

Records of spiders (Araneae) from Nordaustlandet and Sjuøyane, Svalbard

Erling Hauge & Lauritz Sømme

Hauge, E. & Sømme, L. 1997. Records of spiders (Araneae) from Nordaustlandet and Sjuøyane, Svalbard. - *Fauna norv. Ser. A* 18: 17-20.

Six species are listed. Two species are recorded for the first time from the island of Nordaustlandet. *Collinsia spetsbergensis* (Thorell, 1872) is the first record of spiders from the small northernmost islands (Sjuøyane), notably Phippsøya (80°40' N, 20°50' E). Short notes of the species' distribution are given.

Erling Hauge, Zoological Institute, The Museum, University of Bergen, Muséplass 3, N-5007, Bergen, Norway. Lauritz Sømme, Department of Biology, University of Oslo, P.O. Box 1050 Blindern, N-0316 Oslo, Norway.

INTRODUCTION

The spider fauna on the largest island (Vest-Spitsbergen) in the arctic archipelago of Svalbard (74-81° N, 9-30° E) has been fairly well studied. In a detailed account of 15 species from Svalbard (Holm 1958) was included a review of previous literature from the area. Additional localities were reported by Remmert (1966), Huhta (1967), Tambs-Lyche (1967), Rüppell (1968), Bengtson & Fjellberg (1975), Thaler (1975), Hintz (1976), Koponen (1980). As to the other Svalbard islands, data about their spider faunas are sparse. Jackson (1934) reported four species from the Edgeøya, and Jackson (1924, 1937) *Hilaira glacialis*, *Erigone psychrophila* and *Collinsia spetsbergensis* from Nordaustlandet. Summerhayes & Elton (1928) (cit. Holm (1958)) reported *H. glacialis* and di Caporiacco (1931) *C. spetsbergensis* and *Agyneta nigripes* (Simon, 1884) from Nordaustlandet. A total of 16 species are known from the islands of Svalbard (Thaler 1975).

During a Norwegian expedition to Nordaustlandet and the Sjuøyane archipelago (Figure 1) in August 1995, spiders and other terrestrial invertebrates were collected in several localities. Samples were also taken in the vicinity of some volcanic hot springs at Bockfjorden (Vest-Spitsbergen). A total of six spider species were found.

The material was collected by hand, preserved in 70% ethyl alcohol, and is deposited at the Zoological Museum, University of Bergen.

RESULTS

Collinsia holmgreni (Thorell, 1872)

Five females were found (9 Aug. 1995) under rocks in dense vegetation around the volcanic hot springs at Bockfjorden, Vest-Spitsbergen. A holarctic species (Braendegård 1958, Eskov 1994, Eshyinin & Efimik 1996), in Russia reaching the southern Urals (Mikhailov 1997), in western Europe distributed south to the Norwegian high mountains (Hauge et al. 1978) (above the tree line only) and northern Scotland (Locket et al. 1974, Thaler 1980), in Iceland obviously collected almost down to the sea level (Agnarsson 1996), probably 'a unique aeronaut' (Braendegård 1946). The Swedish records are from relatively high altitudes (above 700 m a.s.l.), southernmost Jämtland (Braendegård 1958), in Finland the species is obviously restricted to the northernmost areas; here (in Lapland) confined to areas above the tree line (up to 1300 m a.s.l.) (Holm 1951, Kleemola 1962, Palmgren 1976). Humid habitats seem to be preferred (Cotton 1979).



Figure 1
Svalbard ('Spitsbergen'). Map indicating the sampling areas.

C. spetsbergensis (Thorell, 1872).

Nordaustlandet: Marmorpynten, Storsteinhalvøya, 3 Aug. 1995, under rocks close to a pool with fresh water (1 male, 5 females); Pentavika, Storsteinhalvøya, A.Fjellberg coll. 4 Aug. 1995 (3 females); Florabukta, Murchisonfjord, 4 Aug. under rocks in rich vegetation below bird cliff (4 males, 4 females); Oxfordhalvøya, Walenbergfjorden, 8 Aug. 1995, under rocks in polar desert, also close to seeping water (2 males, 11 females); Depotodden, Laponiahelvøya, 6 Aug. 1995, under rocks in rich vegetation (1 female); Dokken, Duvefjorden, coll. A.Fjellberg (2 males, 7 females). Sjuøyane: Isflakbukta, Phippsøya (80° 40' N, 20° 50' E), 5 Aug. 1995, under rocks in dry slope (2 males, 6 females); first record of spiders ever from these islands, otherwise there are several records (down to the sea level) from Svalbard (Holm 1958).

The species has a wide circumpolar, Arctic distribution (Holm 1958, Leech 1966, Esyunin & Efimik 1996). Records from the Scandinavian mountains, i.e. the northern areas, are all from above 1500 m a.s.l. (Braendegaard 1960, Holm 1967), in Iceland it is recorded from 1000 m a.s.l. and upwards (Braendegård 1958, Agnarsson 1996). In southern Norway records are hitherto restricted to areas between 2150 and 2350 m a.s.l. (Holm 1960), the southernmost records in western Europe, obviously also reaching approximately the same southern latitude in the mountains (the southern Urals) of Russia (Mikhailov 1997), perhaps more northerly distributed in northern Asia (Eskov 1994). Humid (wet) habitats seem to be preferred (Leech 1966).

Erigone arctica palaeartica Braendegård, 1934.

Two males and 3 females, 4 Aug. 1995, under rocks in rich vegetation below bird cliff in Florabukta, Murchisonfjorden. First record from Nordaustlandet. Known from several localities on Spitsbergen (Holm 1958, Huh-ta 1967), here among the most common species (Holm 1937), also known from Edgeøya (Jackson 1934). Distribution: Palaearctic (Holm 1958, Mikhailov 1997).

E. psychrophila (Thorell, 1872).

Marmorpynten, Storsteinhalvøya, 3 Aug. 1995, under rocks (1 male); Florabukta, Murchisonfjorden, 4 Aug. 1995 under rocks in rich vegetation below bird cliff (2 females); Dokken, Duvefjorden, 7 Aug. 1995, coll. A Fjellberg (1 female); Oxfordhalvøya, Wahlenbergfjorden, 8 Aug. 1995 under rocks in polar desert, also close to seeping water (2 males, 3 females).

The species is widespread in Vest-Spitsbergen (Holm 1958), also collected at Nordaustlandet (Jackson 1937), and has a rather wide north Holarctic distribution (Leech & Ryan 1972), including Iceland and the Faroes (Brændegaard 1958), present but obviously rare in the Scottish mountains (Locket et al. 1974). In Swedish Lapland it has been collected from between about 1000 and 1250 m a.s.l. (Holm 1950), in Nordland (Northern Norway) at 1250 m a.s.l. and in coastal areas of Finnmark at altitudes as low as 300 m a.s.l. (Holm 1960). In the south Norwegian mountains (1220-1350 m a.s.l.) it seems fairly common in relatively humid localities (Hauge et al. 1978; Hauge, Kauri & Solhøy in prep.), see also (Braendegård 1960, Leech 1966).

Lepthyphantes sobrius (Thorell, 1872)

Florabukta, Murchisonfjorden, 4 Aug. 1995 under rocks in rich vegetation below bird cliff (4 females); Depotodden, Laponiahelvøya, 6 Aug. 1995 under rock in rich vegetation (one female). These are the first records from Nordaustlandet.

Found exclusively sublapidicolous (Holm 1958, Koponen 1980), distributed in the northern Palearctic from Svalbard to the far east in the former Soviet Union (Holm 1958, 1973; Eshyunin & Efimik 1996, Mikhailov 1997).

Hilaira glacialis (Thorell, 1872).

Florabukta, Murchisonfjorden, 4 Aug. 1995 under

rocks in rich vegetation below bird cliff (5 males, 17 females).

The species is also known from Nordaustlandet (Jackson 1924, Summerhayes & Elton 1928) and several localities at Vest-Spitsbergen (Holm 1958), apparently among the most common species in the area (Koponen 1980). Once regarded as endemic for Svalbard (Holm 1958), palaearctic (Eskov 1994, Eshyunin & Efimik 1995, Mikhailov 1997).

ACKNOWLEDGEMENTS

The expedition to Nordaustlandet and Sjuøyane in 1995 was organized by the Arctic Terrestrial Ecology Program of the Norwegian Research Council with logistic support of the Norwegian Coast Guard. We are most grateful to commander Knut Hustad of 'Senja' and his crew. We also thank Dr. Arne Fjellberg for permission to publish material collected by him.

SAMMENDRAG.

Edderkopper (Araneae) fra Nordaustlandet og Sjuøyane, Svalbard

Under en ekspedisjon til Nordaustlandet og Sjuøyane i 1995 ble det funnet fem edderkopp-arter. *Erigone arctica* og *Lepthyphantes sobrius* ble samlet for første gang på Nordaustlandet. *Collinsia spetsbergensis* er første funn av edderkopper på Phippsøya (80° 40' N, 20° 50' Ø), en av de nordlige (små) Sjuøyane. Videre ble *Collinsia holmgreni* funnet ved de varme kildene ved Bockfjorden, Vest-Spitsbergen. Utbredelsen av de forskjellige artene er kort beskrevet.

REFERENCES

- Agnarsson, Í. 1996. Íslenskar köngulær. - Fjölrít náttúrufræðistofnunar 31: 1-175.
 Bengtson, S.-A. & Fjellberg, A. 1975. Summer food of the purple sandpiper (*Calidris maritima*) in Spitsbergen. - Astarte 8: 1-6.
 Braendegård, J. 1946. The spiders (Araneina) of East Greenland. A faunistic and zoogeographical investigation. -

- Medd. Grønland 121: 1-128.
- Braendegaard, J. 1958. The Zoology of Iceland III. - Copenhagen and Reykjavik.
- Braendegaard, J. 1960. The spiders (Araneida) of Peary Land, North Greenland. - Medd. Grønland 159: 1-24.
- Caporiacco, L. di 1931. - Materiale zoologici raccolti della spedizione Albertini nello Svalbard Nord-Oriental. - Boll. Zool. 2: 129-134.
- Cotton, M.J. 1979. A collection of spiders from North-East Greenland. - Arctic 32 : 71-75.
- Eskov, K.Y. 1994. Catalogue of the linyphii spiders of northern Asia (Arachnida, Araneae, Linyphiidae). - Pensoft publishers, Sofia-Moscow.
- Esyunin, S.L. & Efimik, V.E. 1996. Catalog of the spiders (Arachnida, Aranei) of the Urals. - KMK Scientific Press., Moscow.
- Hauge, E.; Hågvar, S. & Østbye, E. 1978. Pitfall catches of surface-active arthropods in some high mountain habitats at Finse, south Norway. III. The species of Araneida. - Norw. J. Ent. 25: 207-220.
- Hintz, W. 1976. Zur Ökologie der Tundra Zentralspitzbergens. - Aquilo Ser. Bot. 7: 1-56.
- Holm, Å. 1937. Zur Kenntnis der Spinnenfauna Spitzbergens und der Bären-Insel. - Ark. Zool. 29 A: 1-13.
- Holm, Å. 1951. Araneae. - Pp. 138-149 in Brinck, P. & Wingstrand, K.G. (eds.). The mountain fauna of the Virihaure area in Swedish Lapland. II. - Special account. Lunds Univ. Årb. N.F. Avd. 2, 46: 1-173.
- Holm, Å. 1958. The spiders of the Isfjord region of Spitsbergen. - Zool. Bidr. Upps. 33: 29-68.
- Holm, Å. 1960. Notes on Arctic spiders. - Ark. Zool. 12: 511-514.
- Holm, Å. 1967. Spiders (Araneae) from West Greenland. - Medd. Grønland 184: 1-99.
- Holm, Å. 1973. On the spiders (Araneae) collected during the Swedish expedition to Novaya Zemlya and Yensei in 1875 and 1876. - Zool. Scr. 2: 71-110.
- Huhta, V. 1967. Some notes on the spider fauna of Spitsbergen. - Ann. Ent. Fenn. 33: 27.
- Jackson, A.R. 1924. On the spiders of Spitsbergen, results of the Merton College expedition to Spitsbergen in 1923, No.1. - Ann. Mag. Nat. Hist. 13: 7-79.
- Jackson, A.R. 1934. On a collection of spiders made in 1928 by Dr. Sig. Thor in Spitsbergen. - Norsk Ent. Tidsskr. 3: 332-354.
- Jackson, A.R. 1937. Notes on arctic spiders obtained in 1933-1936. - Proc. Zool. Soc. London 107 B: 543-551.
- Kleemola, A. 1962. Spiders from the northernmost part of Enontekiö. - Arch. Soc. Vanamo 16: 128-135.
- Koponen, S. 1980. Spider fauna in the Adventfjorden area, Spitsbergen. Rep. Kevo Subarctic. - Res. Stat. 16: 13-16.
- Leech, R.E. 1966. The spiders (Araneida) of Hazen Camp 81° 49' N, 71° 18' W. - Quaest. Ent. 2: 153-212.
- Leech, R.E. & Ryan, J.K. 1972. Notes on Canadian Arctic spiders (Araneida), mainly from Devon Island, N.W.T. - Can. Ent. 104: 1787-1791.
- Locket, G.H., Millidge, A.F. & Merrett, P. 1974. British Spiders III. - Ray Soc. London.
- Mikhailov, K.G. 1997. Catalogue of the spiders of the territories of the former Soviet Union (Arachnida, - Aranei).
- Palmgren, P. 1976. Die Spinnenfauna Finnlands und Ostfennoskandiens. VII. Linyphiidae 2. - Fauna Fennica 29.
- Remmert, H. 1966. Zur Ökologie der küstennahen Tundra Westspitzbergens. Z. Morph. Ökol. - Tiere 58:1 62-172.
- Rüppell, G. 1968. Über Ökologie und Tagesrhythmus von Bodenarthropoden eutrophierter Tundragebiete Westspitzbergens. - Pedobiologica 8: 150-157.
- Summerhayes, V. & Elton, C.S. 1928. Further contributions to the ecology of Spitsbergen - J. Ecol. 16: 193-268.
- Tambs-Lyche, H. 1967. Notes on the distribution of some Arctic Spiders. - Astarte 28: 1-13.
- Thaler, K. 1975. Über einige Spinnen aus Spitzbergen (Arachnida, Aranei). - Mitt. Schweiz. Ent. Ges. 48: 437-442.
- Thaler, K. 1980. Über wenig bekannte Zwergspinnen aus den Alpen - VI (Arachnida: Aranei: Erigonidae). - Revue Suisse Zool. 87: 579-603.