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NOTES ON ARCTIC SPIDERS OBTAINED IN 1933-1936.

By A. RANDELL JACKSON.

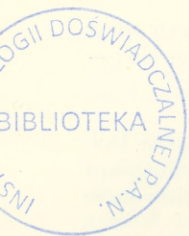
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S. 19

## Notes on Arctic Spiders obtained in 1933-1936.

By A. RANDELL JACKSON \*.

During the last four years I have identified a number of spiders from the arctic and subarctic regions. The following paper consists of lists of their names, and some other notes upon them. One species would seem to be new, and as there are a number of interesting records, it is convenient to have them all together. So I am making one paper out of the lot. The collections are as follows :—

1. Oxford University Expedition to Spitzbergen in 1933. Spiders collected by Mr. O. Gatty.
2. Spiders collected by Mr. P. F. Holmes on Grimsey Island, Iceland, in 1933.
3. Spiders collected by the Oxford University Arctic Expedition in 1934, the actual collecting being done for the most part by Dr. T. G. Longstaffe.

A. In West and North-West Greenland.

B. In North-East Baffin Land.

4. Spiders collected by Mrs. K. R. Ashby in West and South-West Iceland in 1935.
  5. Spiders collected in Ellesmere Land by the Oxford University Expedition of 1935. Dr. G. Noel Humphreys and Mr. D. Haig Thomas were the collectors.
  6. Spiders collected by Mr. L. R. Wager in East Greenland in 1935.
  7. Spiders collected in North East Land in 1935 and 1936 by the Oxford University Expeditions of those years. Mr. D. V. Keith was the collector.
  8. Spiders collected by the Oxford University Expedition to West Greenland in 1936 by Mr. H. G. Vevers and by Mr. D. M. Steven.
1. Mr. O. Gatty's specimens were taken in 1933, and there was some delay in my receiving them. Those sent by Messrs. A. R. Glen, J. M. Fisher, and N. V. Colunin have already been recorded by me (6). Mr. Gatty's species are as follows :—

*LEPTYPHANTES SOBRIUS* Thorell. One female at Treurenberg Bay on vegetation. July 15th, 1933.

*ERIGONE ARCTICA* White. One female on September 6th, 1933, in the hut at Petunia Bay (Klaas Billen Bay).

*ERIGONE PSYCHROPHILA* Thorell. One female.

*MICROERIGONE SPETSBERGENSIS* Thorell. One female in Treurenberg Bay on July 20th, 1933.

All these species have previously occurred in Spitzbergen.

\* Communicated by THE SECRETARY.



2. Mr. P. F. Holmes's collection made on Grimsey Island off the north coast of Iceland in 1933. This small island is just within the Arctic circle :—

*LYCOSA TARSALIS* Thorell. Three males and three females.

*ARCTOSA* ? sp. (damaged). This is a female, and is either *A. alpigena* Dol. or *A. insignita* Thorell. It has recently (1) been stated by Dr. Braendegaard that these two species are distinct, though closely related. Up to now they have been regarded as conspecific.

*SAVIGNYIA FRONTATA* Bl. Three females.

*CALEDONIA EVANSII* Camb. Two females.

*ERIGONE ATRA* Bl. One male, two females.

*ERIGONE ARCTICA* White. Four females.

*ERIGONE CAPRA* Simon. One male, two females.

*CORYPHEOLANUS HOLMGRENI* Thor. One male, one female.

*LEPTORHOPTRUM HUTHWAITII* Camb. Two males, three females.

*HILAIRA FRIGIDA* Thorell. Three females.

*PORRHOMMA MONTANUM* Jackson. One female.

*AGYNETA SUBTILIS* Camb. Two females.

*LEPTYPHANTES MENGEI* Kulez. One male, typical.

*MITOPUS MORIO* Fabr. Adult females and immature examples. Eleven in all. This, of course, is an Opilionid.

All of these have previously been recorded for Iceland except *A. subtilis* Camb. This is, however, a very critical species, and in order to be quite sure of it males should be forthcoming. In any case the genus *Agyneta* is new to Iceland.

All the species save *Erigone capra* have occurred in Britain, and this exception has been found in Ireland; as regards *Leptyphantes mengei* Kulczynski the specimen is exactly like ordinary British specimens. Another form occurs in Iceland which is identical, or very nearly so, with *L. gallicus* Simon.

3. Dr. T. G. Longstaffe's collections :—

A. From West and North-West Greenland.

*DICTYNA BOREALIS* Camb. One female. A.

*LYCOSA GLACIALIS* Thorell. Six males and five females, adult. Thirty immature specimens. Forty-one examples in all. By far the commonest species in the collection. A, H, M, N, O, P.

*LYCOSA GRÆNLANDICA* Thorell. One male adult. H.

*HAHNIA GLACIALIS* Sørensen. One female. H.

*CORYPHEOLANUS HOLMGRENI* Thorell. One female. M.

*ERIGONE PSYCHROPHILA* Thorell. One male. Q.

*CORNICULARIA KARPINSKII* Camb. One female. P,

*TYPHOCHRÆSTUS PYGMÆUS* Sørensen. One male. R. For me this is a true *Typhochræstus* as shown by the structure of the palpi. Originally described sub *Cnephalocotes*.

*HILAIRA FRIGIDA* Thorell. One female. N.

Forty-nine identifiable specimens, of which forty-one belong to *Lycosa glacialis* Thorell. Nine species, of which only three, viz., *C. holmgreni*, *C. karpinskii*, and *H. frigida* occur in Britain.

*Localities* :—

A & H. Jakobshavn, West Greenland.

M & N. Upernivik, North-West Greenland.

O & R. Amdrup Island, North-West Greenland. Lat. 74° 44' N.

P. Ryder Island. 74° 44' N.

Q. Wandel Land, North-West Greenland, 74° 40' N. Edge of ice-cap. All captures made between June 10th and July 24th, 1934.

All these species have been recorded from Greenland before, *C. karpinskii* Camb. sub *Walckenaera insolens* Sørensen, *T. pygmæus* Sørensen is new to the Hope Collection.

B. From North-East Baffin Land.

*DICTYNA* ? species immature. One example. T.

*LYCOSA GLACIALIS* Thorell. Two females, adult, and four young individuals. S, T, U, X.

*TARENTULA ASIVAK* Emerton. One adult female. I recorded this species (4) from Akpatok as *T. insolita* L. Koch (6), a Siberian species. They are probably the same, but I have seen no male, so prefer to use the name of Emerton's (3) species, which is widely distributed in Arctic America. I have compared the type of *Tarentula exasperans* Camb. (7) with Emerton's figure of the male palpus. They are quite different—otherwise the name *exasperans* Cambridge would have displaced Emerton's name.

*ERIGONE ARCTICA* White. One female. Z.

*HILAIRA FRIGIDA* Thorell. Two females. S, V.

*HILAIRA CURVITARSIS* Sørensen. Three females and eleven females. S, U, V.

*CORYPHÆOLANUS HOLMGRENI* Thorell. One female. U.

In all twenty-five named specimens, of which fourteen belong to *H. curvitaris*. There are several very young specimens which I could not identify.

*Localities* :—

S. Ravenscraig Harbour, August 17th. The *H. frigida* was in a web under a stone.

T. Inland from above and up to 300 feet. The *Dictyna* was under a stone.

U. Same locality. Caught by Mr. H. P. Hanham.

V. Head of Eglinton fjord, August 20th. H. P. H.

X. Clyde River, August 25th.

Z. Eglinton Coast, August 26th.

There are as yet few spiders recorded from Baffin Land. All the above, however, are widely distributed in Arctic America, and three of them, *E. arctica*, *C. holmgreni*, and *H. frigida* occur in Britain, the last two only on mountains at a considerable elevation.



4. Spiders collected by Mrs. K. R. Ashby in West and South-West Iceland. Both localities are just outside the Arctic circle. Mrs. Ashby collected in all five tubes of mites, not yet identified, twenty tubes of Opiliones, and fifty of spiders. She was unfortunate in that the majority were immature. The following is the list:—

*MITOPUS MORIO* Fabr. All the Opiliones belong to this species. Both sexes and many immature individuals were collected. A selection has been preserved for the Hope Museum. The commonest Arachnid in the collection, 27 specimens taken.

*GNAPHOSA ISLANDICA* Sørensen. One male and two females adult. I was glad to see these specimens, as we had none in the Museum Collection.

*LYCOSA RIPARIA* C. L. K. var. *SPHAGNICOLA* Dahl. Four females with egg-sacs. This variety has occurred in Scotland, while the type is common in southern England, reaching Cheshire.

*LYCOSA TARSALIS* Thorell. One male and six females all typical. The variety *islandica* Strand did not occur.

*XYSTICUS CRISTATUS* Clerck. One male.

*THERIDION BELLICOSUM* Simon. Three females with egg-sacs found under stones. New to Iceland.

*ERIGONE ARCTICA* White. Two females.

*HILAIRA FRIGIDA* Thorell. One female.

*LEPTYPHANTES ZIMMERMANNII* Bertkau. One female.

*ARANEUS DIADEMATUS* Clerck. One female.

Nine identifiable species of Araneæ, and one of Opiliones. All occur in Britain except the *Gnaphosa*, which is one of the few Iceland species not known in this country.

*Localities*:—

1. Budir Snaefellsness, West Iceland, July 16th to July 24th.

2. Prastalundur Sogsbru, South-west Iceland, August 2nd and 3rd.

All the species occurred in the former, some of the *Mitopus* in the latter as well. No spiders occurred at Prastalundur.

5. Spiders collected by Dr. G. Noel Humphreys and Mr. D. Haig Thomas on Ellesmereland. Oxford University Expedition of 1935.

*LYCOSA GLACIALIS* Thorell. Three adult males and two adult females. Robertson Bay. Mr. D. Haig Thomas.

*ERIGONE ARCTICA* White. These were obtained by Dr. Noel Humphreys in June and July 1935, at Etah. This is in North-West Greenland, but they were captured by the same expedition.

6. Mr. L. R. Wager made a large collection in East Greenland in 1935. These were for the most part dried, and in my opinion unidentifiable. The following were preserved in spirit:—

*ERIGONE TIROLENSIS* L. Koch. Two males. These belong to the form with a tooth on the lower surface of the palpal tibia.

CORYPHÆOLANUS HOLMGRENI Thorell. Two males.

LYCOSA GLACIALIS Thorell. An immature male, probably correctly identified. All these were obtained in early September 1935, at Kangerdlugsuak fjord.

7. Spiders collected by the Oxford University Expedition to North-East Land in 1935 and 1936 by Mr. D. V. Keith.

Many of these specimens were dried up in tubes. In some cases they were placed there alive, as they had made webs. The following are identifiable :—

ERIGONE PSYCHROPHILA Thorell. Two males and two females, adult.

The males were found on June 16th, 1936, in a tent. One female was also found in a tent, and the other near Base Hut. Several immature specimens probably belong to this species.

MICROERIGONE SPETSBERGENSIS Thorell. Both sexes. A female from Phipps Valley early July 1936. A male labelled 2. Both sexes in a tent. Both sexes from Brandy Bay ; a male found near the base on June 13th.

I doubt whether any other species were represented amongst the immature or desiccated examples. I understand the country is extremely inhospitable and bleak.

*E. psychrophila* is new to North-East Land. *Hilaira glacialis* Thorell has occurred there, but was not represented in this collection. These three are the whole known spider fauna.

8. Spiders collected by the Oxford University Expedition to West Greenland in 1936.

The bulk of these specimens were collected by Mr. H. G. Vevers. They form a large and interesting collection, and were splendidly preserved and labelled. Almost every specimen was in a separate tube, and each tube was enclosed in a small wooden box. Hence there were no smashes and no desiccations. The tubes were all numbered, and lists of these numbers were given on the locality sheets, so that there was no doubt whence each specimen came. By these methods the work of identification was much simplified, and the specimens arrived in perfect condition.

The list with localities follows, the numbers referring to the sheets.

DICTYNA MAJOR Menge. Three males, four females, and seven immature.

1. One male, and one female, four immature.
2. One male.
3. Three females.
5. One male, three immature ; in all fourteen examples.

DICTYNA BOREALIS Cambridge. Eight examples, all immature. The abdominal pattern and slender form are, I think, reliable in all except some of the very young examples.

1. Two immature.
2. Six immature.

DRASSODES SIGNIFER C. L. K.

4. One female adult, and one very young example probably of the same species.

OXYPTILA DURA Sörensen.

3. One female adult, one male and two females immature.



*THANATUS ARCTICUS* Sørensen. One male and one female adult, ten immature.

1. One male and one female adult, four immature.
2. Six immature.

There was previously no adult of this species in the Museum Collection.

*ARCTOSA INSIGNITA* Thorell. One adult male from locality 1.

*LYCOSA GRÆNLANDICA* Thorell. One male and five females adult, three of the latter with egg-sacs.

1. One female.
2. One female.
4. One male, two females with egg-sacs.
6. One female with egg-sac.

*LYCOSA FURCIFERA* Thorell. Two males and one female adult, two immature examples.

1. One female and two immature.
4. Two males.

*LYCOSA GLACIALIS* Thorell. One male and thirteen females adult. Five immature specimens.

1. One male, three females, adult.
2. Eight females, five with egg-sacs, four immature.
4. One female with egg-sac, and one immature.
5. One female. Nineteen specimens in all.

*THERIDION UMBRATICUM* L. K. Four males and six females adult. Twenty-three immature specimens. All came from localities 3 and 5.

*OREONETIDES VAGINATUS* Thorell. Two adult females from 5.

*TETRAGNATHA EXTENSA* L. One immature female, probably of this species, from locality 5.

*ARANEUS GRÆNLANDICUS* Simon. Four adult females, one immature male, and three immature females.

1. One female adult, one male and two females immature.
2. One female adult, and one immature.
4. Two females adult.

*LEPTYPHANTES* ? species. Two immature males from 5.

Total fifty adult specimens and sixty-four immature, and reasonably identifiable.

The present collection numbers thirteen species, and is thus smaller than that formed by Major Hingston in West Greenland in 1928 (5). He obtained nineteen species of Araneæ, and one of Opiliones. He did not get *Dictyna borealis*, nor *Oreonetides vaginatus*. On the other hand, he took *Lycosa hyperborea* Thorell, *Enoplognatha intrepida* Sørensen, *Erigone whymperi* Cambridge, *Erigone atra* Blackwall, *Typhochræstus septentrionalis* Jackson, *Hilaira frigida* Thorell, *Araneus ocellatus* Clerck, *Araneus quadratus* Clerck, and *Mitopus morio* Fabricius. Some of these, like the last three, are large and conspicuous, and could not have been missed by Mr. Vevers. They evidently do not occur



in his localities. It is probable that Major Hingston's districts differed a good deal from those of Mr. Vever in vegetation, soil, etc.

*Localities* :—

- A. Amerdloq Fjord at Utorkait. Numbers 1-4 inclusive.
- B. Camp Lloyd at the head of Sondré Strömfjord. Numbers 5 and 6.
1. Birch—*Empetrum*—Heath. 300-400 feet altitude.
2. Moraine heath, on lichen mats and *Betula nana*. 300 feet.
3. Willow scrub. 50 feet. *Theridim umbraticum* was confined to this and 5.
4. Low heath. 20 feet altitude.
5. Willow scrub. 100-200 feet at head of Sondré Strömfjord.
6. Dry silt moraines. 50 feet, at head of Sondré Strömfjord. Only *Lycosa greenlandica* occurred here.

The latitude of both these localities is about 67° N.

The specimens were all taken between June 26th and July 22nd, dates inclusive.

As regards *Arctosa insignita* Thorell, Dr. Braendegaard (1) has stated that this is not identical with *A. alpigena* Dol., as was formerly believed. The latter is recorded for Britain, but not the former. Both occur in Greenland. I have compared Mr. Vever's specimen with a British example of *A. alpigena*, and there is certainly a difference in the palpal organs, though only a slight one. In the great uncertainty as to what the types of *A. alpigena* really are, I propose to revert to Cambridge's name of *A. biunguiculata* for the British form. At all events we know what that is.

Mr. D. M. Steven, who accompanied Mr. Vever on this expedition, collected at Utorkait, Amerdloq Fjord. Latitude 67° N. He obtained a very young Opilionid which I could not identify with certainty, though probably it is *Mitopus morio* Fabr. Also two females of a *Dismodicus*. No member of this genus has as yet been recorded from Greenland, and I believe the species to be new, though it is hard to be certain in the absence of the male.

There are two European species, both of which reach northern Norway, and one American species. Of these Mr. Stevens's specimens most nearly approach *Dismodicus bifrons* Blackwall, a common European and British species. I subjoin description.

*DISMODICUS VARIEGATUS*, sp. n.

*Length*.—Cephalothorax .8 mm., abdomen 1.5 mm. Total 2.2 mm.

It resembles *D. bifrons* in the shape of the cephalothorax, relations and relative size of eyes, and chætotaxy, but is rather larger than the average of that species.

*Colour*.—Cephalothorax light yellow-brown, with a very distinct dorsal pattern. This consists of a trident-shaped macula. The body of the trident is at the occiput, and the three prongs run forward, the central one ending at a point behind the space separating the posterior central eyes and the lateral ones running towards the posterior lateral eyes. The handle of the trident runs backwards to the thoracic juncture of segments, whence indistinct lines radiate to the margins of the carapace, which are themselves pigmented. Sternum yellow-brown, with some darker pigment. Falces decorated in front with a brown festoon-like marking. These are themselves of a light yellow-brown. These organs all appear variegated.

*Abdomen* rather paler and more elongate than in *D. bifrons* Blackwall, and the whole spider has rather the facies of a *Wideria*.

*Vulva*.—The central part, or “fovea” as Kulezynski terms it, is almost circular in the two specimens examined, and has a very short stalk connecting it with the posterior border of the organ.

*D. variegatus* differs from *D. bifrons* Blackwall and *D. elevatus* C. L. K. firstly in the colour of the cephalothorax and palces. In the two latter species, which are both European, the cephalothorax in fresh specimens is dark brown, and neither it nor the palces has any trace of pattern. In a few specimens of *D. bifrons*, however, long immersion in spirit causes bleaching, and then a faint trident mark like that of *D. variegatus* shows up. Neither of the European species, however, shows the bright yellow and black effect of *D. variegatus*. In *D. decemoculatus* Emerton, the only known American species, the cephalothorax is bright orange-yellow. The female is adorned with a narrow dark stripe down the dorsal groove.

*D. variegatus* is a longer, narrower spider than either of the European species. In this it apparently resembles *D. decemoculatus*.

The ocular relations are very variable in this genus, but *D. variegatus* resembles *D. bifrons* and *D. decemoculatus* in these respects. In *D. elevatus* the eyes are distinctly further apart, and this is due to the more globular caput of that species. I only possess two females of *D. elevatus*, which were given to me by the late Professor Kulczynski, and the curves of two ocular lines are quite different in the two individuals. The vulvæ of these four species are all very similar. The central part or “fovea” of Kulezynski conceals the spermothece, or rather the internal half of each. This fovea springs from the posterior groove of the organ, and, running forwards, expands.

In *D. elevatus* the anterior end of this expansion is concave, and the whole organ is shaped like a cup, with a long stalk. It is a good deal larger than the fovea in any of the other three species.

In *D. bifrons* and *D. variegatus* the anterior end appears rounded, but in some specimens it is to be observed that it is really cup-shaped, the cup being filled up with a chitinous piece, so that there is some resemblance to a cup containing a ball, as in the old game of cup and ball. In specimens where the organ appears rounded, clearing and examining with a high power shows this other condition to be the case. So that *D. elevatus* shows an empty cup, and the other two each has a full cup. What a long series of *D. elevatus* would show I do not know.

In *D. bifrons* the cup has a long stalk, in *D. variegatus* a very short stalk indeed. If this is constant it is a very good character.

In *D. decemoculatus* Emerton, as figured by Crosby & Bishop (2), the stalk is very long indeed and the cup at the end very small. This, if constant, should be very distinct.

It is possible, of course, that the discovery of the male will show this species to be really *D. bifrons* Blackwall, in which case the new name will only become varietal. I do not, however, think this is likely.

I sent one of Mr. Stevens's specimens to Copenhagen, and asked Dr. Braendegaard to see whether examples were in Sørensen's collection under another name. He found one amongst the examples of *Hilaire frigida* Thorell. So that it has been found in Greenland before, though not recorded. He was so good as to send me this specimen for comparison with my own.

Dr. Braendegaard has kindly compared several of the specimens recorded in this paper with material in Sørensen's collection, and I take this opportunity of thanking him.



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