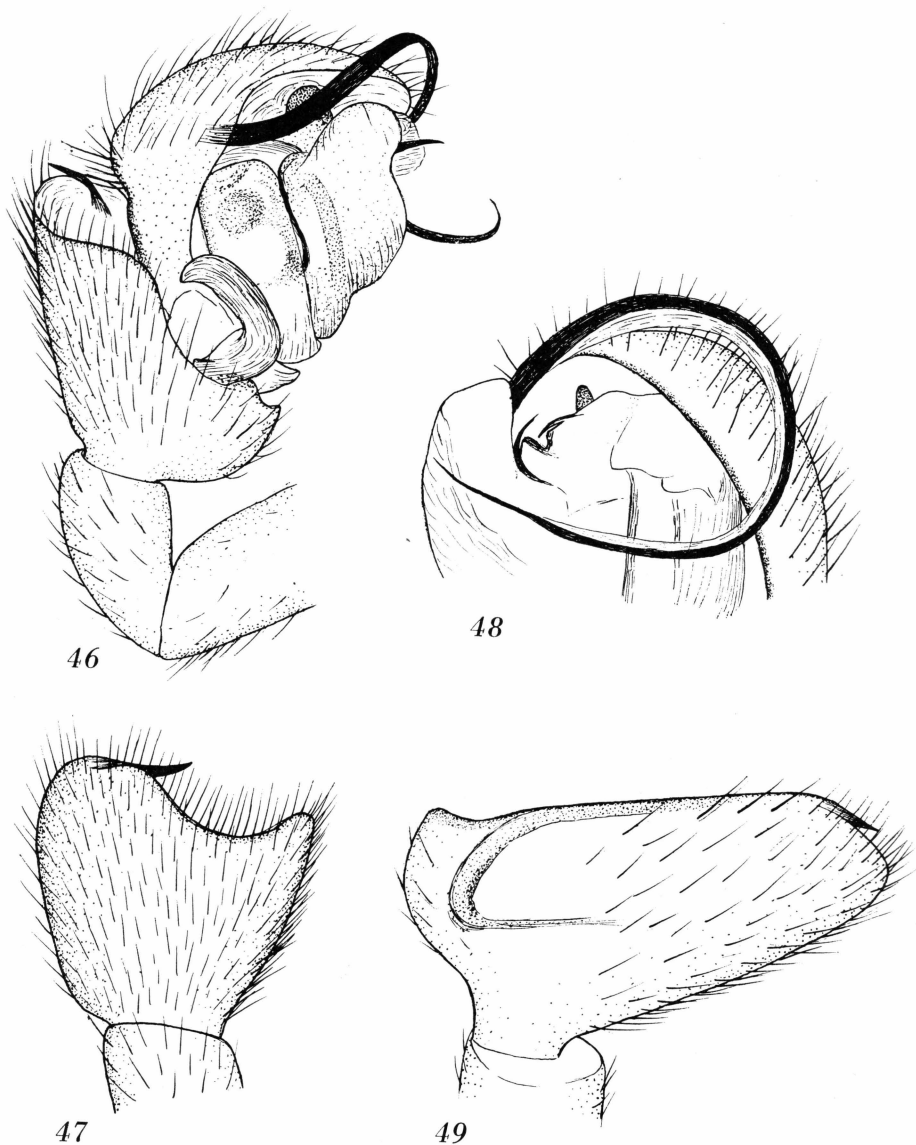
Distribution:

West Greenland, Canada (Newfoundland, Labrador, Alberta), U.S.A. (Utah), Alaska.

Taxonomical remarks:

SØRENSEN's type specimens of *Minicia* (?) *gibbosa* were compared to specimens (4 ♂♂ and 4 ♀♀) from Utah of *Hybocoptus dentipalpis*¹⁾ obtained by courtesy of Dr. W. J. GERTSCH. No divergences between the Greenland and the American specimens could be observed. On the other hand there was a slight difference between the palpal tibia of the

¹⁾ A new genus for this species seems to be justified.



Figs. 46–49. *Hybocoptus gibbosus* (SOERENSEN), ♂, right palp. Fig. 46. Palp, lateral view. $\times 100$. – Fig. 47. Palpal tibia, dorsal view. $\times 120$. – Fig. 48. Palpal tibia, mesial view. $\times 120$. – Fig. 49. End of palpal tarsus, ventral view. $\times 120$.

male specimens and the figure of this segment in CROSBY and BISHOP (1933, Pl. 9, Fig. 190): the meso-apical margin of the tibia was almost straight in the specimens investigated; in the figure it is produced into a short rounded lobe.—The following description of the species is based on SØRENSEN's specimens from Igaliko (the male selected as lectotype).

MALE. Total length 2.4 mm, carapace 1.18 mm long, 0.87 mm wide, sternum 0.6 mm long, 0.63 mm wide. Leg I 3.11 mm (Fe 0.88, Pt 0.34, Ti 0.77, Mt 0.65, Ta 0.47 mm), leg IV 3.42 mm (Fe 0.95, Pt 0.31, Ti 0.88, Mt 0.78, Ta 0.5 mm).

Carapace with a rather flat postocular lobe (Fig. 44), twice as long as high and with protruding and rounded anterior corners (Fig. 45); between the corners and the posterior median eyes some long stiff hairs directed forwards. Clypeus 0.4 mm high, strongly convex and densely clothed with stiff hairs directed upwards. Anterior eyes in a distinctly procurved line, medians somewhat smaller than laterals, separated by the radius, from laterals by 1.5 times the diameter. Posterior eyes in a strongly procurved line, equal, medians separated by the diameter, from laterals by almost twice the diameter. Chelicerae somewhat prolonged, apically slightly divergent, anterior margin of fang groove with 4 teeth; stridulating organ not present. Legs: Tibiae I and II with 2 dorsal spines, tibiae III and IV with one spine; all spines shorter than the diameter of the tibia. Position of spine of tibia IV = 0.26. All metatarsi with a trichobothrium, its position on metatarsus I = 0.7. Palp (Figs. 46–49): Femur twice as long as patella. Tibia short, strongly widened distally, more in vertical than transversal direction (4:3), dorso-lateral part of apical margin evenly and moderately indented, dorso-mesial part truncate, with a transversal, slightly curved slender and pointed tooth arising on the inside and directed laterally. Apical margin on lateral side produced into a short and broad lobe, mesial margin straight, only a short part ventrally being somewhat indented. Paracymbium with a very short, broad basal part continuing into a equally broad terminal part, slightly bent at tip. Bulbus with a long stylus, emerging on the lateral side of cymbium and forming a semicircle along the apical edge of cymbium, then bending first outwards and then downwards.

FEMALE. Total length 2.4 mm, carapace 1.2 mm long, 0.93 mm wide, sternum 0.74 mm long, 0.7 mm wide. Leg I 3.03 mm (Fe 0.9, Pt 0.37, Ti 0.7, Mt 0.61, Ta 0.45 mm), leg IV 3.66 mm (Fe 1.02, Pt 0.37, Ti 0.95, Mt 0.81, Ta 0.51 mm).

Carapace moderately broad (length-width index 1.27), anterior margin evenly rounded, lateral margins of cephalic portion convergent forward and with a marked indentation at the cervical grooves. Profile of carapace slightly convex behind the ocular area, then slightly concave towards the fovea. Clypeus 0.16 mm high, straight and vertical. Eyes: Anterior eyes in a slightly recurved line, median eyes smaller than laterals, separated by the diameter, from laterals by $3/4$ of the diameter. Posterior eyes in a procurved line, equal median eyes separated by the radius,

from laterals by almost the diameter. Median ocular quadrangle longer than its posterior width (9:7). Legs: Number of tibial spines as in the male. Proximal spine of tibia I and spine of tibia IV as long as the diameter of the tibia. Position of the trichobothrium of metatarsus I = 0.67. Chelicerae of normal shape, as in the male with 4 promarginal teeth. Epigyne (Fig. 50) roundedly triangular, wider than long with a large median tongue-shaped plate produced from the anterior part of the epigyne, somewhat longer than broad and posteriorly broadly rounded and somewhat produced over the epigastric furrow; this plate is divided by another tongue-shaped plate, almost half as wide as the former and

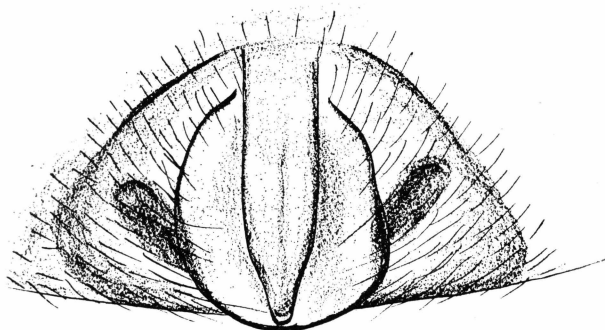


Fig. 50. *Hybocoptus gibbosus* (SOERENSEN), epigyne, $\times 135$.

produced from the anterior edge of the epigyne and reaching to the posterior border of the broad plate; on the lateral side of the latter a pair of oval receptacles appear as two dark patches.

Ecology:

SØRENSEN (1898) gives no information about the habitat of this species. EMERTON (1915) found it in moss and HACKMAN (1954) states it as having been "found among moss and litter on a rock near the shore". The single specimen in the present collection was obtained by sifting seaweed on the sea shore. The same sample also contained the following species: *Erigone whymperi*, *Dismodicus bifrons decemoculatus*, *Pardosa furcifera* and *Haplodrassus signifer*. In the same locality I made rather extensive collections under stones without finding any specimens of *H. gibbosus* which thus does not seem to be a sublapidicolous species.

20. *Islandiana princeps* BRÆNDEGAARD

(Figs. 51–52)

♂♀ *Islandiana princeps* BRÆNDEGAARD 1932, Kungl. Vet. Vitterh. Samh. Handl. (B) 2:7, p. 22, Figs. 6–8. Type locality: Akureiri, N. Iceland.

♂♀ *Aduva alata* (EMERTON) BISHOP & CROSBY 1936, Proc. Biol. Soc. Washington, 49, p. 39, pl. 1, Figs. 1–3.

♂♀ *Islandiana alata* (EMERTON) BRÉNDEGAARD 1937, Medd. om Grønland 108:4, p. 12, Figs. 7-9.

(non) *Tmeticus alatus* EMERTON 1919, Rept. Can. Arct. Exp. 1913-18, 3:3 H, pl. 1, Figs. 5-7.

♂ *Islandiana princeps* BRÉNDEGAARD, BRÉNDEGAARD 1958, Zoology of Iceland III:54, Figs. 62, 63 A.

♂♀ *Islandiana princeps* BRÉNDEGAARD, IVIE 1965, Amer. Mus. Novitates 2221, p. 5, Figs. 1-5.

Localities:

69°15' Disko, Godhavn, Østerlien, July 10-19, 1962: 1 ♂.

69°16' Disko, Fortunebay, 100 m, July 12, 1962: 1 ♀.

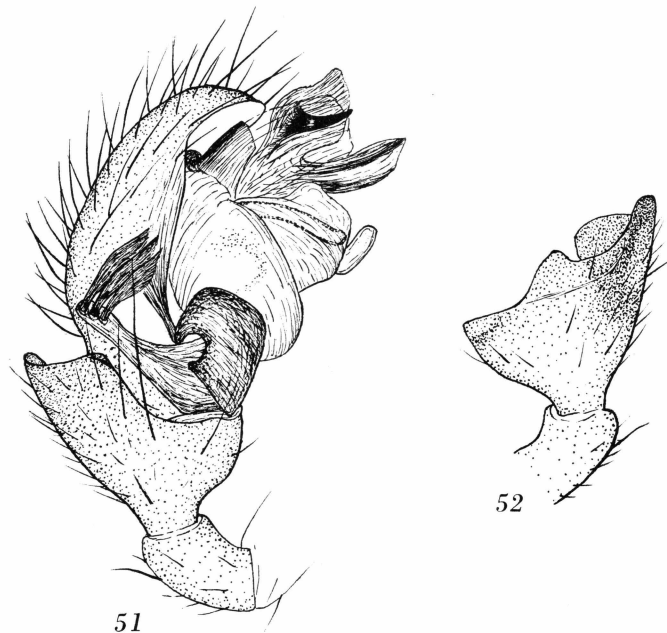
Disko, Lyngmarksfjeld, 250 m, July 13-20, 1962: 3 ♂♂ 3 ♀♀.

69°30' Disko Fjord, Kangerdluarssuk, July 17, 1962: 1 ♂.

69°46' Arveprinsens Ejland, Atâ, July 24, 1962: 3 ♂♂ 2 ♀♀.

Distribution:

East Greenland (from 61°25' to 74°05' N lat.), West Greenland, Canada, northern U.S.A., Iceland.



Figs. 51, 52. *Islandiana princeps* BRÉNDEGAARD, ♂. Fig. 51. Right male palp, lateral view. — Fig. 52. Palpal tibia, mesial view. — $\times 165$.

Taxonomical remarks:

This species is closely related to *I. cocconino* IVIE (U.S.A.: Arizona and Colorado), *I. holmi* IVIE (northern U.S.A.), and *I. alata* (EMERTON) (Canada, Alaska, Sweden). The male of *I. princeps* is characterized by

the strong, slightly curved black spine on the terminal apophysis of the embolic division (Fig. 51). With regard to the broad triangular plate of the epigyne the female is very like that of *I. holmi*, but is smaller (the cephalothorax length = 0.77–0.84 mm) and lighter.

Ecology:

The specimens recorded above were collected under stones on dry ground with scattered vegetation, on Lyngmarksfjeld also in traps on *Cassiope hypnoides* – *Phyllodoce coerulea* heath by a snow bed.

21. *Latithorax obtusus* (EMERTON)

(Figs. 53–62)

♀ (nec ♂) *Cnephalocotes* (?) *pygmaeus* SØRENSEN 1898, Vid. Meddel. naturhist. Foren. 50, p. 214.

♂ *Tmeticus obtusus* EMERTON 1915, Trans. Connect. Ac. Sci. 20, p. 149, Pl. 2, Fig. 4. Type locality: Jasper, Alberta, Canada.

♀ (nec ♂) *Typhochrestus borealis* JACKSON 1930, Ann. Mag. Nat. Hist. (10) 6, p. 649, pl. 17, Fig. 8.

♀ *Typhochrestus septentrionalis* JACKSON 1934, Norsk Entomol. Tidsskr., p. 342, Pl., Fig. 9.

♂♀ *Scylaceus obtusus* (EMERTON) BISHOP and CROSBY 1938, N.Y. Ent. Soc. 46, p. 93, Pl. 7, Figs. 81–83.

West Greenland records:

1. SØRENSEN 1898, p. 214 (*Cnephalocotes* (?) *pygmaeus*, ♀).
2. JACKSON 1930, p. 649 (*Typhochrestus borealis*, ♀).

Localities:

64°09' Store Malene, 80 m, June 29, 1962: 5 ♀♀.

64°10' Godthåbsfjord (2).

Lille Malene, 80 m, July 1, 1962: 1 ♂ 9 ♀♀.

65°30'–66°46' Between Sukkertoppen and Kangâmiut, June 5, 1885: 1 ♀ (1).

69°15' Disko, Godhavn, July 22, 1962: 2 ♂♂ 11 ♀♀.

Disko, Østerlien, July 6–26, 1962: 26 ♂♂ 39 ♀♀.

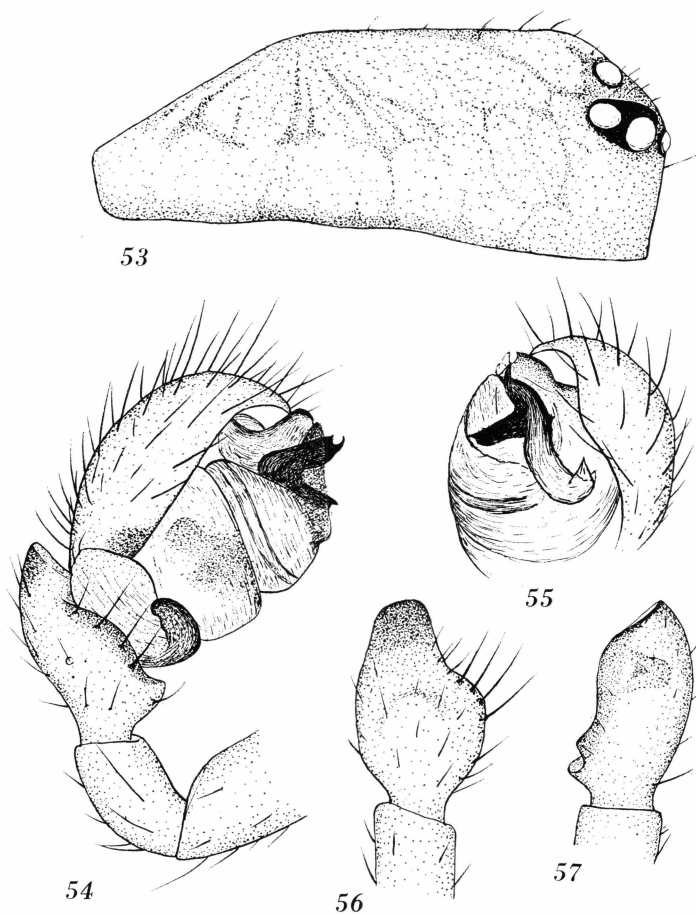
Distribution:

West Greenland, Canada (Alberta, Labrador, Newfoundland), United States (Utah, Colorado).

Taxonomical remarks:

The type material of *Cnephalocotes* (?) *pygmaeus* SØRENSEN consists of two males and one female. The latter is not conspecific with the males, which belong to the genus *Typhochrestus*, but agrees completely with the female of *Tmeticus obtusus* EMERTON. *Typhochrestus septentrionalis* JACKSON, too, seems to be a synonym of this species. When describing it JACKSON (1934 a) only had one female, which he had previously presented as the allotype of *Typhochrestus borealis* JACKSON (1930).

BISHOP and CROSBY (1938) transferred *Tmeticus obtusus* EMERTON to the genus *Scylaceus* CROSBY & BISHOP, the type of which is *S. pallidus* (EMERTON). These two species cannot be considered congeneric, however, as they have very different types of embolic division. This feature as

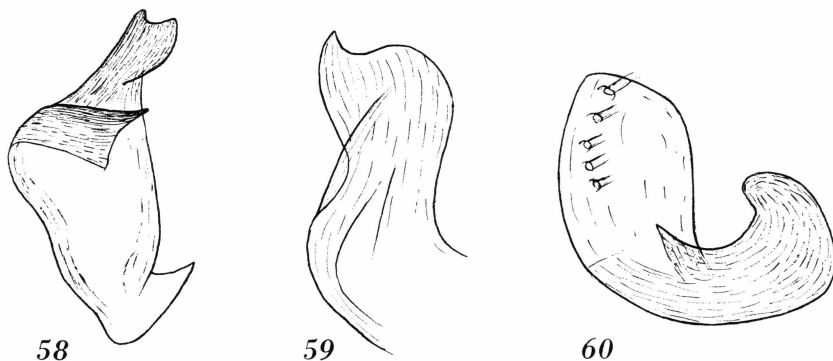


Figs. 53–57. *Latithorax obtusus* (EMERTON), ♂. Fig. 53. Cephalothorax from the side $\times 90$. – Fig. 54. Right palp, lateral view. $\times 150$. – Fig. 55. Bulb of right palp, ventral view. $\times 150$. – Fig. 56. Tibia of right palp, dorsal view. $\times 135$. – Fig. 57. Tibia of right palp, mesial view. $\times 150$.

well as the broad and low cephalothorax of the male and the epigynum of the female indicate close relationship with the genus *Latithorax* HOLM, in which I have previously (HOLM 1943) included *Rhaebothorax faustus* (CAMBR.) and *R. latus* HOLM. The following description of *Latithorax obtusus* (EMERTON) is based on a male and a female collected at Godhavn, July 22, 1962.

MALE. Total length 1.54 mm, carapace 0.73 mm long, 0.62 mm wide, leg I 1.95 mm (Fe 0.57, Pt 0.2, Ti 0.47, Mt 0.37, Ta 0.34 mm), leg IV 2.27 mm (Fe 0.67, Pt 0.2, Ti 0.59, Mt 0.47, Ta 0.34 mm).

Carapace dark with a narrow black spot on the back of the cephalic part, radiating black lines on the thoracic part and a narrow dark seam at the margins. Ocular area black except between posterior median eyes, chelicerae pale brownish, sternum blackish, palps and legs yellowish brown with femora paler and coxae dark with apical margin black, abdomen black.



Figs. 58–60. *Latithorax obtusus* (EMERTON), ♂. Fig. 58. Embolic division of right palp. – Fig. 59. Median apophysis of right bulb. – Fig. 60. Paracymbium of right palp. – $\times 275$.

Carapace broad (length-width index 1.18), cephalic part narrow evenly rounded in front with lateral margins straight and strongly converging forward, profile line slightly convex behind the eyes, there upon straight to the fovea (Fig. 53). Clypeus straight and vertical, 0.13 mm high. Eyes: Anterior eyes in a slightly recurved line (anterior tangent straight), posterior recurved, diameter of median eyes about $3/4$ of that of lateral eyes, intervals equal to the radius of the median eyes. Posterior eyes in a slightly procurved line, median eyes somewhat larger than laterals, separated by $3/4$ of the diameter, from laterals by the radius. Median ocular quadrangle as long as wide. Sternum as long as wide, posterior prolongation between fourth coxae narrow and pointed. Chelicerae: lateral border straight, stridulating organ present but weakly developed. Anterior margin of fang groove with 4 teeth. Legs: Tibiae I–III with 2 spines, tibia IV with 1 spine; spines shorter than the diameter of the tibia or, in tibia IV as long as the diameter. Metatarsus I slightly longer than tarsus I (ratio 1.1) and tibia IV much longer than metatarsus IV (ratio 1.26). Position of trichobothrium of metatarsus I 0.56. Tarsus I somewhat thicker than tarsus II. Abdominal

stridulating organ strongly developed, as in the Palearctic species. Palp (Figs. 54–60): Patella half as long as femur, tibia short, dorsally produced into a short rather broad, blunt apophysis, lateral apical margin slightly produced and rounded, mesial margin also rounded but ventrally with a short angular tooth. Cymbium broad, rounded, paracymbium with a broad proximal part and curved distal part. Paracymbium as in Fig. 60. Tegulum not protruding ventrally, median tegular apophysis terminally broad and curved, obliquely truncate at tip (Fig. 59). Embolic division (Fig. 58) with a moderately long scaphium, posteri-



Fig. 61. *Latithorax obtusus* (EMERTON), epigyne. $\times 140$.

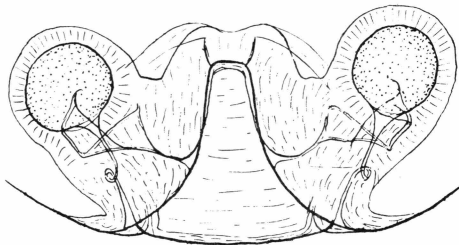


Fig. 62. *Latithorax obtusus* (EMERTON), vulva. $\times 300$.

only flat and broad and with a small tooth, distally narrower and anteriorly continuing into a screw-shaped terminal apophysis ending in two points. At the base of the apophysis a straight embolus of the same length as the apophysis projects in ventral direction and at a right angle.

FEMALE. Total length 1.62, carapace 0.72 mm long. 0.54 mm wide, leg I 1.94 (Fe 0.55, Pt 0.22, Ti 46, Mt 0.39, Ta 0.32 mm), leg IV 2.24 mm (Fe 0.65, Pt 0.2, Ti 0.6, Mt 0.45, Ta 0.34 mm).

Colour as in the male but carapace somewhat lighter and the median patch on the cephalic part larger. Carapace narrower than in the male and with a slight constriction at the cervical grooves (length: width = 1.33); behind the dorsal convexity of the cephalic part there is a slight depression. Clypeus 0.09 mm high, straight and slightly protruding. Eyes as in the male. Chelicerae and legs as in the male, but spines of the tibiae longer than the diameter of the tibia, in fourth leg twice as long as the diameter. Position of the trichobothrium of metatarsus I 0.57. Epigyne (Fig. 61) with a light coloured median triangular plate

in a groove open behind, as long as its posterior width; the groove laterally bordered by a broad chitinized margin. Vulva as illustrated in Fig. 62.

Ecology:

This species was found among moss in rather moist localities like luxuriant dwarf bush heath by brooks or litter in *Salix* thicket. In the locality Østerlien at Godhavn numerous males and females were obtained in traps in *Salix herbacea* cover in a snow bed and in a dense *Salix* thicket in the vicinity.

22. *Metopobactrus prominulus* (O. P.-CAMBRIDGE)

Localities:

69°15' Disko, Godhavn, July 5–26, 1962: 20 ♂♂.

69°16' Lyngmarksfjeld 70–100 m, July 14–21, 1962: 10 ♂♂ 5 ♀♀.

Distribution:

West Greenland (Disko), Great Britain, Sweden, Denmark, Germany, Netherlands, France, Switzerland, Czechoslovakia, Poland, Hungary, Balkans.

Ecology:

This species, now for the first time recorded from Greenland and the Nearctic area, was found among moss both on dry and rather moist heaths and among litter in *Salix* thickets ("krat"). Numerous males were obtained in pitfall traps on *Empetrum* and *Vaccinium uliginosum* heath at Godhavn, but all the females were collected by sifting moss and litter. In Swedish Lapland this species seems to prefer dry localities such as *Cladonia* and *Ptilidium* cover in open birch forest and on heaths up to 900 m. WIEHLE (1960) cannot find a marked preference for any particular type of biotype in this species. In my opinion it is most adequately characterized as moderately xerophilous, preferring dry localities on open ground.—Males were obtained from beginning to end of July.

23. *Pocadicnemis pumila* (BLACKWALL)

Localities:

69°15' Disko, Godhavn, July 5–26, 1962: 5 ♂♂ 7 ♀♀.

69°16' Disko, Engelskmandens Havn, July 21, 1962: 5 ♀♀.

Lyngmarksfjeld, 70 m, July 21, 1962: 1 ♂ 4 ♀♀.

Distribution:

West Greenland (Disko), Canada, Alaska, U.S.A., Europe.

Ecology:

Both males and females were collected in pitfall traps, always in small numbers, in bog, *Empetrum* heath and herb field but also by sift-

ing moss and litter in *Salix* thicket. The species thus occurs in widely differing biotopes. WIEHLE (1960) says it is most common "im Torfmoss der Moorgegenden" but has also found it in rather dry and closed localities.

24. *Praestigia groenlandica* n. sp.

(Figs. 63–67)

Localities:

69°15' Disko, Godhavn, July 5–10: 6 ♂♂ 3 ♀♀, July 10–19: 1 ♂ 12 ♀♀, July 19–26, 1962: 1 ♀.

69°30' Disko Fjord, Kangerdluarssuk, July 18, 1962: 2 ♀♀ 8 juv.

Description:

A species closely related to *Praestigia duffeyi* MILLIDGE (1954).

MALE. Total length 2.13 mm, carapace 0.82 mm long (from posterior margin to tip of the horn), 0.65 mm wide.

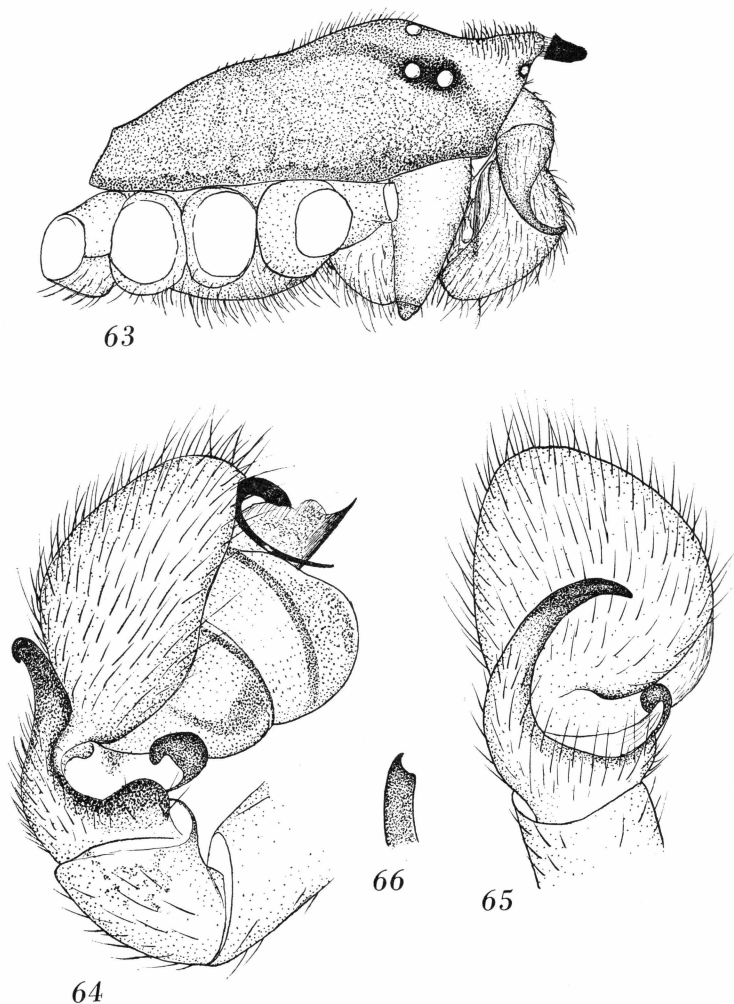
Carapace dusky brown with a black pentagonal median marking connected with the lateral eyes by a broad streak on either side; thoracic portion with faint radiating lines and a narrow black seam at the margins. Sternum black, chelicerae light brown, legs pale yellowish, abdomen black.

Carapace rather elongate (length/width = 1.26), smooth; its shape (Fig. 63) closely resembles that of *Pr. duffeyi* MILLIDGE. Clypeus 0.16 mm high, straight, strongly retreating. Eyes small and widely separated; anterior eyes in a recurved line, medians separated by their diameter, from laterals by about 4 times the diameter. Posterior eyes in a procurved line, equal, medians separated by twice the diameter, from laterals by 2.5 times the diameter. Chelicerae: anterior margin of fang groove with 4 teeth; stridulating organ hardly discernible.

Legs: Tibiae I and II with two spines shorter than the hairs, tibiae III and IV with one spine as long as the hairs; in tibia IV the position of the spine is 0.26. Position of the trichobothrium of metatarsus I 0.85, of metatarsus IV 0.82.

Leg	Fe	Pt	Ti	Mt	Ta	Total
I	0.64	0.24	0.58	0.4	0.34	2.20 mm
II	0.58	0.24	0.52	0.42	0.34	2.10 "
III	0.53	0.22	0.42	0.4	0.31	1.88 "
IV	0.72	0.23	0.62	0.55	0.38	2.50 "

Palp (Figs. 64–66) is distinguished from *duffeyi* by a somewhat stouter tibial apophysis, obliquely truncate and somewhat hooked at tip.



Figs. 63–66. *Praestigia groenlandica* n. sp., v. Fig. 63. Cephalothorax from the side. $\times 65$. – Fig. 64. Right palp, lateral view. $\times 145$. – Fig. 65. Right palp, dorsal view. $\times 145$. – Fig. 66. End of tibial apophysis. $\times 145$.

FEMALE. Total length 2.4 mm, carapace 0.88 mm long, 0.65 mm wide.

Colour of carapace, chelicerae, sternum, and abdomen as in the male. Palpi and legs yellow with coxae, and apical edge of femora, patellae and tibiae suffused with black.

Carapace and sternum smooth. Just above the anterior median eyes a small conical elevation, smaller than in *duffeyi*. Eyes: Anterior row of eyes slightly recurved, median eyes small, separated by hardly the diameter, from laterals by about twice the diameter. Posterior eyes

in a procurved line, median eyes separated by ca. one diameter, from laterals by slightly more.

Legs: Spines of tibiae longer than in the male, about 2/3 of the diameter of the tibia. Position of the spine of tibia IV 0.3. Position of trichobothrium of metatarsus I 0.88.

Leg	Fe	Pt	Ti	Mt	Ta	Total
I	0.61	0.27	0.53	0.43	0.31	2.15 mm
II	0.59	0.26	0.50	0.42	0.29	2.06 „
III	0.54	0.24	0.41	0.40	0.28	1.87 „
IV	0.72	0.24	0.64	0.54	0.34	2.48 „

Epigyne: Posterior side with two light, rounded, small fields; the “septum” between them as broad as the diameter of the fields and behind these widened to a transversal plate, about 3.5 times as wide as long (Fig. 67).

Type locality: Godhavn, Disko, West Greenland, male holotype, female allotype July 5–10 1962.

Taxonomical remarks:

This species is distinguished from *Pr. duffeyi* MILLIDGE by its smaller size, yellow legs, smooth carapace (in *duffeyi* somewhat tarnished) and slight differences in the male palp and the epigyne. A male and a female of *Pr. duffeyi*, kindly supplied by Dr. A. F. MILLIDGE, are considerably bigger, the carapace of the male measuring 1.1 mm in length, that of the female 1.15 mm. The legs have a rather dark orange colour.

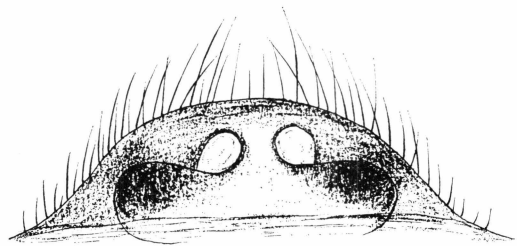


Fig. 67. *Praestigia groenlandica* n. sp., epigyne from behind. × 145.

Pr. pini (HOLM) from Swedish Lapland is quite distinct from the two other members of the genus by the form of the male carapace and the epigyne of the female. However, the male palp is very similar to that of *Pr. groenlandica*.

Ecology:

The specimens recorded above were collected in quite a variety of habitats: *Carex* and *Carex-Eriophorum* bogs, heath with mosses and low

Salix glauca, snow beds with *Salix herbacea* and litter in willow scrub. All localities were moist, however, some of them very much so.

25. *Rhaebothorax morulus* (O. P.-CAMBRIDGE)

Localities:

64°09' SW Lille Malene, 80 m, July 1, 1962: 3 ♂♂ 4 ♀♀.

64°10' SW store Malene, 80 m, June 29, 1962: 1 ♂ 6 ♀♀.

Distribution:

East Greenland (65°35' N lat.), West Greenland, Iceland, the Faroes, Great Britain, Sweden, the Alps.

Taxonomical remarks:

It has been suggested that this species is a synonym of *Rh. broccus* (L. KOCH) from the Swiss Alps (BRISTOWE 1939, BRÆNDEGAARD 1937). However, as shown by the description and figures of *Rh. broccus* presented by DE LESSERT (1910), the male palp of this species is quite different from that of *Rh. morulus*. The epigynes of the two species do not agree either, a fact established by a comparison of the present females with some from the Swiss Alps. The divergences between the two forms are so great that there can be no question of a racial difference only as suggested by BRÆNDEGAARD (1946).

On the other hand a closer relationship exists between *Rh. morulus* and *Rh. foveolatus* WIEHLE (1960) from Germany.

Ecology:

All specimens except one were collected by sifting *Hylocomium* in heaths. The latter, one female, was captured under a stone in a *Salix herbacea* community.

26. *Rhaebothorax paetulus* (O. P.-CAMBRIDGE)

♂♀ *Erigone paetula* O. P.-CAMBRIDGE, 1875, Proc. Zool. Soc. London, p. 333, Pl. 44, Fig. 8. Type locality: Lautares at Monier, French Alps.

♂♀ *Typhochrestus paetulus* (CAMBRIDGE), SIMON 1884, Les Arachnides de France, 5, p. 587, Figs. 406, 407.

♂ (nec. ♀) *Gongylidium lapidicola* SØRENSEN 1898, Naturvid. Meddel. naturhist. Foren. København 50, p. 204.

♂ *Typhochrestus paetulus* (CAMBRIDGE), DE LESSERT 1910, Cat. Invert. Suisse, 3, p. 184, Fig. 110.

♂♀ *Rhaebothorax paetulus* (CAMBRIDGE) SIMON 1926, Les Arachnides de France 6:2, p. 455, 523.

♂ *Coryphaeolana lapidicola* (SØRENSEN), BRÆNDEGAARD 1937, Meddel. om Grønland 108: 2, p. 10, Figs. 5, 6.

♂♀ *Rhaebothorax paetulus* (CAMBRIDGE), HOLM 1943, Ark. Zool. 34 A: 19, p. 8, Figs. 1 a-g, Pl. I, Figs. 1-3.

♂♀ *Coryphaeolana lapidicola* (SOERENSEN), CHAMBERLIN and IVIE 1947, Bull. Univ. Utah, 37:10, p. 34, Pl. V, Figs. 45-49.

West Greenland records:

1. SØRENSEN 1898, p. 204 (*Gongylidium lapidicola*, ♂).
2. HOLM 1958 b, p. 526.

Localities:

64°10' Ny Herrnhut (2).

Godthåb, June 28-July 3, 1962: 6 ♂♂ 6 ♀♀.

67° Søndre Strømfjord, June 27, 1962: 1 ♀.

68°45' Kangarsuneq, July 24, 1890: 1 ♂ (LUNDBECK) (1).

69°15' Disko, Godhavn, July 6-26, 1962: 72 ♂♂ 79 ♀♀.

Distribution:

East Greenland (from 60°15' to 61°25' N lat.), West Greenland, Alaska, the Scandinavian Fjells, the Alps.

Ecology:

In the Swedish Fjells this species has been found under stones on moist ground or among *Sphagnum* in bogs in the *regio alpina* (HOLM 1943). Where pitfall traps were used the species was found to occur especially numerously in snow beds. The collections from Godhavn mentioned above mostly comes from such localities. The same method also gave quite a large collection in a herby meadow on a slope near the Arctic Station at Godhavn. The distribution of males and females during four collecting periods was as follows:

	28. VI-3. VII	6-10. VII	10-19. VII	19-26. VII
♂	6	30	40	22
♀	6	18	37	24

27. *Rhaebothorax sphagnicola* HOLM

(Figs. 68, 69)

♂ *Rhaebothorax sphagnicola* HOLM 1939, Ark. Zool. 31 A: 8, p. 32, Fig. 15 a.

♂♀ *Rhaebothorax sphagnicola* HOLM 1943, Ibid., 34 A: 19, p. 10, Figs. 2 a-e, Pl. 1, Figs. 4-6.

Localities:

69°15' Disko, Godhavn, July 16, 1962: 1 ♀.

69°30' Disko Fjord, Kangerdluarssuk, July 18, 1962: 4 ♂♂ 17 ♀♀.

69°46' Eqip sermia glacier, Ege, July 24, 1962: 1 ♂.

Distribution:

West Greenland, Sweden.

Taxonomical remarks:

Rh. sphagnicola is distinguished from the other members of the genus by an elongate embolic division and a flat tegulum, which extends backwards as far as the posterior end of the subtegulum (Fig. 68). The ab-

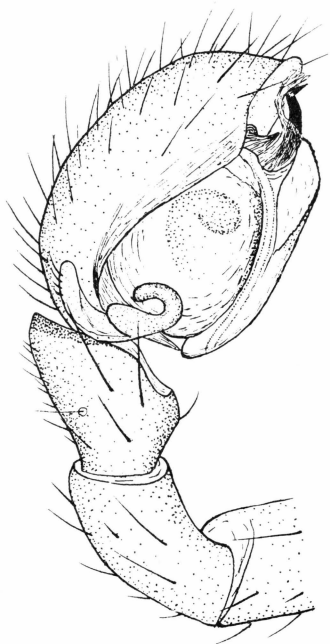


Fig. 68. *Rhaebothorax sphagnicola* HOLM, right male palp, lateral view. $\times 165$.

dominal stridulating organ is less developed than in the other members of the genus. The position of the trichobothrium of the first metatarsus is about 0.43.

The epigyne (Fig. 69) has a short and broad median plate in front of which there are two openings separated by a narrow septum.

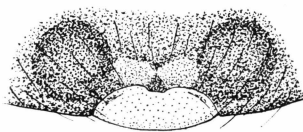
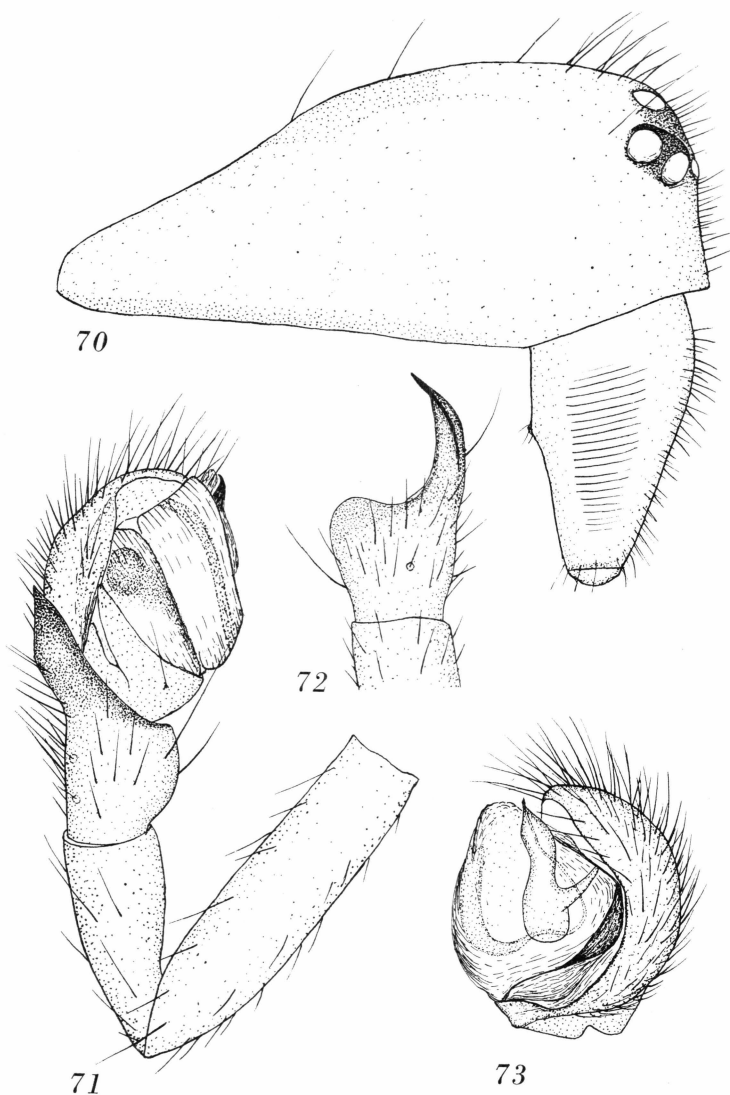


Fig. 69. *Rhaebothorax sphagnicola* HOLM, epigyne. $\times 200$.

Ecology:

The species occurs in moist localities, mostly among *Sphagnum* in bogs. In the first two localities mentioned above the specimens were obtained by sifting *Sphagnum* and *Aulacomnium* in a bog, while the male from Ege was found in a *Carex*-tussock at a waterfall. In Lapland the



Figs. 70–73. *Sciastes extremus* n. sp., ♂. Fig. 70. Cephalothorax from the side. $\times 100$. – Fig. 71. Right palp, lateral view. $\times 135$. – Fig. 72. Right palpal tibia, dorsal view. $\times 135$. – Fig. 73. Palpal tarsus, ventral view. $\times 135$.

species was collected in moist *Sphagnum* in bogs, in the birch region, and in the alpine region up to 800 m.

28. ***Sciastes extremus*** n. sp.

(Figs. 70–73)

Description:

MALE. Total length 1.76, carapace 0.87 mm long, 0.68 mm wide, sternum 0.53 mm long, 0.49 mm wide.

Carapace pale yellowish brown with a large pentagonal median dark marking and a relatively broad dark seam along the margin of thoracic portion; sternum greyish yellow-brown, darker towards the margins, legs pale yellowish, abdomen dark greyish. Carapace moderately broad (length/width = 1.28), cephalic portion broad with lateral margins straight and convergent forward. Dorsal profile line evenly convex between fovea and ocular area, posterior slope straight (Fig. 70). Clypeus 0.15 mm high, straight and slightly protruding. Behind eyes several long erect hairs, interocular area and clypeus with numerous shorter hairs. Eyes: Anterior eyes in a slightly recurved line (anterior tangent of eyes straight, posterior recurved), median eyes smaller than laterals, separated by the radius from laterals by $2/3$ of the diameter. Posterior eyes in a straight line, equal, intervals larger than the diameter (5:4). Median ocular quadrangle as long as its posterior width. Sternum smooth, longer than wide because of a long prolongation between coxae IV; this prolongation is longer than wide lateral margins parallel and furnished with 3 hairs. Chelicerae 0.43 mm long, antero-posterior width in basal half 0.24 mm, lateral borders slightly convex with a slight concavity shortly before tip; frontal side with numerous hairs of uneven length. Stridulating organ strongly developed. Anterior margin of fang groove with 5–6 teeth, the inner one small, the next one stout and the remainder decreasing in size. Legs. Tibiae I–IV with 2 dorsal spines, proximal spine of tibia I as long as the diameter of the tibia, that of tibia IV twice as long as the diameter. Tibia I also with one prolateral spine in distal half. All metatarsi with a trichobothrium, its position on metatarsus I = 0.5, on metatarsus IV = 0.51. Metatarsus I insignificantly longer than tarsus I (ratio 1.07). Tibia IV somewhat longer than metatarsus IV (ratio 1.12).

Leg	Fe	Pt	Ti	Mt	Ta	Total
I	0.65	0.23	0.49	0.45	0.42	2.24 mm
II	0.57	0.23	0.42	0.41	0.37	2.00 „
III	0.47	0.22	0.34	0.35	0.30	1.68 „
IV	0.64	0.23	0.55	0.49	0.37	2.28 „

Palp (Fig. 71–73): Patella somewhat more than half as long as femur (6:11), straight, gradually widening in apical direction. Tibia short, moderately widened distally, straight dorsally and convex ventrally. Apical margin laterally produced into a long apophysis, broad at base, gradually tapering to the pointed tip and slightly curved inward. Cymbium broadly oval, narrowly truncate at tip. Terminal part of paracymbium elongate-triangular, broad at base and gradually tapering to the dorso-anterior tip. Embolic division of simple structure: an elongate, straight scaphium, broad and rounded at tip, constricted at the

middle; behind the middle with a long slender and curved dorso-mesial tooth and anteriorly produced into a short tooth-shaped black embolus, slightly curved at tip.

FEMALE. Total length 2-14 mm, carapace 1.0 mm long, 0.76 mm wide, sternum 0.58 mm long, 0.54 mm wide.

Colour and general structure as in the male except in the following respects: Lateral margins of carapace slightly indented above the palpi. Along the median line of carapace a row of 4 long hairs, ocular area with numerous short hairs, clypeus without hairs, 0.11 mm high. Chelicerae 0.54 mm long, antero-posterior width 0.37 mm, lateral borders straight, frontal side with only a few hairs. Position of trichobothrium in metatarsus I 0.51 (paratypes 0.51, 0.53), in metatarsus IV 0.45 (paratypes 0.44, 0.46).

Leg	Fe	Pt	Ti	Mt	Ta	Total
I	0.66	0.28	0.5	0.43	0.37	2.24 mm
II	0.58	0.27	0.45	0.39	0.32	2.01 „
III	0.5	0.24	0.37	0.35	0.28	1.74 „
IV	0.69	0.27	0.59	0.49	0.34	2.38 „

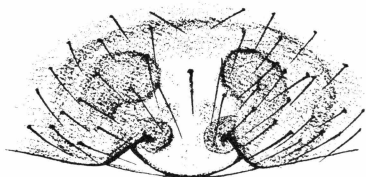


Fig. 74. *Sciastes extremus* n. sp., epigyne. $\times 135$.

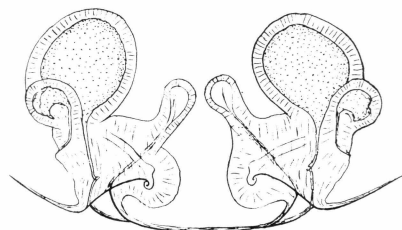


Fig. 75. *Sciastes extremus* n. sp., vulva. $\times 205$.

Epigyne consists of a slightly chitinized plate, 0.14 mm long and 0.27 mm wide, posteriorly with two short furrows, strongly convergent forward. The field between the furrows almost completely covered with a broad plate, strongly rounded posteriorly and at the middle reaching the posterior margin of the field. (Fig. 74). Vulva as in Fig. 75.

Type locality:

West Greenland, Disko, Lyngmarksfjeld, 70 m, July 21, 1962: male holotype, female allotype, 2 ♂♂ and 2 ♀♀ paratypes.

Other localities:

64°10' Lille Malene, 80 m, July 1, 1962: 1 ♂ 5 ♀♀.

69°15' Disko, Godhavn, July 19-26, 1962: 2 ♀♀.

69°16' Disko, Lyngmarksfjeld, 100 m, July 14-20, 1962: 10 ♂♂ 1 ♀.

Distribution:

This species is only known from West Greenland.

Taxonomical remarks:

This species is without doubt congeneric with *Tmeticus truncatus* EMERTON (1882) which is the type species of the genus *Sciastes* BISHOP & CROSBY (1938). An investigation of a male specimen of *Sciastes truncatus* from Alaska showed that this species is in accordance with the Greenland species with regard to the generic characters, i.e. the form of the carapace, the presence of a prolateral spine on the tibiae of the first pair of legs, the position of the trichobothrium of the metatarsi at about the middle, the general structure of the embolic division and the paracymbium. On the other hand there is a distinct difference between the two species with regard to the shape of the male palpal tibia; in *S. truncatus* its apical margin is only slightly produced dorsally and laterally, whereas in *S. extremus* it is armed with a lateral apophysis as long as the tibia.

Sciastes belongs to the group of Erigonid genera which have a prolateral spine on tibia I and two spines on tibia IV. This group also comprises *Leptorhoptrum*, *Hilaira*, *Drepanotylus*, and *Hillhousia*. As in the two first-mentioned genera a trichobothrium is present in the fourth metatarsi. By the shape of the paracymbium and the simple structure of the bulb *Sciastes* shows relationship to *Leptorhoptrum* but the latter is distinguished by longer metatarsi (ratio of metatarsus I to tarsus I = 1.5, in *S. truncatus* 1.22, in *S. extremus* only 1.07) and by the position of the trichobothrium of the metatarsi below the middle (0.55).

Ecology:

Sciastes extremus seems to prefer moderately moist localities and was found in luxuriant *Empetrum hermaphroditum*—*Vaccinium myrtillus* heath with low *Salix*, among litter in willow scrub, in *Cassiope tetragona*—*Phyllodoce coerulea* heath and snow beds with *Sibbaldia procumbens* and *Salix herbacea*. No specimens were found under stones.

29. *Tiso aestivus* (L. KOCH)

Localities:

69°15' Disko, Godhavn, July 6–10: 7 ♂♂ 7 ♀♀; July 10–19: 5 ♂♂ 4 ♀♀; July 19–26, 1962: 1 ♂ 7 ♀♀.

69°16' Disko, Fortunebay, July 12, 1962: 5 ♂♂ 12 ♀♀.

Disko, Lyngmarksfjeld, 250 m, July 13–20, 1962: 1 ♂ 1 ♀.

Distribution:

East Greenland (68°05'–10' N. lat.), West Greenland, Iceland, the Faroes, Northern Fennoscandia, the British Isles, the Alps, the Carpathians (Tatra), the Pyrenees, Kamchatka.

Ecology:

The species occurs both in rather moist places like the *Sibbaldia procumbens*—*Salix herbacea* community on snow beds as well as in herb fields and in as dry localities as lichen heath on mountain slopes.

30. *Typhochrestus pygmaeus* (Soerensen)

(Figs. 76–81)

♂ (nec ♀) *Cnephalocotes* (?) *pygmaeus* SØRENSEN 1898, Vid. Meddel. Naturhist. Foren. København 50, p. 214. Type locality: Taserssuaq (lat. 65°05' N), West Greenland.

Typhochrestus pygmaeus (SØRENSEN) JACKSON 1938, Proc. Zool. Soc. London B, 107, p. 545.

West Greenland records:

1. SØRENSEN 1898, p. 214 (*Cnephalocotes* (?) *pygmaeus*, ♂).
2. JACKSON 1938, p. 545.

Localities:

- 61°50' Neqaimit (1).
 69°15' Disko, Godhavn, July 10–19, 1962: 2 ♂♂ 1 ♀.
 69°45' Taserssuaq (1).
 74°44' Amdrup Ø (2).

Distribution:

West Greenland.

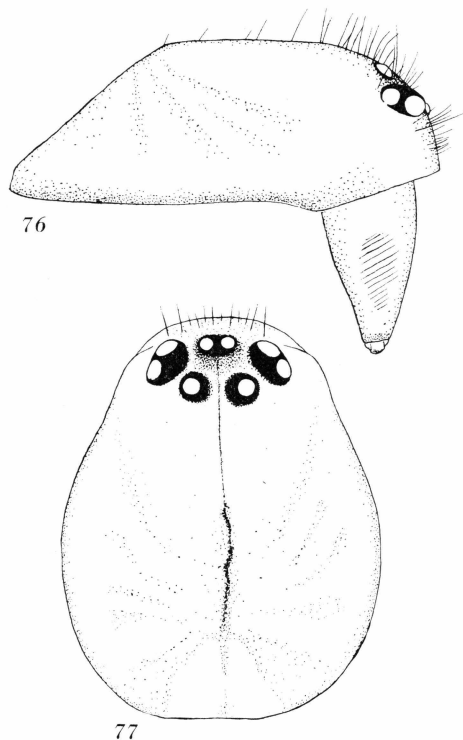
Description:

SØRENSEN (1898) described both sexes of *Cnephalocotes* (?) *pygmaeus* but in the type material the single female from between Sukkertoppen and Neqaimit, is not conspecific with the two males, one from Neqaimit and the other from Taserssuaq. Instead it is unquestionable identical with *Latithorax obtusus* (EMERTON) (see above). I have selected the male from Taserssuaq as the type, and the following description is based on this specimen and a female from Godhavn in the present collection.

MALE. Total length 1.7 mm, carapace 0.74 mm long, 0.56 mm wide, sternum 0.42 mm long, 0.41 mm wide, leg I 1.71 mm (Fe 0.52, Pt 0.21, Ti 0.38, Mt 0.32, Ta 0.3 mm), leg V 1.86 mm (Fe 0.52, Pt 0.19, Ti 0.47, Mt 0.4, Ta 0.27 mm).

Carapace (Figs. 76, 77) elongate oval (length/width = 1.32), cephalic portion broad with a marked convexity below the lateral eyes, anterior margin evenly rounded, lateral margins straight, convergent forward; seen from the side cephalic portion shows an inconsiderable elevation behind the eyes, after which it continues straight and level to the fovea. Clypeus straight, slightly protruding 0.16 mm high. Eyes: Anterior eyes in a straight line, median eyes smaller than laterals, separated by the radius, from laterals by a little less than the diameter.

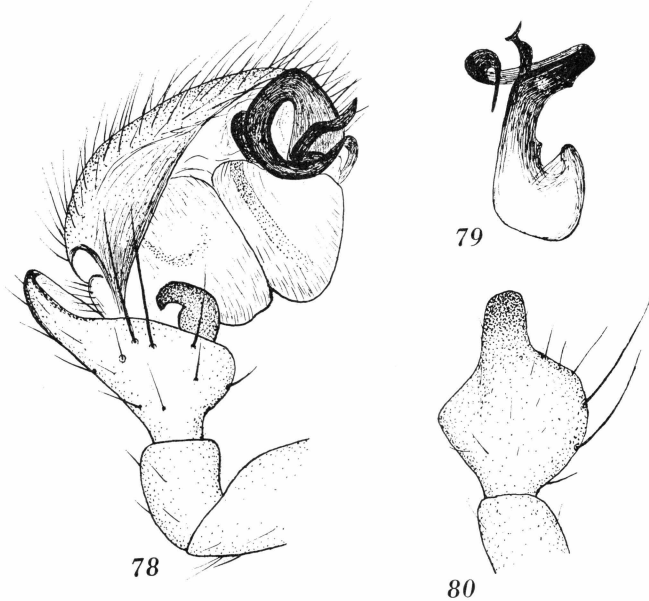
Posterior eyes in a procurved line, about equal, median eyes separated by 1.5 times the diameter, from laterals by the diameter. Median ocular quadrangle 0.12 mm long, posterior width 0.135 mm. Lateral eyes slightly raised. Chelicerae laterally straight, and with distinct stridulation ridges; fang groove with 5 promarginal teeth. Sternum as wide as long, posterior prolongation somewhat narrower than fourth coxae. Branchial opercula rugose, posterior coxae with corresponding stridulating point. Legs: Tibiae I–III with 2 dorsal spines, tibia IV with 1 spine. Spines of tibia I about as long as the diameter of the tibia,



Figs. 76, 77. *Typhochrestus pygmaeus* (SOERENSEN), ♂. Fig. 76. Cephalothorax from the side. — Fig. 77. Cephalothorax from above. — $\times 75$.

spine of tibia IV somewhat longer than the diameter, its position = 0.41. In the first pair of legs the tarsi are fusiform and both tarsi and metatarsi thicker than those of the second pair; metatarsi on the anterior side armed with a longitudinal row of 6 spines and apically with about 6 shorter spines. Palp (Figs. 78–80): Patella short, not widened distally; ratio of length of patella to that of femur as 4 to 11. Tibia of about the same length as patella, strongly widened distally, dorsal margin produced into a short, straight, moderately broad apophysis,

bluntly rounded at tip; anteriorly on the lateral margin of the tip a small tooth (very inconspicuous in the type specimen, more developed in the two males from Disko). Cymbium somewhat longer than wide, pointedly rounded at tip. Paracymbium of moderate size, sickle-shaped median part dorsally convex, tip slightly curved. Tegulum ventrally protruding, embolic division consists of an elongate scaphium with a strongly widened posterior part and a long broad tapeformed black embolus, curved into a complete circle at the latero apical end of bulbus and curved backwards at tip; from the base of embolus arises a rather long screw-shaped apophysis directed forward.



Figs. 78–80. *Typhochrestus pygmaeus* (SOERENSEN), ♂, right palp. Fig. 78. Palp, lateral view. – Fig. 79. Embolic division. – Fig. 80. Tibia, dorsal view. – $\times 150$.

FEMALE. Total length 1.9 mm, carapace 0.72 mm long, 0.54 mm wide, leg I 1.63 mm (Fe 0.49, Pt 0.2, Ti 0.36, Mt 0.31, Ta 0.27 mm), leg IV 1.88 mm (Fe 0.53, Pt 0.2, Ti 0.49, Mt 0.38, Ta 0.28 mm).

Carapace elongate (length/width = 1.33), cephalic portion broad, dorsally evenly convex between the eyes and the fovea, anterior margin evenly rounded, lateral margins parallel. Eyes: Anterior eyes in a straight row, median eyes small, subcontiguous, separated from laterals by the diameter. Posterior eyes in a procurved line, equal, median eyes separated by the diameter, from laterals by a little less. Chelicerae laterally straight, with stridulating ridges; anterior margin of fang groove with 6 teeth. Legs: Tibiae I–III with 2 spines, tibia IV with 1 spine, the position of the latter 0.31; all spines somewhat longer than the diameter

of the joint. Epigyne: transversal oval plate with a triangular pale area, somewhat longer than wide posteriorly, with anterior tip rounded and lateral margins somewhat arched inwards a little before the middle (Fig. 81).

Taxonomical remarks:

A species related to *Typhochrestus pygmaeus* is *Sisicottus uintanus* CHAMBERLIN & IVIE (1939), a male and a female of which were kindly put at my disposal by Dr. GERTSCH. This has a much slenderer embolus, the apophysis of the male palpal tibia is longer and narrower, and the first metatarsus of the male has not spine armature. Moreover the median area of the epigyne has a different form. The species which has been recorded from the Uintah Mts., Utah, is no doubt congeneric with the Greenland species and ought to be transferred to the genus *Typhochrestus*.

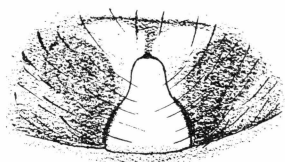


Fig. 81. *Typhochrestus pygmaeus* (SOERENSEN), epigyne. $\times 150$.

SIM. In the type species of *Sisicottus* BISHOP & CROSBY (1938), *S. montanus* (EMERTON), the bulbus has a similar structure with a long embolus curved around a straight black apophysis. A very important difference between this species and the members of the genus *Typhochrestus* is that in the former this apophysis arises from the median apophysis, whereas in the latter it belongs to the embolic division.

Ecology:

The three specimens from Godhavn were collected with pitfall traps in an *Empetrum hermaphroditum*—*Vaccinium uliginosum* heath with low *Salix* near the seashore. In the same locality: *Erigone whymperei*, *Praestigia groenlandica*, *Conigerella borealis*.

Fam. Linyphiidae

31. *Oreonetides vaginata* (THORELL)

♀ *Erigone vaginata* THORELL 1872, Öfv. Kungl. Vet. Ak. Förhandl. 1872:2, p. 153.

Type locality: Disko.

West Greenland records:

1. THORELL 1872, p. 153 (*Erigone* v.).
2. SØRENSEN 1898, p. 203 (*Gongylidium* (?) v.).

3. JACKSON 1938, p. 548.

4. HOLM 1958 b, p. 528.

Localities:

59°55' Ilua (2).

60° Frederiksdal (4).

61°15' Neria (2).

61°20' Tigssaluk – "Irigdalen" (4).

62°10' Kuáneq (2).

64°10' Malenebugt, June 29–July 1, 1962: 2 ♂♂ 9 ♀♀.

Ny Hernhut (4).

65°30'–45' Majorqaq (2).

66°55' Holsteinsborg (2).

67° Søndre Strømfjord (3).

69°15' Disko, Godhavn, July 6–26, 1962: 6 ♂♂ 4 ♀♀.

69°16' Disko, Engelskmandens Havn, July 9, 1962: 1 ♂ 2 ♀♀.

Disko, Lyngmarksfjeld, 250 m, July 13–20: 1 ♂; 70 m, July 21, 1962: 2 ♀♀.

Distribution:

East Greenland (60°30' and 60°40' N lat.), West Greenland, Labrador (Akpatok), Alaska, northern Fennoscandia, the Faroes, the British Isles, the Alps, the Pyrenees, the Carpathians (Tatra), the Murman Coast, Siberia, Kamchatka.

Ecology:

This species was collected under stones and in pitfall traps in snow beds with *Salix herbacea*, under stones and among moss in moist heaths, and among litter in willow scrub. It does not seem to occur in *Carex* bogs or mires.

32. *Meioneta nigripes* (SIMON)

West Greenland records:

1. SØRENSEN 1898, p. 199 (*Tmeticus Levinsenii* ad part.).

2. BRÆNDEGAARD 1946, p. 32 (*Micryphantes n.*).

Localities:

67°20' Tatsip-atâ, June 27, 1890: 5 ♀♀ (1, 2).

68°45' Egedesminde: 2 ♀♀ (1, 2).

Distribution:

East Greenland (from 65°55' to 76°50' N lat.), North Greenland (Peary Land), West Greenland, Iceland, Jan Mayen, Spitsbergen, Novaya Zemlya, the Faroes, the Scandinavian Fjells, the French, Swiss, and Tyrolean Alps. From Akpatok, Labrador, a separate race is known, *Meioneta nigripes jacksoni* BRÆNDEGAARD (1937).

Taxonomical remarks:

The specimens recorded above derive from SØRENSEN's collection in Copenhagen and have been revised by BRÆNDEGAARD (1946). Apparently they belong to this species, which is easily distinguished from all other palaearctic ones by its large posterior median eyes, small anterior median eyes and dark palpi and legs. Males have not yet been found in West Greenland. Males from East Greenland which I have seen agree entirely with Scandinavian specimens.

Ecology:

In the Scandinavian Fjells this species is only found in the alpine region, in northern Lapland not below 800 m. Also in Scotland and the Alps it is limited to the *regio alpina* and on Iceland it occurs only in the northern part and on the central plateau at about 700 m above sea level (BRÆNDEGAARD 1958).

33. *Meioneta rurestris* (C. L. KOCH)

(Fig. 82)

♀ *Tmeticus Levinseni* SØRENSEN 1898, Vid. Medd. Naturhist. Foren. København, p. 199 (*ad part.*).

♀ *Micryphantes nigripes jacksoni* BRÆNDEGAARD 1937, Medd. Grøn. 108:4, p. 7 (*ad part.*).

West Greenland records:

1. SØRENSEN 1898, p. 199 (*Tmeticus Levinseni* *ad part.*).
2. BRÆNDEGAARD 1937, p. 7 (*Micryphantes nigripes jacksoni*).

Localities:

59°52' Qeqertasugssuk (1).

64°09' SW Store Malene, 40 m, June 29–July 3, 1962: 3 ♂♂.

64°10' Godthåb (1).

69°15' Disko, Godhavn, July 10–15, 1962: 2 ♂♂ 1 ♀.

69°16' Disko, Lyngmarksfjeld, 100 m, July 7–14, 1962: 1 ♀.

Distribution:

East Greenland (Ũmánaq, 62°55' N) lat. SØRENSEN 1898), West Greenland, the British Isles, the whole continent of Europe, West Siberia Palestine, Caucasus, Turkestan, North Africa, Madeira, the Azores. The species seems not to occur on Iceland but is substituted there by *M. similis* (KULCZ.).

Taxonomical remarks:

Examining SØRENSEN's material of *Tmeticus Levinseni* which consists of females only, I found that two females from Godthåb, one from Qeqertasugssuk and one from Ũmánaq (East Greenland) belong to *M. rurestris*. BRÆNDEGAARD (1937) identified these specimens with a

form of *Meioneta nigripes*, which JACKSON (1933) had recorded from Akpatok, Labrador, and which BRÆNDEGAARD gave the name *Meioneta nigripes jacksoni*. JACKSON (op. cit.) points out that this form, distinguished from the nominate form by smaller posterior median eyes, is easily confused with *M. rurestris*. However, in general appearance and regarding the size of the anterior median eyes the females in SØRENSEN'S collection agree entirely with typical *M. rurestris*. The presence of this species in West Greenland has now moreover been definitely established by the discovery of males in the Godthåb area and at Godhavn. The specimens are all bigger than European ones but a comparison of the

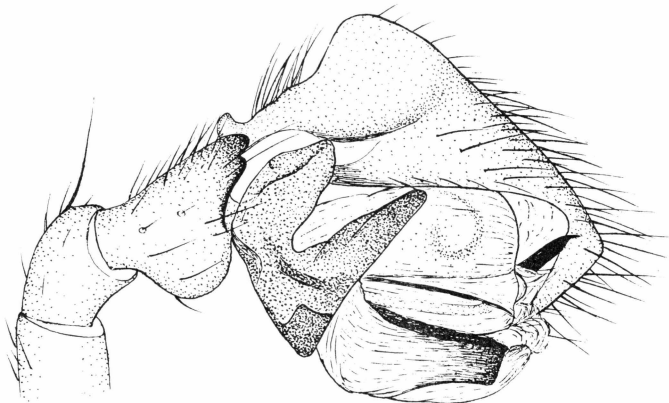


Fig. 82. *Meioneta rurestris* (C. L. Koch), right male palp, lateral view. $\times 140$.

palps of Swedish and Greenland males shows no difference in structure. The species is easily distinguished in the male by the form of the lamella characteristica, which is rather broad, slightly tapering forward and truncate at the tip with the dorsal corner produced into a small tooth. The dorsal margin is folded in and forms a narrow edging inwards (Fig. 82).

Ecology:

The species occurs sparsely in bogs and heaths and most specimens were collected with pitfall traps.

34. *Bathyphantes eumenoides* n. sp.

(Figs. 83–85)

Type locality:

69°15' Disko, Godhavn July 9, 1962: 2 ♀♀.

Description:

FEMALE. Total length 2.6 mm, carapace 1.05 mm long, 0.92 mm wide, sternum 0.64 mm long, 0.66 mm wide. Leg I 4.93 mm (Fe 1.36,

Pt 0.33, Ti 1.25, Mt 1.17, Ta 0.82 mm), leg IV 4.77 mm (Fe 1.39, Pt 0.32, Ti 1.17, Mt 1.15, Ta 0.74 mm).

Carapace greyish yellow, cephalic portion dark at the margin, palpi and legs of the same colour as carapace, chelicerae yellowish brown, sternum blackish brown and abdomen dark grey with 6 transversal light bars (Fig. 83).

Carapace moderately broad (length/width = 1.14), lateral margins of anterior half slightly indented. Eyes: Anterior row straight,

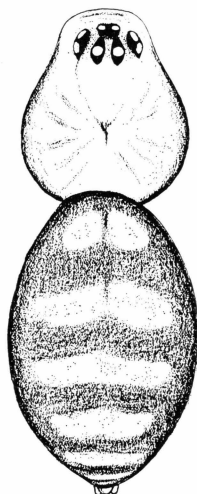


Fig. 83. *Bathyphantes eumenoides* n. sp., ♀. Cephalothorax and abdomen, dorsal view. $\times 25$.

median eyes much smaller than laterals, separated by about the radius, from laterals by a little more than the diameter. Posterior eyes in a straight row, equal, medians separated by less than the diameter, from laterals by the diameter. Legs: All femora with 1 dorsal spine, femur I also with 1 prolateral spine in distal half; tibiae with 2 dorsal spines, in the distal half tibiae I, III, and IV with 1 prolateral spine and tibiae I, II, and IV with 1 retrolateral spine. In the paratype tibia III also has a retrolateral spine. Position of trichobothrium in metatarsus I = 0.27, II = 0.29, III = 0.28; metatarsus IV without trichobothrium. Chelicerae 0.29 mm long, slightly divergent, fang groove with 3 or 4 pro-marginal and 4 retromarginal teeth. Epigynum with a clavus twice as long as wide and wider than the parmula; the latter is about half as long as the clavus. The epigyneal groove is visible on either side of the basal half of the clavus when the epigyne is viewed from the ventral side (Figs. 84, 85).

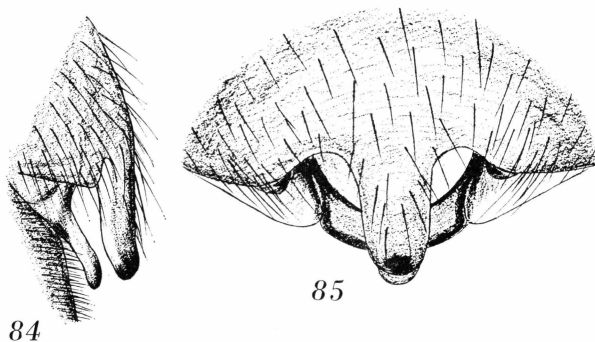
Distribution:

West Greenland, Alaska [Umiat, Colville River July 3 1949: 1 ♀. (N. A. WEBER); Nome May 22–June 7, 1950: 1 ♀ (G. SCHUMANN)].

Taxonomical notes:

This species is closely related to *Bathyphantes eumenis* (L. KOCH), which is distinguished by some small differences in the shape of the epigyne.

L. KOCH (1879) when describing *Linyphia eumenis* points out that its abdomen is marked with light transversal patches, but only one of



Figs. 84, 85. *Bathyphantes eumenoides* n. sp., ♀. Fig. 84. Epigyne from the side. – Fig. 85. Epigyne from below. – $\times 120$.

the 4 females in the type material has such markings, in the remaining the abdomen is concolorous. There is also a slight difference in the shape of the epigyne in these two types of females. Very probably those with concolorous abdomen are conspecific with *B. simillima* (L. KOCH) described in the same paper (male only).

35. *Lepthyphantes complicatus* (EMERTON)

♂ *Bathyphantes complicatus* EMERTON 1882, Conn. Acad. Sci. Trans. 6, p. 72, pl. 24, fig. 8. Type locality: Mt. Washington, N. H., U.S.A.

♀ *Erigone umbraticola* KEYSERLING 1886, Spinnen Amerikas, Therid. 2, p. 195, pl. 18, fig. 255.

For further synonyms, see HOLM 1958 a, p. 57.

West Greenland records:

1. SØRENSEN 1898, p. 196 (*L. audax*).

Localities:

59°55'–69°45' between Ilua and Ritenbenk (1).

64°15' Malenebugt, June 29–July 3, 1962: 2 ♂♂ 5 ♀♀.

64°21' Itivdleq, Eqalugialik, July 2, 1962: 2 ♀♀.

69°15' Disko, Godhavn, July 6–10: 2 ♂♂ 1 ♀; July 22, 1962: 2 ♂♂ 5 ♀♀.

69°16' Disko, Fortunebay, July 12, 1962: 3 ♀♀ 2 juv.

Disko, Engelskmandens Havn, July 26, 1962: 1 ♀.

Distribution:

East Greenland (60°30'–62°35' N lat.), West Greenland, Canada (Labrador, New Foundland, Alberta), Alaska, U.S.A. (New York, New Hampshire), Iceland, Spitsbergen, the Faroes, northern Fennoscandia, Scotland, Switzerland.

Ecology:

This species was found among moss and litter on heaths and in willow thickets as well as under stones in different localities. It occurs both in very wet places like *Sphagnum* bogs and, under stones, in a dry wind-eroded lichen heath.

36. *Lepthyphantes turbatrix* (O. P.-CAMBRIDGE)

♂♀ *Linyphia turbatrix* O. P.-CAMBRIDGE 1877, Ann. Mag. Nat. Hist. (4) 20, p. 281.

Type locality: Between Jakobshavn and Nûgssuaq peninsula, West Greenland.

♂ *Bathypantes subalpina* EMERTON 1882, Conn. Acad. Sci. Trans. 6, p. 70, pl. 22, figs. 3.

♂ *Linyphia groenlandica* LENZ 1897, Biblioth. Zool. 8, p. 73, figs. 1–3.

♀ *Lepthyphantes groenlandica* (LENZ), SØRENSEN 1898, Vid. Medd. Naturhist. Foren. Kjøbenhavn, p. 194.

♂♀ *Lepthyphantes subalpina* (EMERTON), ZORSCH 1937, Amer. Midl. Naturalist 18:5, p. 870, pl. 3, figs. 32–35.

West Greenland records:

1. CAMBRIDGE 1877, p. 281 (*Linyphia t.*).

2. LENZ 1897, p. 73 (*Linyphia groenlandica*).

3. SØRENSEN 1893, p. 194 (*Leptyphantes groenlandica*).

Localities:

60°50' Igaliko (3).

68°45' Egedesminde (3).

69°15' Disko, Godhavn, July 6–19, 1962: 4 ♂♂ 12 ♀♀ 9 juv.

69°16' Disko, Engelskmandens Havn, July 9, 1962: 1 ♂.

Disko, Fortunebay, July 12, 1962: 1 ♀ 3 juv.

69°46' Arveprinsens Ejland, Atâ, July 24, 1962: 1 ♂ 2 ♀♀.

Eqip sermia glacier, Ege July 24, 1962: 1 ♀ 4 juv.

70°32' Nûgssuaq peninsula, Agssakak (2).

Distribution:

East Greenland (60°15'–25' N lat.), West Greenland, Canada (Newfoundland, Quebec, Ontario), United States (New York, New Hampshire).

Taxonomical remarks:

BRENDEGAARD (1946) has identified *Linyphia groenlandica* LENZ with *Lepthyphantes turbatrix* (CAMBR.), and a female determined by

SØRENSEN under the former name was compared by JACKSON with CAMBRIDGE's type of *Linyphia turbatrix* and turned out to be identical with this.

From ZORSCH's excellent drawings of the male palpus and the epigyne of *Lepthyphantes sulbalpinus* (EMERTON) it is easy to draw the conclusion that this species must be synonymous with *L. turbatrix* (CAMBR.), which thus no longer appears endemic to Greenland.

Ecology:

Most of the specimens of this species were collected under stones on different types of heaths and in snow beds with *Salix herbacea*. In a herb field on a slope at Godhavn specimens were obtained both under stones and in pitfall traps.

37. *Linyphia peltata* WIDER & REUSS

West Greenland record:

SØRENSEN 1898, p. 194 (*Linyphia Emertonii*).

Locality:

65°20' Isortoq inland (Syd-Isortoq), June 15, 1879 (A. KORNERUP).

Distribution:

West Greenland, Great Britain, European continent, Algeria, China, Japan.

Taxonomical remarks:

SØRENSEN (1898) recorded from Syd-Isortoq a female which he identified with *Linyphia emertoni* THORELL (1875). The type material of this species, 2 ♂♂ and 1 ♀ from Labrador, has not been recovered nor has the species been identified later. SØRENSEN's specimen, however, is a strongly bleached female of *Linyphia peltata* WID., whose epigyne and abdominal pattern agrees entirely with Swedish specimens.

Fam. Araneidae

38. *Singa (Hyposinga) groenlandica* SIMON

(Figs. 86, 87)

West Greenland records:

1. SIMON 1889, p. 290 (*Hyposinga gr.*).
2. SØRENSEN 1898, p. 187 (*Hyposinga gr.*).
3. JACKSON 1930, p. 645 (*Araneus gr.*).
4. JACKSON 1938, p. 548 (*Araneus gr.*).
5. HOLM 1958 b, p. 528 (*Singa albovittata*).

Localities:

61° "Eid "(5).

61°40' Tasiussaq (2).

64°09' Kobbefjord, SE shore, June 30, 1962: 1 ♀.

64°10' SW of Lille Malene, 80 m, July 1, 1962: 2 ♀♀ 2 juv.

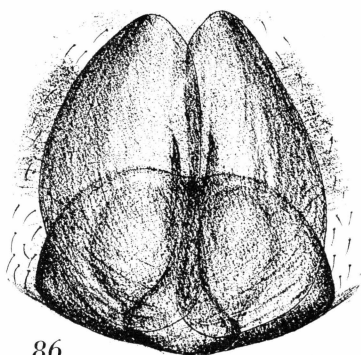
64°15'–45' Godthåbsfjord (2).

64°40' Godthåbsfjord, Qugssuk (3).

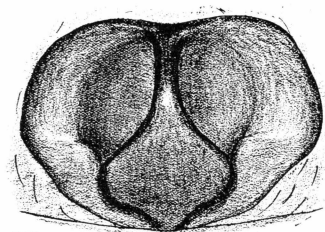
67° Amerdloq fjord, Utorqait (4).

69°15' Disko, Godhavn, Østerlien, July 10–26, 1962: 2 ♀♀ 1 juv.

ca. 70° Kokortok Fjord (1).



86



87

Figs. 86, 87. *Singa groenlandica* (SIMON). ♀ Fig. 86. Epigyne covered with two scales, ventral view. — Fig. 87. Epigyne without scales, ventral view. — $\times 75$.

Distribution:

West Greenland.

Taxonomical remarks:

The epigyne of this species—only the female is known—is very characteristic and as I have previously pointed out (HOLM 1960) it differs considerably from that of *Singa albobittata* (WESTR.). I erroneously recorded *S. groenlandica* under the latter name from "Eid" (HOLM 1958 b), but corrected my mistake in 1960 and gave the first figure of the epigynum of *S. groenlandica*. As in *S. albobittata* the epigynum is to start with covered by two large scales (Fig. 86) which later drop off, probably during copulation or egg-laying. The epigyneal plate is then seen to have two large, rounded, deep grooves, separated by a narrow septum strongly widened backwards (Fig. 87).

Ecology:

The specimens were found in moist, luxuriant heath and in herb field on a slope.

Fam. **Tetragnathidae**39. ***Tetragnatha extensa*** (LINNÉ)

West Greenland records:

1. THORELL 1872, p. 151 (*T. groenlandica*).
2. SØRENSEN 1898, p. 188 (*T. groenlandica*).
3. JACKSON 1930, p. 643.
4. JACKSON 1938, p. 548.
5. HOLM 1958 b, p. 528.

Localities:

- 60°08'–33' Tasermiut fjord (2).
61° "Eid" (5).
61°15' Ivigtut (2).
ca. 64°40' Godthåbsfjord, Qugssuk (3).
64°21' Itivdleq, Eqaugialik, July 2, 1962: 1 ♀ 3 juv.
67° Søndre Strømfjord (4).
69°30' Disko Fjord, Kuannersuit (1).

Distribution:

West Greenland, East Greenland (lat. 62°15' N), Europe, North-Africa, the Azores, W Asia, Siberia, Turkestan, Kamchatka, Japan, China, Alaska, Canada, United States (northern states).

Ecology:

I found this species in only one locality at the end of the northern branch of Lysefjord, Itivdleq, where there are thickets of *Alnus crispa*. The female and 2 juvenile specimens were found on the bushes, and 3 juvenile specimens were obtained by sifting litter under the bushes.

Fam. **Hahniidae**40. ***Hahnia glacialis*** SØRENSEN

West Greenland records:

1. SØRENSEN 1898, p. 219.
2. JACKSON 1938, p. 544.

Localities:

- 59°55' Ilua (1).
68°45' Kangersuneq (1).
69°15' Jakobshavn (2).
Disko, Godhavn, July 9, 1962: 1 ♀.
69°30' Disko Fjord, Kangerdluarssuk, July 17, 1962: 1 juv.
69°46' Arveprinsens Ejland, Atâ July 24, 1962: 1 ♀.

Distribution:

East Greenland (from 59°50' to 70°30' N lat.), West Greenland, Alaska.

Ecology:

According to SØRENSEN (1898) this species was collected under stones. The immature specimen from Kangerdluarssuk was obtained by sifting in a lichen heath; the females from Godhavn and Atâ were captured under stones.

Fam. Lycosidae

41. *Arctosa insignita* (THORELL)

(Figs. 88, 89)

♀ *Trochosa insignita* THORELL 1872, Öfv. Vet. Akad. Förhandl. 1872, p. 160.
Type locality: Disko, West Greenland.

West Greenland records:

1. THORELL 1872, p. 160 (*Trochosa i.*).
2. SIMON 1889, p. 290 (*Lycosa i.*).
3. SØRENSEN 1898, p. 232 (*Trochosa i.* ad part.).
4. JACKSON 1930, p. 641 (*Trochosa alpigena*).
5. JACKSON 1938, p. 548.
6. HOLM 1958 b, p. 528.

Localities:

- 59°55' Ilua (3).
61° "Eid" (6).
64°09' Kobbefjord, SE shore, June 30, 1962: 1 ♀ subad.
SW Lille Malene, 80 m, July 1, 1962: 1 juv.
64°10' Ny Herrnhut (6).
Godthåb, June 30–July 3, 1962: 1 ♀ 10 juv.
Ameragdla (6).
64°21' Itivdleg, Eqaugialik, July 2, 1962: 1 ♀.
64°30' Sangujât (6).
64°40' Godthåbsfjord, Qugssuk (4).
65°20' Sukkertoppen – Qipisarqo (6).
67° Amerdloq fjord, Utorqait (5).
69°13' Jakobshavn (2, 3).
69°15' Disko, Godhavn, July 6–26, 1962: 31 ♂♂ 26 ♀♀ 74 juv.
Engelskmandens Havn, July 9, 1962: 2 juv.
69°16' Disko, Lyngmarksfjeld 100–200 m, July 7–20, 1962: 2 ♀♀ 7 juv.
Fortunebay, July 12, 1962: 1 ♀ 5 juv.
69°30' Disko, Kangerdluarssuk, July 17–18, 1962: 1 ♂ 1 juv.
69°46' Arveprinsens Ejland, Atâ, July 24, 1962: 1 ♂.
Eqe at Equip sermia glacier, July 24, 1962: 1 ♀.

Distribution:

East Greenland (60°35' N lat.), West Greenland, Canada (Baffin Land, Labrador), Alaska.

Taxonomical remarks:

THORELL (1872) described this species from a single adult female collected in Disko by C. NYSTRÖM during the Swedish Greenland Expe-

dition in 1871. This specimen still exists and belongs to the Zoological Institute of the University of Uppsala. My measurements of its cephalothorax length agrees THORELL's 0.4 mm. The epigyne is 0.57 mm wide with the median triangular plate as long as wide, 0.26 mm (Fig. 88).

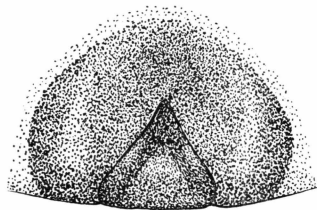


Fig. 88. *Arctosa insignita* (THORELL), epigyne. From the type specimen. $\times 95$.

Some authors have regarded this species as synonymous with *Arctosa alpigena* (DOL.) (STRAND 1906, EMERTON 1921, JACKSON 1930, GERTSCH 1934, 1935, SIMON 1937, GERTSCH & JELLISON 1939). It has also been described by EMERTON (1894) as *Lycosa hastata* and recorded under this name by several authors from Arctic North America. BRÆNDEGAARD

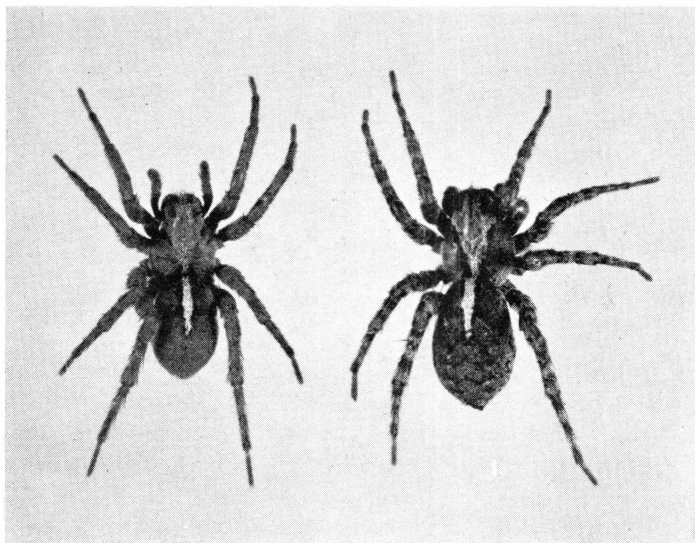


Fig. 89. *Arctosa insignita* (THORELL). Left: female with legs not annulated and with dorsal side of abdomen lacking a dark pattern. Right: female with annulated legs and wedge-shaped black bars on dorsal side of abdomen. Specimens from Disko, Godhavn. $\times 3$.

(1934) pointed out that *A. insignita* and *A. alpigena*, though closely related, are two different species. He characterized them in a later paper (1939).

Both males and females of *A. insignita* occur in two different forms with regard to the colour (Fig. 89): a lighter one with legs almost con-

colourous and with no transversal bars on the dorsal side of the abdomen, and a darker one with distinctly annulated legs and some black transversal bars on the abdomen. These two forms often occur in the same locality, the latter one being the commonest.

Ecology:

This species is most common in bogs and moist heaths. Contrary to *A. alpigena* (DOL.) it also occurs in dry localities such as the typical *Empetrum hermaphroditum* heath and lichen heaths on mountains slopes. It was not found in herb fields or grass communities. According to BRÉNDEGAARD (1946) *A. insignita* must be considered a heliophil species, and thus requires more arid living conditions than *A. alpigena*.

Most of my specimens were collected in pitfall traps. Only 2 females were caught under stones, both at the sea shore (at Eqaugialik and Fortunebay). The distribution of males, females and juveniles during four collecting periods was as follows:

	30. VI–3. VII	5–10. VII	10–19. VII	19–26. VII
♂	—	—	21	16
♀	3	4	31	13
juv.	11	13	77	27

42. *Pardosa furcifera* (THORELL)

(Fig. 90)

♂ *Lycosa furcifera* THORELL 1875, Proc. Boston Soc. Nat. Hist. 17, p. 499.

Type locality: Square Island, Labrador.

West Greenland records:

1. SØRENSEN 1898, p. 233.
2. JACKSON 1930, p. 641.
3. JACKSON 1938, p. 548.
4. HOLM 1958 b, p. 529.

Localities:

- 59°55' Ilua (1).
 60°45' Julianehåb (4).
 61° "Eid" (4).
 61°40' Narssalik, Kuáneq (4).
 Tassiussaq (1).
 64°09' Kobbefjord, SE shore, July 30, 1962: 8 juv.
 64°10' Godthåb, June 29–July 3, 1962: 29 ♂♂ 9 ♀♀ 11 juv.
 64°21' Itivdleg, Eqaugialik, July 2, 1962: 1 ♂ 2 ♀♀ 7 juv.
 64°30' Sangujât (4).
 64°40' Godthåbsfjord, Qugssuk (2).
 67° Amerdloq fjord, Utorqait (3).
 69°15' Godhavn, July 6–26, 1962: 16 ♂♂ 23 ♀♀ 27 juv.

69°16' Disko, Engelskmandens Havn, July 21–26, 1962: 1 ♀ 1 juv.
69°46' Arveprinsens Ejland, Atâ, July 24, 1962: 7 juv.

Distribution:

East Greenland (from 60°10' to 60°30' N lat.), West Greenland, Newfoundland, Alaska, U.S.A. Also found on Iceland in 1876 and 1892, but not recovered since (BRÆNDEGAARD 1958).

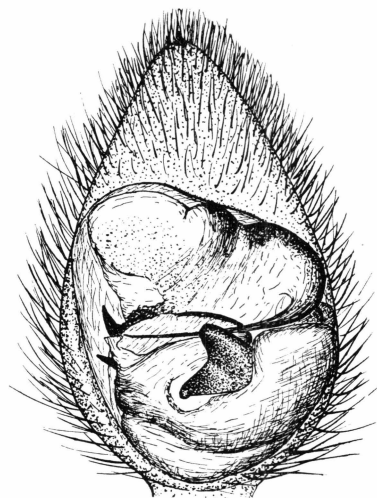


Fig. 90. *Pardosa furcifera* (THORELL), ♂. Right palpal tarsus, ventral view. From the type specimen from Labrador. $\times 40$.

Taxonomical remarks:

The type specimen of this species is an adult male with a cephalothorax length of 3.9 mm in Naturhistoriska Riksmuséet, Stockholm (*Collectio Thorell* nr. 244: 1520). The palp of this specimen from Labrador (Fig. 90) is in perfect agreement with that of the West Greenland specimens.

Ecology:

According to BRÆNDEGAARD (1946) this species lives in arid areas of the Arctic. Nevertheless it seems to prefer rather moist ground and occurs in the *Salix herbacea* community of snow beds as well as in the moss layer of heaths adjoining brooks. It was also found on herb fields on slopes and in *Salix* thicket.

The males seem to occur most abundantly in early summer as shown by the following table of the distribution of males, females and juveniles during four collecting periods:

	29. VI-3. VII	6-10. VII	10-19. VII	19-26. VII
♂	30	7	8	1
♀	11	3	16	5
juv.	26	7	14	14

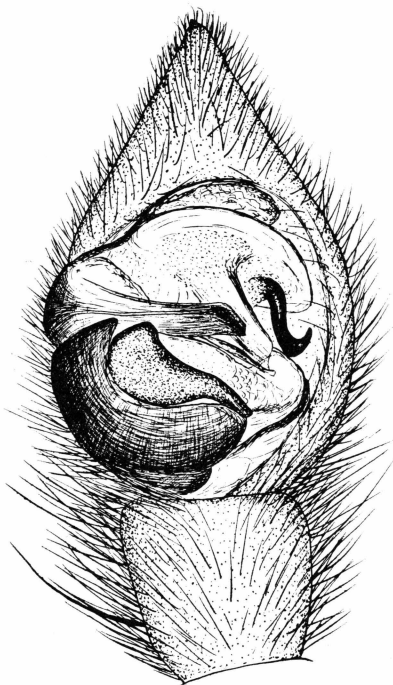


Fig. 91. *Pardosa glacialis* (THORELL), ♂. Tibia and tarsus of left palp, ventral view.
× 40.

43. *Pardosa glacialis* (THORELL)

(Figs. 91, 92 A-E)

♀ *Lycosa glacialis* THORELL 1872, Öfv. Vet. Akad. Förhandl. 1872, p. 159.

Type locality: West Greenland.

West Greenland records:

1. THORELL 1872, p. 159.
2. THORELL 1878, p. 395.
3. SIMON 1889, p. 290 (*Pardosa aquilonaris*).
4. VANHÖFFEN 1897, p. 150.
5. LENZ 1897, p. 76 (*Pardosa aquilonaris*).
6. SØRENSEN 1898, p. 76.
7. JACKSON 1930, p. 641.
8. JACKSON 1938, p. 544, 548.
9. HOLM 1958 b, p. 529 (*L. gl.* + *L. umanaki*).

Localities:

- 61° "Eid" (9).
61°10' Ivigtut (9).
64°40' Godthåbsfjord, Qugssuk (7).
67° Søndre Strømfjord (8).
Amerdloq fjord, Utorqait (8).
68°10' Arfersiorfik fjord (9).
69°13' Jakobshavn (3, 8).
69°15' Disko, Godhavn, (3), July 5–26, 1962: 1 ♂ 57 ♀♀ 107 juv.
69°16' Disko, Engelskmandens Havn, July 9, 1962: 1 ♀ 2 juv.
Disko, Fortunebay, July 1962: 3 ♀♀ 3 juv.
Disko, Lyngmarksfjeld, 50–200 m, July 7–20, 1962: 1 ♂ 13 ♀♀ 144 juv.
69°30' Disko Fjord, Kangerdluarssuk, July 17–18, 1962: 3 ♀♀ 20 juv.
69°40' Disko, Flakkerhuk, Mudderbugten (9).
69°45' Taserssuaq (6).
ca. 70° "Fiord de Kakortok" (Qeqertap ilua?) (3).
70°27' Qaræssap nunatâ (Karajak-nunatak) (4, 5).
70°30' Ikerasak (4).
70°33' Nûgssuaq, Ūmataussaq (Agssakak) (4, 5).
70°38' Nûgssuaq, Kûk (Kome) (4, 5).
70°40' Umanak (4, 5).
70°48' Itivdliaarsuk fjord (probably at Eqinga) (4, 5).
72°45' Upernivik (1, 9).
74°03' Ryders Øer (6).
74°44' Amdrup Ø (8).
78°20' Foulke Fjord (2).

Distribution:

East Greenland (from about lat. 68° to 76°50' N), West Greenland, Canada (Ellesmere Isl., Baffin Land, Southampton Isl., and Manitoba), CAMBRIDGE (1877) recorded this species from "North Greenland".

Taxonomical remarks:

BRÆNDEGAARD (1946) has pointed out that this species has been erroneously identified with several American species of the same group.

The epigyne of this species is very variable as is shown in Figs. 92 A–E. The tegular apophysis, too, seems to be somewhat differently shaped in different individuals. My material of males is, however, very small (see below).

THORELL (1872) described this species from two adult females collected by A. E. NORDENSKIÖLD with locally statement only "Greenland". One of these together with two juvenils is in Naturhistoriska Riksmuseet, Stockholm, (Collectio THORELL no. 244: 1523 b). This adult female, which must be regarded as the type, has a cephalothorax length of 3.3 mm and a length of patella + tibia IV of 4 mm. The widened part of the median septum of the epigyne is square-shaped (Fig. 92 A), and smaller than in the females collected by myself in Disko (Figs. 92 B–E).

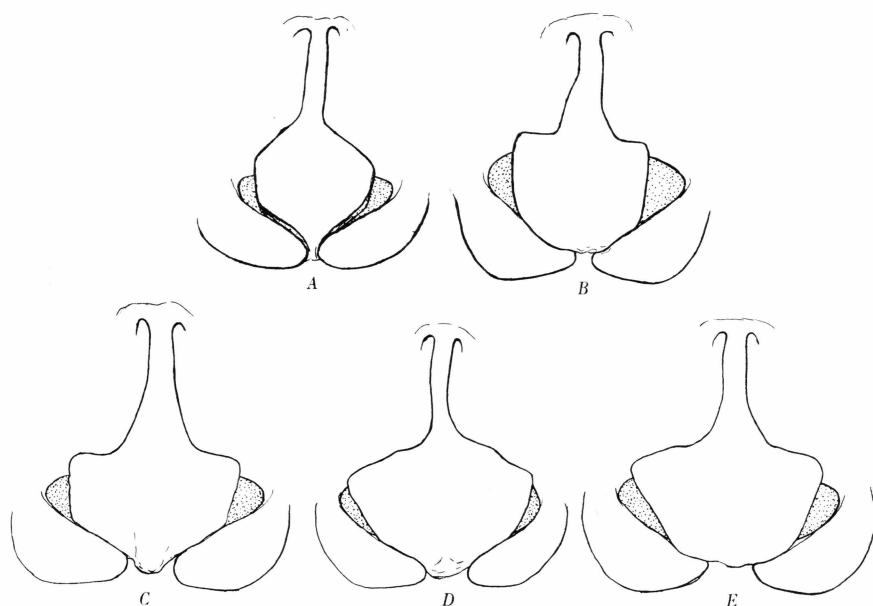


Fig. 92. *Pardosa glacialis* (THORELL), epigynes, A of the type specimen, B-E of specimens from Godhavn, Disko. - $\times 43$.

Ecology:

This species occurs in heaths as well as in bogs. On the Lyngmarks-fjeld it was found abundantly on *Cassiope tetragona* heath. As a rule it does not occur together with *Lycosa groenlandica* THORELL and *Lycosa furcifera* THORELL, which prefer the more luxuriant herb and grass communities and the *Salix* thickets.

The material of this species collected on Disko during July 5-26, 1962, consists of 352 specimens, 77 of which are adult females and only 2 adult males. The whole material of male, female, and juvenile specimens was acquired in three collecting periods as follows:

	5-10. VII	10-19. VII	19-26. VII
♂	1	1	0
♀	6	51	20
juv.	19	214	40

Only two males were obtained and most of the females were carrying an egg cocoon. Obviously the bulk of the males appears during a mating period in very early summer.

44. *Pardosa groenlandica* (THORELL)

♂♀ *Lycosa groenlandica* THORELL 1872, Öfv. Vet. Akad. Förhandl. 1872, p. 157.

Type locality: Brededal, Disko, West Greenland.

West Greenland records:

1. THORELL 1872, p. 157.
2. SØRENSEN 1898, p. 233.
3. JACKSON 1930, p. 641.
4. JACKSON 1938, p. 544, 548.
5. HOLM 1958 b, p. 529.

Localities:

- 59°52' Qeqertasugssuk (2).
 60° Frederiksdal (5).
 60°45' Julianehåb (5).
 61° "Eid" (5).
 61°10' Ivigtut (5).
 61°20' Tigssaluk – "Irigdal" (5).
 61°40' Tasiussaq (2, see BRÆNDEGAARD 1946, p. 20, note).
 62°50' J. A. D. Jensens Nunatakker (2).
 64°10' Ny Herrnhut (5).
 Ameragdla (5).
 64°15' Store Malene, 40 m, 780 m, June 29–July 3, 1962: 2 ♂♂ 1 ♀ 3 juv.
 64°30' Sangujât.
 64°40' Godthåbsfjord, Matuola (3).
 65°20' Sukkertoppen – Kepisakko (5).
 66°55' Holsteinsborg (1).
 67° Søndre Strømfjord (4), June 27–July 27, 1962: 8 ♂♂ 10 ♀♀ 17 juv.
 Amerdloq fjord, Utorqait (4).
 69°13' Jakobshavn (4).
 69°15' Disko, Godhavn, July 6–26, 1962: 17 ♂♂ 20 ♀♀ 39 juv.
 Disko, Engelskmandens Havn, July 9–26, 1962: 5 ♂♂ 11 ♀♀ 10 juv.
 69°16' Disko, Fortunebay, 100 m, July 12, 1962: 1 ♂ 2 juv.
 Disko, Lyngmarksfjeld, 250 m, July 13–20, 1962: 3 juv.
 69°20' Disko, Brededal (1).
 69°30' Disko, Kangerdluarssuk, July, 1962: 2 juv.
 69°46' Ege at Eqip sermia glacier, July 24, 1962: 2 ♀♀ 2 juv.

Distribution:

East Greenland (from 60°05' to 73°25' N lat.),¹ West Greenland, Canada, (Labrador), Alaska, U.S.A. CAMBRIDGE (1877) recorded this species from "North Greenland". Like *Lycosa furcifera* this species was found on Iceland in 1876, but not recovered since (BRÆNDEGAARD 1958).

Ecology:

The typical locality for this species is the herb fields on mountain slopes as well as *Salix polaris* and *Sibbaldia procumbens* communities of snow beds. It was also found under stones in heaths and at the seashore.

Adult males and females occurred during all four collecting periods from June 27 to July 26 as shown in the following table:

	27. VI-3. VII	5-10. VII	10-19. VII	19-26. VII
♂	2	2	10	10
♀	6	3	12	19
juv.	13	8	29	21

45. *Pardosa hyperborea* (THORELL)

(Figs. 93, 94)

West Greenland records:

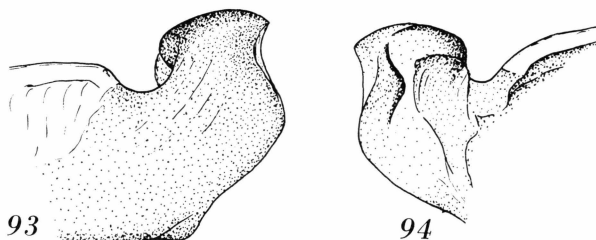
1. SØRENSEN 1898, p. 234.
2. JACKSON 1930, p. 641.
3. HOLM 1958 b, p. 529.

Localities:

- 59°55' Ilua (1).
 60°45' Julianehåb (3).
 64°10' SW Lille Malene, July 1, 1962: 3 ♀♀. - Ameragdla (3).
 64°40' Godthåbsfjord, Qugssuk (2).
 65°30' Sukkertoppen (1).

Distribution:

East Greenland (61° and 70°30' N lat.). West Greenland, Canada, Alaska (Kodiak), U. States (Maine), Iceland, Fennoscandia, Kola Peninsula, Murman Coast, East Prussia, Poland.

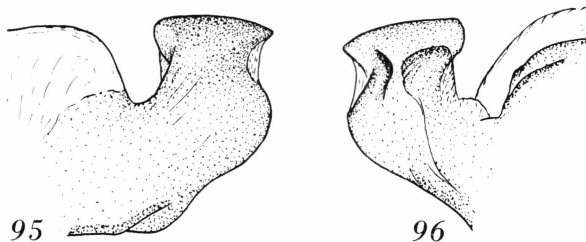


Figs. 93, 94. *Pardosa hyperborea* (THORELL), ♂. Fig. 93. Terminal apophysis of right bulb, lateral view. - Fig. 94. Terminal apophysis, mesial view. - $\times 105$.

Taxonomical remarks:

An investigation into the structure of the bulbus of *Lycosa hyperborea* THORELL and *L. saltuaria* L. KOCH revealed a distinct difference in the shape of the terminal apophysis of the two species. In the former this apophysis has a shallow emargination anteriorly (Fig. 93, 94), whereas in the latter this emargination is much deeper (Fig. 95, 96). No noticeable difference in the shape of this apophysis has been observed

in specimens of *L. hyperborea* from Greenland, Kodiak Island (Alaska), Iceland and Scandinavia. Probably there are no intermediate forms between these species, which many authors, like TAMBS-LYCHE (1940), have regarded as two races of *L. saltuaria*. Moreover, an investigation into the structure of the epigyne in a large material of *L. saltuaria* and *hyperborea* would very probably show a constant difference between the two species in this organ as well. Together with previously observed differences with regard to the hairs, setae and spines of the legs, and the fact that the two forms have a different geographical distribution (*L.*



Figs. 95, 96. *Pardosa saltuaria* (L. KOCH), ♂. Fig. 95. Terminal apophysis of right bulb, lateral view. — Fig. 96. Terminal apophysis, mesial view. — $\times 105$.

hyperborea is an arctic-north-boreal, *L. saltuaria* a montane Central and West European form) the difference concerning the terminal apophysis speaks strongly for regarding the two forms as separate but closely allied species.

Fam. Gnaphosidae

46. *Haplodrassus signifer* (C. L. KOCH)

West Greenland records:

1. SØRENSEN 1898, p. 222 (*Drassus troglodytes*).
2. JACKSON 1930, p. 640 (*Drassodes* s.).
3. JACKSON 1938, p. 547 (*Drassodes* s.).
4. BRÉNDEGAARD 1946, p. 55 (*Drassodes* s.).
5. HOLM 1958 b, p. 530.

Localities:

- 59°55' Ilua (1).
 60° Frederiksdal (5).
 60°45' Julianehåb (5).
 61° Igaliko (5).
 61°10' Ivigtut (5).
 61°40' Tasiussaq (4).
 62° Frederikshåb (4).
 64°10' Ameragdla (5).
 Godthåb, SW Lille Malene, July 1, 1962: 1 ♀ 5 juv.
 64°21' Lysefjord (Ameralik), Eqaugialik, July 2, 1962: 2 juv.

64°40' Matuola (2).

66°55' Holsteinsborg (4).

67° Amerdloq fjord, Utorqait (3).

Søndre Strømfjord, July 1962: 8 juv.

69°15' Disko, Godhavn, July 10–26, 1962: 7 ♂♂ 3 ♀♀ 6 juv.

Distribution:

East Greenland (from 60°05' to 63°25' N lat.), West Greenland, Canada, United States (New Foundland, Connecticut, Wisconsin, Montana, Wyoming, California), Europe, Palestine, Irak, West Siberia, Mongolia.

Ecology:

The species was collected in *Empetrum* heath, herb field, snow beds with *Salix herbacea*, and in *Fucus* wrack on sea-shore.

Fam. Philodromidae

47. *Thanatus arcticus* THORELL

(Figs. 97–101)

♀ juv. *Thanatus arcticus* THORELL 1872, Öfv. Vet. Akad. Förhandl. 1872, p. 157.

Type locality: Disko, West Greenland.

♀ *Thanatus arcticus* THORELL, LENZ 1897, Bibl. Zool. 20, p. 76, Figs. 8, 9.

♀ *Thanatus arcticus* THORELL, KULCZYNSKI 1916, Mém. Ac. imp. Sci. St. Petersb. (8) 28:11, p. 24, Pl. 1, Fig. 34.

♀ *Thanatus lapponicus* JACKSON 1932, Proc. Zool. Soc. Lond. 1932, p. 109, Pl. 1, Fig. 5.

♂ *Thanatus arcticus* THORELL, HOLM 1958, Ark. Zool. (2) 11:31, p. 530, Figs. 6–8.

♂♀ *Thanatus arcticus* THORELL, DONDALE, TURNBULL and REDNER 1964, Canad. Entomol., 96, p. 651, Figs. 14–18, 55–59.

West Greenland records:

1. THORELL 1872 b, p. 157.

2. CAMBRIDGE 1877, p. 281 (*Thanatus formicinus*?).

3. VANHÖFFEN 1897, p. 150.

4. LENZ 1897, p. 76.

5. SØRENSEN 1898, p. 225.

6. JACKSON 1930, p. 640.

7. JACKSON 1938, p. 548.

8. HOLM 1958 b, p. 530.

Localities:

60°45' Julianehåb (5, 8).

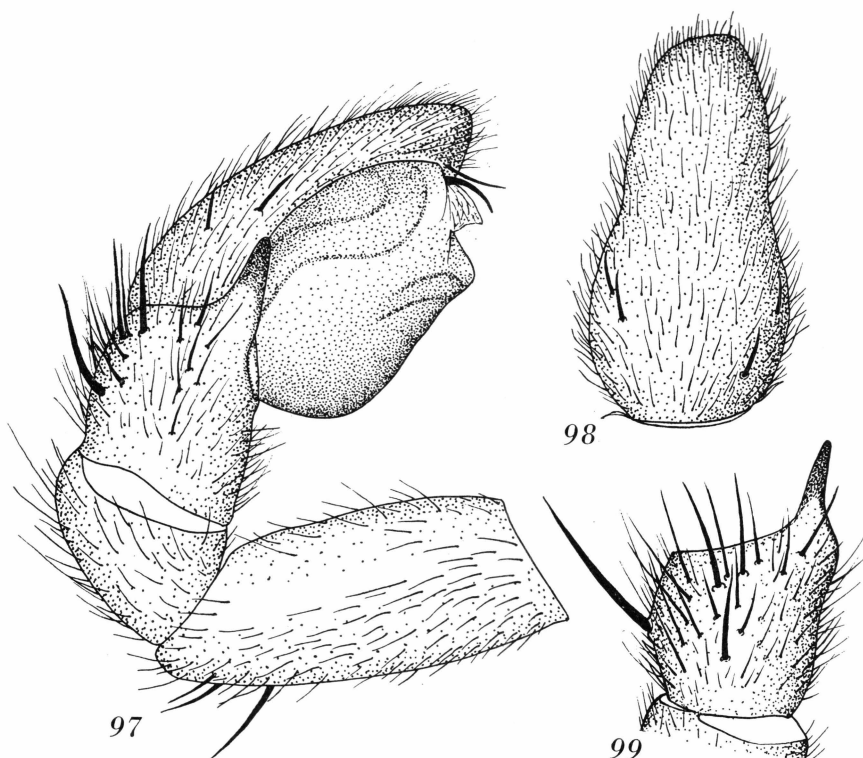
61° "Eid" (8).

61°40' Tasiussaq (5).

64°09' SW Store Malene, 40 m, June 29–July 3, 1962: 2 ♂♂.

64°10' SW Lille Malene, 80 m, July 1, 1962: 1 juv.

Ameragdla (8).



Figs. 97–99. *Thanatus arcticus* THORELL, ♂. Fig. 97. Right male palp, lateral view. – Fig. 98. Tarsus of right male palp, dorsal view. – Fig. 99. Tibia of right male palp, dorsal view. – $\times 45$.

64°40' Godthåbsfjord, Matuola (6).

67° Amerdloq Fjord, Utorqait (7).

69°13' Jakobshavn (2).

69°15' Disko (1).

Disko, Godhavn, July 6–26, 1962: 2 ♂♂ 1 ♀ 7 juv.

Disko, Engelskmandens Havn, July 9, 1962: 12 juv.

69°16' Disko, Lyngmarksfjeld, 50–250 m, July 7–20, 1962: 3 ♀♀ 12 juv.

Disko, Fortunebay, July 12, 1962: 1 ♀ 3 juv.

69°30' Disko, Kangerdlugssuaq, July 17 1962, 1 ♀ 2 juv.

69°46' Arveprinsens Ejland, Atâ, July 24, 1962: 1 juv.

Ege at Eqip sermia glacier, July 17, 1962: 4 juv.

70°33' Nûgssuaq, Agssakak (3, 4).

70°40' Umanak (3).

Distribution:

West Greenland, Canada (Mackenzie, British Columbia), Alaska
West Siberia, Kamchatka (?), Norway, Sweden (Torne Lappmark).

Taxonomical remarks:

Thanatus arcticus THOR. also occurs in the fjells of northern Sweden where it was found in the same localities as *Thanatus formicinus* (CL.). Most probably *Thanatus lapponicus* JACKSON from Norway (Finnmark) is a synonym of *Th. arcticus*, as supposed by DONDALE, TURNBULL and REDNER (1964). *Thanatus nigromaculatus* KULCZYNSKI from Kamchatka is also a possible synonym of this species.

Swedish male specimens of this species agree with the Greenland ones, except that the basal half of the cymbium of the palpus has 4–6 spines on its dorso-lateral side instead of 1 or 2 in the latter (Fig. 98).

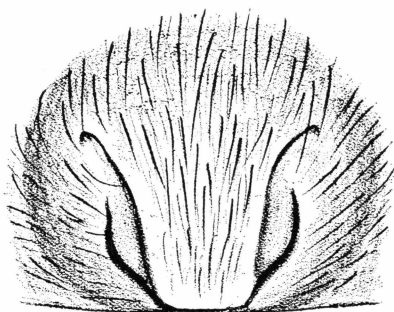


Fig. 100. *Thanatus arcticus* THORELL, epigyne. $\times 65$.

The epigyne of the female may differ slightly in these two populations: in 7 Greenland specimens the anterior width of the area ("septum") between the two furrows (Fig. 100) varies from 0.41 to 0.5 mm and the length from 0.37 to 0.45, whereas in two Swedish specimens the anterior width is 0.37 and 0.41 and the length 0.37 and 0.43 mm. The material is of course too small to permit any certain conclusions.

A probably subadult female labelled "*Thanatus arcticus* THOR. Grönland. NYSTRÖM" by THORELL and kept in the Museum of the Zoological Institute, Uppsala, seems to be one of the two immature females THORELL (1872) mentions in his description of the species. As the second specimen which was collected by FRIES, seems to be lost, the former specimen must be considered the type.

Ecology:

In Swedish-Lapland this species occurs both in the alpine and subalpine region of the mountains. In West Greenland adult specimens were collected in *Empetrum hermaphroditum*, *Cassiope tetragona* and lichen heaths, whereas immature specimens were obtained in many other habitats as well, e.g. bogs, herb field, among litter in willow thickets.

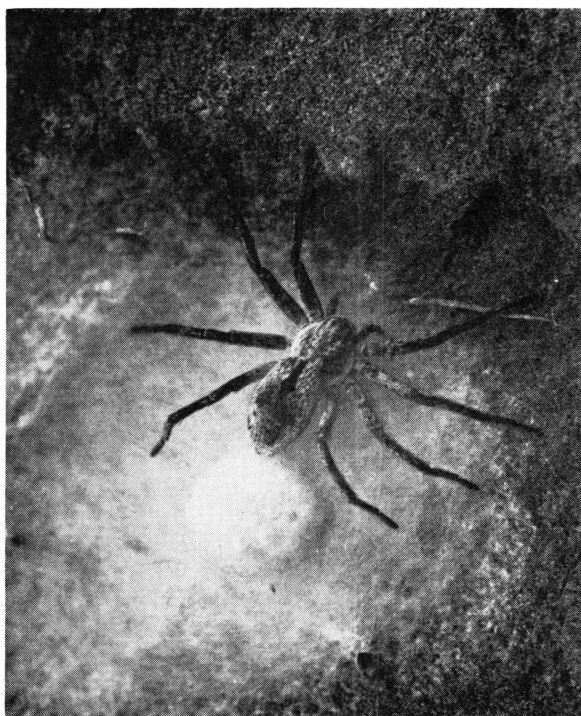


Fig. 101. *Thanatus arcticus* THORELL. Female with egg cocoon. Disko, Fortunebay, July 12, 1962. Photo Å. HOLM.

Two females were found under stones, guarding their egg cocoon. This is large and flat, white in colour and attached to the under surface of a stone (Fig. 101).

Fam. Thomisidae

48. *Xysticus (Proxysticus) durus* (SOERENSEN)

♂♀ *Oxyptila dura* SØRENSEN 1898, Vid. Medd. Naturhist. Foren. p. 230.

♀ *Oxyptila dura* SOERENSEN, JACKSON 1930, Ann. Mag. Nat. Hist. (10) 6, p. 640, Pl. 17, Fig. 6.

♂♀ *Xysticus durus* (SOERENSEN), DONDALE, TURNBULL and REDNER 1965, Canad. Ent. 97:12, p. 1260, Figs. 74, 77, 150, 153.

Remaining synonyms: see GERTSCH 1953, p. 455.

West Greenland records:

1. SØRENSEN 1898, 230 (*Oxyptila d.*).
2. JACKSON 1930, p. 640 (*Oxyptila d.*).
3. JACKSON 1938, p. 547 (*Oxyptila d.*).
4. HOLM 1958 b, p. 530.

Localities:

- 59°55' Kumak (1).
60° Frederiksdal (4).

61°40' Tasiussaq (1).

64°10' Ameragdla (4).

SW Store Malene, 80 m, June 29, 1962: 1 juv.

64°40' Godthåbsfjord, Matuola (2).

67° Amerdloq fjord, Utorqait (3).

69°15' Disko, Godhavn, July 5-26, 1962: 46 ♂♂ 4 ♀♀ 14 juv.

Distribution:

East Greenland (from 65°35' to 66°20' N lat.). West Greenland, Canada, United States (Rocky Mountains from Wyoming to New Mexico).

Ecology:

All the specimens with the exception of a young one were caught in pitfall traps in *Empetrum*, *Vaccinium* and *Polygonum* heaths as well as in *Carex* bogs and herb slopes. The largest catch, consisting of 17 ♂♂, 2 ♀♀ and 1 juv., was made with only 4 traps on a herb slope of Østerlien, Disko, July 19-26. The whole material collected with pitfall traps consists of 46 males, 4 females and 14 juvenile specimens distributed over 3 collecting periods during July in the following way:

	5-10. VII	10-19. VII	19-26. VII	Total
♂	3	19	24	46
♀	—	1	3	4
juv.	4	2	8	14

The steep increase in the number of adult males caught during the two latter periods may indicate a mating period during the second half of July. The adult females are obviously very sedentary, accounting for only 8% of the adult specimens in the catches.

Fam. Dictynidae

49. *Dictyna borealis* O. P.-CAMBRIDGE

(Fig. 102)

♀ *Dictyna borealis* O. P.-CAMBRIDGE 1877, Ann. Mag. Nat. Hist. (4) 20, p. 273, Pl. 8, Figs. 1 a-e. Type locality: Ilordleq, West Greenland.

Synonyms: See CHAMBERLIN & GERTSCH 1958, p. 136.

West Greenland records:

1. CAMBRIDGE 1877, p. 273.

2. VANHÖFFEN 1877, p. 150 (*D. groenlandica*).

3. LENZ 1897, p. 75 (*D. groenlandica*).

4. SØRENSEN 1898, p. 218 (*D. hamifera* ad part. Localities below from the collection).

5. JACKSON 1938, p. 544, 547.

6. BRÆNDEGAARD 1940, p. 7 (*D. hamifera*).

7. DENIS 1955, p. 67.

Localities:

59°55' Ilua (4).

66°55' Holsteinsborg (4).

67° Amerdloq Fjord, Utorkait (5).

68°45' Kangersuneq (4).

Egedesminde (4).

69°13' Jakobshavn (4, 5).

69°15' Disko, Godhavn, July 10–26, 1962: 1 ♂ 1 ♀ 8 juv.

69°16' Disko, Fortunebay, July 12, 1962: 9 juv.

69°30' Ilordleq (1).

69°45' Taserssuaq (4).

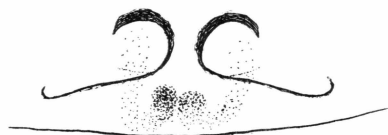


Fig. 102. *Dictyna borealis* CAMBRIDGE, epigyne. $\times 100$.

69°30' Disko Fjord, Kangerdluarssuk, July 17, 1962: 1 ♀ 5 juv.

69°45' Ritenbenk (4, 6).

69°46' Arveprinsens Ejland, Atâ, July 24, 1962: 12 juv.

Port Victor, Ege (7).

70°40' Umanak Fjord (2, 3).

In the collection determined by SØRENSEN (1898) there are also specimens from "Godthåbsfjord" and "between Sukkertoppen and Kangâmiut". According to BRÆNDEGAARD (1946, 1960) this species occurs in West Greenland as far north as at lat. 74° and 74°44' N, but I have not been able to find records from any locality north of 70°40' N lat. (Umanak Fjord). Nevertheless the species does most probably occur further north as well, since it has already been found at lat. 82°15' N in North Greenland.

Distribution:

East Greenland (from 68°05' to 76°50' N lat.), North Greenland (Peary Land from 81°57' to 82°10' N lat.). West Greenland, Canada (Northwest Territories, Ellesmere Island). Specimens from Colorado recorded as *D. borealis* seem to belong to another species (LEECH 1966). In the western mountain states of the United States a subspecies occurs, *D. borealis cavernosa* CHAMBERLIN & GERTSCH.

Taxonomical remarks:

On the basis of a rather extensive material of *Dictyna* from East and West Greenland SØRENSEN (1898) concluded that there was only

one species of this genus in Greenland, first described by THORELL (1872) as *D. hamifera*, later by O. P.-CAMBRIDGE (1877) and LENZ (1897) as *D. borealis* and *D. groenlandica* respectively. BRÆNDEGAARD (1940, 1946) may claim the credit for definitely establishing the existence of two different species of *Dictyna* in Greenland, viz. *D. borealis* CAMBR. (= *D. groenlandica* LENZ) and *D. major* MENGE (= *D. hamifera* THORELL). He points out the main distinguishing characters between these species, and gives informative figures of the male palp, the epigyne and the dorsal pattern of the abdomen of these species.

Ecology:

According to BRÆNDEGAARD (1946) this species is common in the arid areas of East Greenland, and the same author also states (1960) that in North Greenland "*D. borealis* has especially been found in dry localities such as south-facing slopes exposed to the sun and arctic steppes with a vegetation of *Dryas*, *Cassiope*, *Carex*, and *Vaccinium*." At Disko this species seems to be less common than *D. major* MENGE. The whole material (from Disko and Atâ) consists of 37 specimens of which only 3 are adults, one male and two females. The high percentage of juveniles must at least partly be due to the fact that the material was obtained mainly by sifting. No adult specimens were caught in pitfall traps. The species seems to prefer dry localities such as *Empetrum*-lichen and low *Empetrum-Vaccinium* heaths and some young individuals were collected in a sandy area at the seashore with a scattered vegetation of *Elymus* and *Honkenya*. By sifting the moss and lichens of a 1/4 m² dry and low *Empetrum-Vaccinium* heath at Atâ the only spiders in the sample were 12 juveniles of *D. borealis*.

50. *Dictyna major* MENGE

(Fig. 103).

Synonyms: See CHAMBERLIN & GERTSCH 1958, p. 82.

West Greenland records:

1. THORELL 1872, p. 656 (*D. hamifera*).
2. SØRENSEN 1898, p. 218 (*D. hamifera* ad part. Localities below from the collection).
3. JACKSON 1930, p. 639 (ad part.).
4. JACKSON 1938, p. 547.
5. HOLM 1958b, p. 530.

Localities:

- 60°55' Qagssiarssuk (2).
61° "Eid" (5).
64°10' Godthåb, SW Store Malene, 80 m, June 29–July 1, 1962: 1 ♂ 1 ♀ 8 juv.

- 64°21' Lysefjord (Ameralik), Eqaugialik, July 2, 1962: 1 ♂ 1 juv.
 64°40' Godthåbsfjord, Qugssuk (3).
 66°55' Holsteinsborg (2).
 67° Søndre Strømfjord, June 27–July 27, 1962: 1 ♂. Amerdloq fjord, Utorqait (4).
 68°38' Íkamiut (2).
 68°49' Christianshaab (2).
 69°15' Disko, Blæsedalen, July 7, 1962: 2 ♂♂ 3 ♀♀.
 Disko, Godhavn, July 10–26, 1962: 6 ♂♂ 4 juv.
 Disko, Østerlien, July 7–26, 1962: 7 ♂♂ 14 ♀♀ 19 juv.
 69°16' Disko Engelskmandens Havn, July 9, 1962: 4 ♂♂ 5 ♀♀ 8 juv.
 Disko, Fortunebay, July 12, 1962: 1 ♀.

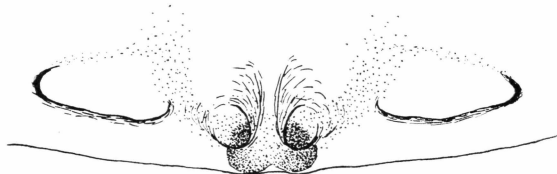


Fig. 103. *Dictyna major* MENGE, epigyne. $\times 100$.

- 69°30' Disko, Kangerdluarssuk, July 17–18, 1962: 2 ♀♀ 5 juv.
 69°35' Disko, Kuánerssuit (1).
 69°45' Taserssuaq (2).
 69°46' Arveprinsens Ejland, Atâ, July 24, 1962: 1 ♀ 4 juv.
 Eqe at Equip sermia glacier, July 24, 1962: 1 juv.

Distribution:

East Greenland (60°25'–65°50' N lat.), West Greenland, Canada (Labrador, Quebec, Manitoba, Ontario, Mackenzie), United States (Montana, Idaho, California) Alaska, Siberia, Northern and Central Europe.

BRÆNDEGAARD (1940) records this species also from Egedesminde (68°45' N lat.) but the specimens from this locality in the collection determined by SØRENSEN belong to *D. borealis* CBR.

Ecology:

The main habitat of *D. major* seems to be *Salix* bushes, where most of the adult specimens were obtained by netting. Females and juvenile specimens were also collected by sifting of litter in *Salix* thickets as well as of moss in heaths. In pitfall traps only adult males were obtained. Contrary to *D. borealis* this species does not occur in very dry localities. Half the specimens in my collection consists of adults, and of these 22 are males and 27 females. The distribution of the material over 4 collecting periods from June 29 to July 26 is following:

	June 29–July 3	July 5–10	July 11–19	July 20–26	Total
♂	2	6	5	8	21
♀	1	7	4	16	28
juv.	9	11	9	21	50

REMARKS ON THE DISTRIBUTION OF THE SPECIES

As a result of the present investigation the number of spiders known from Greenland has risen from 50 (LINDROTH 1957) to 64. These are distributed among 11 families:

1. Theridiidae	3 species
2. Erigonidae	32 „ + 1 subspecies
3. Linyphiidae	8 „
4. Araneidae	4 „
5. Tetragnathidae	1 „
6. Hahniidae	1 „
7. Lycosidae	7 „
8. Gnaphosidae	2 „
9. Philodromidae	1 „
10. Thomisidae	2 „
11. Dictynidae	2 „

Of these species 31 or a little less than half the number are common to East and West Greenland, 26 are known only from West Greenland and 7 only from East Greenland. With 57 species West Greenland thus has a considerably richer spider fauna than East Greenland with only 38, a circumstance which of course is mainly due to the more favourable climate in the former area.

In the following TABLE I I have given a list of the spiders hitherto known from Greenland and their distribution in Arctic and Boreal areas. This table does not give a complete picture of the distribution, but illustrates the zoogeographical character of the spider fauna of Greenland. It appears that the Holarctic element is dominating and consists of the following 25 species: (* = occurring only in West Greenland, ** = occurring only in East Greenland):

* <i>Theridion oleatum</i>	<i>Conigerella borealis</i>
** <i>Caledonia evansi</i>	* <i>Cornicularia karpinskii</i>
<i>Collinsia holmgreni</i>	„ <i>clavicornis</i>
„ <i>spetsbergensis</i>	* „ <i>cuspidata</i>
„ <i>thulensis</i>	* <i>Diplocephalus barbatus</i>

* <i>Erigone atra</i>	* <i>Araneus ocellatus</i>
„ <i>psychrophila</i>	<i>Tetragnatha extensa</i>
<i>Hilaira frigida</i>	** <i>Arctosa alpigena</i>
* <i>Pocadicnemis pumila</i>	<i>Pardosa hyperborea</i>
<i>Rhaebothorax paetulus</i>	<i>Haplodrassus signifer</i>
<i>Oreonetides vaginata</i>	* <i>Thanatus arcticus</i>
<i>Lepthyphantes complicatus</i>	<i>Dictyna major</i>
* <i>Araneus cornutus</i>	

Of these species only 2 have not been found in West Greenland, viz. *Caledonia evansi*, and *Arctosa alpigena*. Some exclusively Arctic species in this group have a circumpolar distribution: *Collinsia holmgreni*, *Collinsia spetsbergensis*, *Erigone psychrophila*, *Oreonetides vaginata*.

Three Holarctic species are in Greenland represented by exclusively Nearctic subspecies: *Theridion ohlerti lundbecki*, which seems to be endemic to Greenland, *Dismodicus bifrons decemoculatus*, which is distributed from West Greenland to Alaska, *Erigone arctica arctica*, which also occurs in Canada, Alaska, and U.S.A., and *Erigone arctica soerenseni*, which is found only in Southwest Greenland.

The Holarctic element consists in the first hand of Arctic and Arctic-subarctic species but also of species which have their main distribution in the Boreal region: *Araneus cornutus*, *A. ocellatus*, *Tetragnatha extensa*, *Haplodrassus signifer*. Most of the Arctic and Arctic-subarctic species occur also in the Scandinavian Fjells, viz. *Caledonia evansi*, *Collinsia holmgreni*, *C. spetsbergensis*, *Conigerella borealis*, *Cornicularia clavicornis*, *C. karpinskii*, *Erigone psychrophila*, *Hilaira frigida*, *Rhaebothorax paetulus*, *Oreonetides vaginata*, *Lepthyphantes complicatus*, *Arctosa alpigena*, and *Thanatus arcticus*. Of these the following are also known from the mountains of Great Britain and Central Europe: *Caledonia evansi*, *Cornicularia clavicornis*, *Rhaebothorax paetulus*, *Oreonetides vaginata*, and *Arctosa alpigena*, in Great Britain also *Collinsia holmgreni*.

As it is to be expected, the Nearctic element is considerable. It comprises the following species:

<i>Enoplognatha intrepida</i>	* <i>Lathithorax obtusus</i>
<i>Cochlembolus alpinus</i>	* <i>Bathyphantes eumenoides</i>
* „ <i>sacer</i>	<i>Lepthyphantes turbatrix</i>
* <i>Dismodicus bifrons</i>	<i>Hahnia glacialis</i>
<i>decemoculatus</i>	<i>Arctosa insignita</i>
** <i>Erigone arctica arctica</i>	* <i>Tarentula exasperans</i>
<i>Hilaira vexatrix</i>	<i>Pardosa furcifera</i>
* <i>Hybocoptus gibbosus</i>	„ <i>glacialis</i>
<i>Islandiana princeps</i>	„ <i>groenlandica</i>

** <i>Xysticus deichmanni</i>	<i>Dictyna borealis</i>
„ <i>durus</i>	

Only two of these species have not been met with in West Greenland, viz. *Erigone a. arctica* and *Xysticus deichmanni*, whereas six are not recorded from East Greenland. One of the latter, *Tarentula exasperans*, is, however known from Peary Land. Only one Nearctic genus is represented in Greenland, viz. *Sciastes*, whereas *Cochlembolus* has turned out to be also Palaearctic, the Central European species *Cervinargus prominens* VOGELSANGER being congeneric with and closely related to the Nearctic *Cochlembolus sacer*.

The Palaearctic element of the Greenland spider fauna is less prominent and consists of the following 12 species:

* <i>Diplocentria replicata</i>	<i>Meioneta nigripes</i>
** <i>Erigone tirolensis</i>	„ <i>rurestris</i>
* <i>Metopobactrus prominulus</i>	** <i>Bolyphantes index</i>
<i>Rhaebothorax morulus</i>	* <i>Linyphia peltata</i>
* „ <i>sphagnicola</i>	* <i>Araneus quadratus</i>
<i>Tiso aestivus</i>	** <i>Gnaphosa lapponum</i>

Three species, *Erigone tirolensis*, *Bolyphantes index*, and *Gnaphosa lapponum*, have not been recorded from West Greenland, five from East Greenland, Outside Greenland *Erigone tirolensis* has been recorded from one Nearctic locality only, viz. Akpatok in Labrador by JACKSON (1933). The only male from this locality, is however, "rather smaller than typical *E. tirolensis*, and the anterior tooth of the embolic division appears a little blunter." (op.cit., p. 149). Thus its identity with this species seems doubtful. The same is the case with *Meioneta nigripes* which also is recorded from Akpatok by JACKSON (1933). The specimens from this locality are not typical and were considered by BRÉNDEGAARD (1937) as a subspecies, *M. nigripes jacksoni*.

Meioneta rurestris, *Linyphia peltata*, and *Araneus quadratus* have a wide distribution in the Palaearctic area, whereas the remaining species have a northern distribution, some of them, however, occurring also in the montane regions of Great Britain and Central Europe: *Erigone tirolensis*, *Rhaebothorax morulus*, *Tiso aestivus*, and *Meioneta nigripes*. Also *Bolyphantes index* has a wide distribution in the mountains of Central Europe but does not occur in Great Britain.

There now remain some spiders which have not been found outside Greenland and therefore so far are to be characterized as "endemic". They are the following seven:

<i>Theridion ohlerti lundbecki</i>	<i>Sciastes extremus</i>
<i>Erigone arctica soerenseni</i>	<i>Typhochrestus pygmaeus</i>
„ <i>whymperi</i>	<i>Singa groenlandica</i>
<i>Praestigia groenlandica</i>	

All these species except *Erigone whymperi* have only been found in West Greenland. *Theridion ohlerti lundbecki* is somewhat more closely related to the North American form than the European, whereas *Erigone arctica soerenseni* has its nearest relative in *Erigone arctica maritima* which occurs both in Europe and Alaska (records from the latter area not yet published). *Praestigia groenlandica* is closely related to *P. duffeyi* MILLIDGE from England and Germany. Another species (*P. pini* HOLM) occurs in Northern Sweden and a forth species, not yet described, in Alaska. Finally, *Typhochrestus pygmaeus*, *Singa groenlandica*, and *Sciastes extremus* are probably exclusively Nearctic species which very likely will be discovered also in Arctic North America.

LINDROTH (1957) has made an analysis of some terrestrial fauna groups of Greenland with regard to their biogeographical affinities. Concerning the spiders he found that the 50 species known from Greenland up to that time arranged into the different geographical groups mentioned above consist of 42% Holarctic, 22% Palaearctic, 22% Nearctic and 14% endemic forms. If the 64 species and subspecies now known from Greenland are distributed among the same groups the figures will be 39% Holarctic, 19% Palaearctic, 31% Nearctic, and 11% endemic. If, however, *Erigone arctica soerenseni* is counted as Holarctic, *Praestigia groenlandica* as Palaearctic, and the remaining five "endemic" species as Nearctic, the distribution of the figures of the whole of Greenland, West Greenland, and East Greenland, respectively, will be the following:

	Total	Holarctic	Palaearctic	Nearctic
Whole Greenland	64	26 = 41%	13 = 20%	25 = 39%
West Greenland	56	23 = 41%	10 = 18%	23 = 41%
East Greenland	38	16 = 42%	7 = 18%	15 = 40%

From this table it appears that the spider fauna of Greenland consists of two fifth each of Holarctic and Nearctic forms and one fifth of Palaearctic forms implying that the American influence on the Greenlandic spider fauna is far stronger than the European. The dispersal of spiders is certainly due mainly to air-borne transport ("ballooning"), and the comparatively narrow strait between Greenland and the North

American continent and Baffin Island has been no effective barrier, less effective, anyhow, than the twice as wide distance across the Atlantic to the European continent. Further, as demonstrated by LINDROTH (1957), the predominating western winds in the North Atlantic play an important role for a dispersal of spiders and flying species from west to east.

From the table above it also appears that in the spider fauna of East and West Greenland there exist almost exactly the same proportions between the different geographical groups. This is somewhat surprising, but we must bear in mind that the spider fauna of Greenland is still rather incompletely known and that the same is the case with the distribution of many Arctic spiders.

Table I. *Distribution of the spiders of Greenland.*

	Alaska	Canada	U.S. A.	West Greenland	North Greenland	East Greenland	Iceland	Jan Mayen	The Faroes ¹	Spitsbergen	Scandinavia	Great Britain	Central Europe	Novaya Zemlya	Siberia	Kamchatka
Theridiidae																
<i>Enoplognatha intrepida</i> (SOER.)	×	×	×	×		×										
<i>Theridion oleatum</i> L. KOCH		×		×												
„ <i>ohlerti lundbecki</i> SOER.				×										×	×	×
Erigonidae																
<i>Caledonia evansi</i> (CAMBR.)	×					×	×		×		×	×	×			
<i>Cochlembolus alpinus</i> (BANKS)		×	×	×		×										
„ <i>sacer</i> CROSBY		×		×												
<i>Collinsia holmgreni</i> (THOR.)	×	×		×	×	×	×	×	×	×	×	×	×	×	×	×
„ <i>spetsbergensis</i> (THOR.)	×	×		×	×	×	×			×	×			×	×	
„ <i>thulensis</i> (JACKS.)	×	×		×	×	×				×						
<i>Conigerella</i> n. gen. <i>borealis</i> (JACKS.)		×	×	×	×	×	×			×	×					
<i>Cornicularia clavicornis</i> EM.	×	×	×	×		×	?		×	×	×	×	×			
„ <i>cuspidata</i> (BL.)		×	×	×			×		×		×	×	×			×
„ <i>karpinskii</i> (CAMBR.)	×		×	×			?				×				×	
<i>Diplocentria replicata</i> HOLM				×							×					
<i>Diplocephalus barbatus</i> (L. KOCH)		×		×										×	×	
<i>Dismodicus bifrons decemoculatus</i> (EM.)	×		×	×												
<i>Erigone arctica arctica</i> (WHITE)	×	×	×			×										
„ <i>arctica soerenzeni</i> HOLM				×												
„ <i>atra</i> BL.	×	×	×	×			×		×		×	×	×	×	×	×
„ <i>psychrophila</i> THOR.	×	×		×	×	×	×		×	×	×			×	×	×
„ <i>tirolensis</i> L. KOCH						×	×	×	×	×	×	×	×	×	×	×
„ <i>whymperi</i> CAMBR.				×		×										
<i>Hilaira frigida</i> (THOR.)		×		×	×	×	×	×	×		×	×				
„ <i>vexatrix</i> (CAMBR.)	×	×		×	×	×										
<i>Hybocoptus gibbosus</i> (SOER.)	×	×	×	×												
<i>Islandiana princeps</i> BRÆND.		×	×	×		×	×									
<i>Latithorax obtusus</i> (EM.)		×	×	×												
<i>Metopobactrus prominulus</i> (CAMBR.)				×							×	×	×			
<i>Pocadicnemis pumila</i> (BL.)	×	×	×	×							×	×	×			
<i>Praestigia groenlandica</i> n. sp.				×												
<i>Rhaebothorax morulus</i> (CAMBR.)				×		×	×		×		×	×	×			
„ <i>paetulus</i> (CAMBR.)	×			×		×					×		×			
„ <i>sphagnicola</i> HOLM				×							×					
<i>Sciastes extremus</i> n. sp.				×												
<i>Tiso aestivus</i> (L. KOCH)				×		×	×		×		×	×	×		×	

¹ Records of some of the species not yet published.

(continued)

Table I (continued).

	Alaska	Canada	U.S.A.	West Greenland	North Greenland	East Greenland	Iceland	Jan Mayen	Faroes	Spitsbergen	Scandinavia	Great Britain	Central Europe	Novaya Zemlya	Siberia	Kamchatka
<i>Typhochrestus pygmaeus</i> (SOER.)				×												
Linyphiidae																
<i>Oreonetides vaginata</i> (THOR.)	×	×		×		×			×		×	×	×		×	×
<i>Meioneta nigripes</i> (SIM.)				×	×	×		×	×	×		×	×	×		
„ <i>rurestris</i> (C. L. KOCH)				×		×					×	×	×		×	
<i>Bathypantes eumenoides</i> n. sp.	×			×												
<i>Bolyphantes index</i> (THOR.)						×	×		×		×		×			
<i>Lepthyphantes complicatus</i> (EM.)	×	×	×	×		×	×		×	×	×	×	×			
„ <i>turbatrix</i> (CAMBR.) . . .		×	×	×		×			×	×		×	×			
<i>Linyphia peltata</i> WID.				×							×	×	×			
Araneidae																
<i>Araneus cornutus</i> CL.	×	×	×	×			×				×	×	×		×	×
„ <i>ocellatus</i> CL.	×	×	×	×			×				×	×	×		×	×
„ <i>quadratus</i> CL.				×							×	×	×		×	×
<i>Singa groenlandica</i> SIM.				×												
Tetragnathidae																
<i>Tetragnatha extensa</i> (L.)	×	×	×	×		×	×				×	×	×		×	×
Hahniidae																
<i>Hahnia glacialis</i> SOER.	×			×		×										
Lycosidae																
<i>Arctosa alpigena</i> (DOL.)	×	×	×			×	×				×	×	×		×	
„ <i>insignita</i> (THOR.)	×	×		×		×										
<i>Tarentula exasperans</i> (CAMBR.)		×		×	×	×										
<i>Pardosa furcifera</i> (THOR.)	×	×	×	×		×	(×)									
„ <i>glacialis</i> (THOR.)		×		×	×	×										
„ <i>groenlandica</i> (THOR.)	×	×	×	×		×	(×)									
„ <i>hyperborea</i> (THOR.)	×	×	×	×		×	×				×		×			
Gnaphosidae																
<i>Gnaphosa lapponum</i> (L. KOCH)						×	×				×					
<i>Haplodrassus signifer</i> (C. L. KOCH)..		×	×	×		×	×		×		×	×	×	×		
Philodromidae																
<i>Thanatus arcticus</i> THOR.	×	×		×							×			×	×	
Thomisidae																
<i>Xysticus deichmanni</i> SOER.	×	×				×										
„ <i>durus</i> (SOER.)		×	×	×		×										
Dictynidae																
<i>Dictyna borealis</i> CAMBR.		×		×	×	×										
„ <i>major</i> MENGE	×	×	×	×		×					×	×	×		×	

SUMMARY

1. A material of spiders was collected mainly in the Godthåb area (about lat. $64^{\circ}10' N$) and in Disko (about $69^{\circ}15' N$) in West Greenland. 47 species have been identified in this material.

2. Three new species are described: *Sciastes extremus*, *Praestigia groenlandica*, and *Bathyphantes eumenoides*. The females, previously unknown, of *Erigone arctica soerenseni* HOLM and *Cochlembolus sacer* CROSBY are described.

3. A new genus, *Conigerella*, is established. Type species: *Typhochrestus borealis* JACKSON.

4. The following species are recorded from Greenland for the first time: *Cochlembolus sacer* CROSBY, *Cornicularia clavicornis* EMERTON, *Cornicularia cuspidata* (BLACKW.), *Diplocentria replicata* HOLM, *Latithorax obtusus* (EMERTON), *Metopobatrax prominulus* (CAMBR.), *Pocadicnemis pumila* (BLACKW.), *Rhaebothorax sphagnicola* HOLM, and *Meioneta rurestris* (C. L. KOCH).

5. The following synonyms have been stated:

Theridion petrense SØRENSEN 1898 = *Theridion oleatum* L. KOCH.

Cervinargus VOGELSANGER 1944 = *Cochlembolus* CROSBY.

Gongylidium lapidicola SØRENSEN 1898 (♀ nec ♂) + *Gonatium inflatum* SØRENSEN 1898 (♂) = *Cochlembolus alpinus* (BANKS).

Lophocarenum dentipalpis EMERTON 1915 = *Hybocoptus gibbosus* (SØRENSEN).

Cnephalocotes (?) *pygmaeus* SØRENSEN 1898 (♀ nec ♂) = *Latithorax obtusus* (EMERTON).

Tmeticus levinseni SØRENSEN 1898 (ad part.) = *Meioneta rurestris* (C. L. KOCH).

Linyphia emertoni THORELL, SØRENSEN 1898 = *Linyphia peltata* WID.

6. The spider fauna of Greenland has been calculated to comprise 41% Holarctic, 20% Palaearctic, and 39% Nearctic forms. No essential difference in this respect exists between East and West Greenland.

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