A New Species of the Genus *Lepthyphantes* from Sweden (Araneae, Linyphiidae)

By Torbjörn Kronestedt

Section of Entomology
Swedish Museum of Natural History
S-104 05 Stockholm, Sweden

Abstract

Kronestedt, T. A new species of the genus *Lepthyphantes* from Sweden (Araneae, Linyphiidae). — Ent. Tidskr. 96: 162—166, 1975.

Both sexes of *Lepthyphantes holmi* sp. n. are described on material from the vicinity of Stockholm, where the species is frequently met with. Notes on habitat and phenology are given. The species shows affinity to *L. geniculatus* Kulczyński and *L. nitidus* (Thorell).

Introduction

The taxonomy within the spider genus *Lepthyphantes* has since long been in a confused stage. Recently a number of redescriptions have been undertaken and synonymies have been cleared out. In this respect the papers by Wiehle (1965), Moritz (1973), Thaler (1973) and Wunderlich (1973) can be mentioned among others. Thus, we have now achieved a better knowledge about a number of species although a more thorough revision comprising the European species is still wanting.

About ten years ago I first came across a *Lepthyphantes* species which I could not assign to any known species. Since then I have frequently met with this species while collecting around Stockholm. In the light of the improved knowledge of the species of this genus, I now have a ground to describe this species as a new one, naming it after my friend Professor Åke Holm, Uppsala.

Lepthyphantes holmi sp.n.

Type

Male holotype from Sweden: Uppland, Vallentuna, Kusta, November 24, 1974; together with 1 ♂ and 2 ♀♀ paratypes from the same locality and date deposited in the Section of Entomology, Swedish Museum of Natural History.

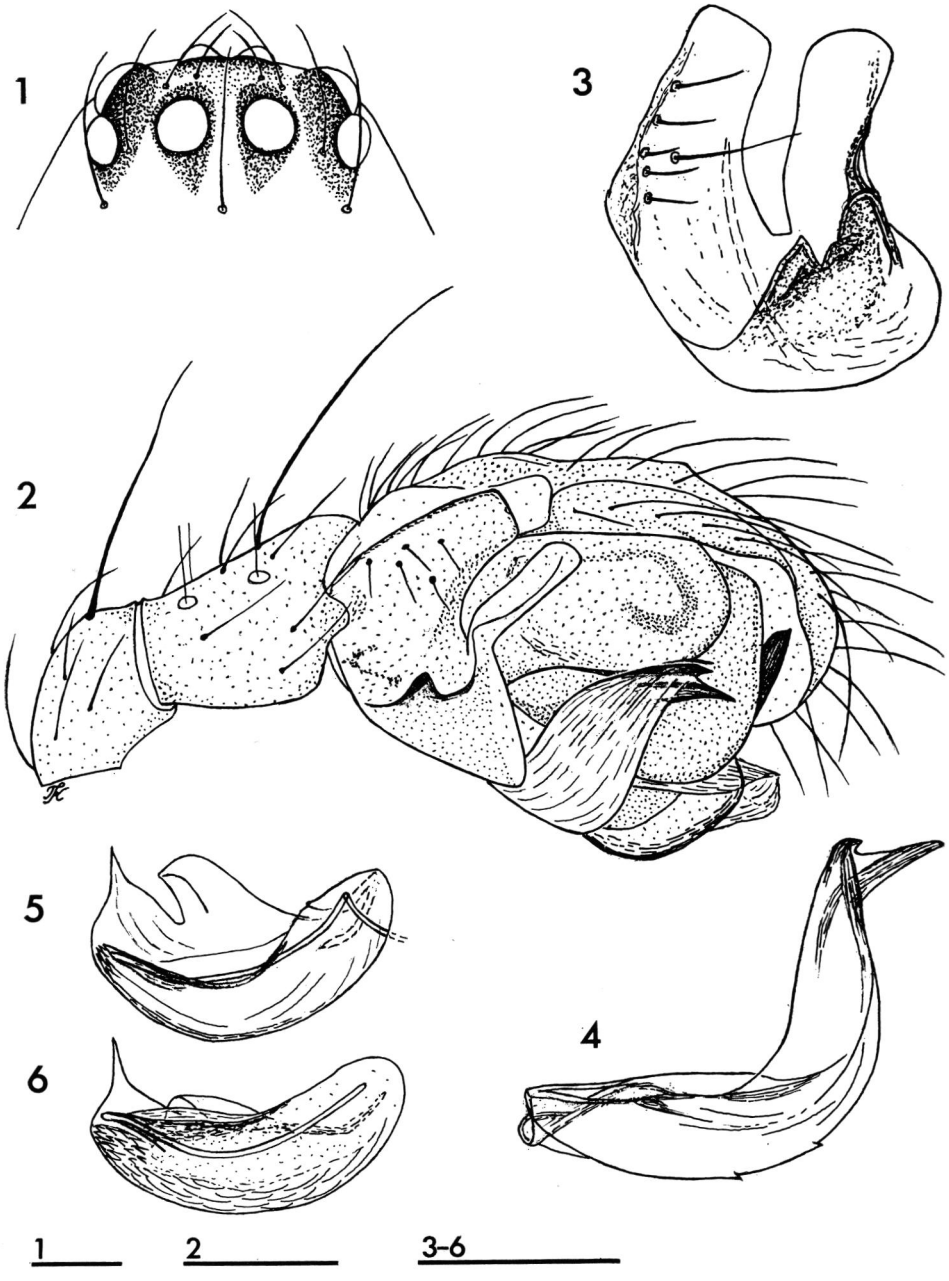
Description

(Measurements taken from the specified specimens.)

Male holotype. Total length 2.3 mm. Carapace 0.95 mm long, 0.73 mm wide.

Carapace pale yellow brown; thoracic margin greyish.

Chelicerae pale yellow brown. Fang groove with 3 stout promarginal teeth and 5 small retromarginal teeth in a close row, the proximal one largest.



Figs. 1—6. *Lepthyphantes holmi* sp. n. ♂. — 1. Ocular area. — 2. Right palp, retrolateral view (holotype). — 3. Right paracymbium, retrolateral view. — 4. Right lamella characteristica, retrolateral view from slightly behind. — 5. Right embolus, prolateral view slightly from in front. — 6. Right embolus, ventral view.

Scale lines = 0.1 mm.

Sternum yellowish, suffused with black.

Eyes (Fig. 1) surrounded by black. Anterior median eyes smallest (diam. 0.05 mm), separated by less than their radius. Anterior laterals largest (diam. 0.08 mm). Posterior eyes in a slightly recurved row. Posterior medians slightly smaller than anterior laterals and the former separated from each other by approximately their radius.

Abdomen greyish, venter darker; lung opercula yellowish brown. Dorsum sometimes with faint darker transverse bars.

Legs light yellow brown with a faint greyish tinge. Femur I with a prolateral spine in distal half. Tibiae I—IV with 2 dorsal spines, tibia I in addition with one pro- and one retrolateral spine in distal half, tibia II with one retrolateral spine in distal half. Metatarsi I—III with one dorsal spine in proximal half. Metatarsus IV spineless. Metartarsi I—III with a trichobothrium (Tm I 0.21, Tm II 0.20, Tm III 0.20).

Leg	Fe	Pt	Ti	Mt	Ta	Total
I	1.16	0.29	1.19	1.08	0.75	4.47 mm
II	1.08	0.28	1.03	0.96	0.68	4.03 mm
III	0.88	0.24	0.74	0.75	0.49	3.10 mm
IV	1.13	0.25	1.13	1.09	0.64	4.24 mm

Palp (Fig. 2). Patella with long dorsodistal spine but without dorsodistal prominence (cf. e.g. *L. geniculatus* and *L. nitidus*). Tibia with dorsal spine, distally with a small retrolateral apophysis. Paracymbium (Fig. 3) with a sclerotized tooth. Lamella characteristica (Fig. 4) bifid apically, the two pointed processes being sclerotized; lower process pointing outwards. Embolus as in Figs. 5, 6.

Female paratype (allotype). Total length 2.4 mm. Carapace 0.93 mm long, 0.74 mm wide.

Coloration, cheliceral dentition and leg spination as in the male. (One female was found with a dorsal spine in one of its Mt IV. The spine was situated in the proximal half near the middle of the segment.)

Legs. Tm I 0.19, Tm II 0.22, Tm III 0.19.

Leg	Fe	Pt	Ti	Mt	Ta	Total
I	1.03	0.29	0.98	0.90	0.65	3.85 mm
II	0.96	0.28	0.85	0.81	0.59	3.49 mm
III	0.81	0.24	0.65	0.65	0.44	2.79 mm
IV	1.05	0.25	0.94	0.91	0.56	3.71 mm

Epigyne (Fig. 7). Anterior part of scape broad with side margins semicircular. Distal part of stretcher visible posteriorly. Lateral lobes more or less visible in ventral view. Vulva as in Fig. 8.

Material

Uppland: Lidingö, Furutorp 1 ♂ 18.XI—2.XII.63, 2 ♂♂ 16—30.XII.63, 1 ♀ 13—27.I.64, 1 ♂ 27.I—3.II.64, 2 ♂♂ 3—10.II.64, 2 ♂♂ 10—24.II.64, 3 ♂♂ 2—9.III.64, 5 ♂♂ 16—31.III.64, 1 ♂ 9.III.66, 1 ♂ 19.III.66 (all caught in traps). — Sånga, Sockarbytorp 6 ♂♂ 6 ♀♀ 26.IV—12.V.69, 1 ♀ 12—24.V.69, 2 ♂♂ 24.V—7.VI.69, 1 ♂ 7—21.VI.69, 2 ♀♀ 21.VI—5.VII.69, 1 ♂ 8—30.XI.69, 1 ♂ 8 ♀♀ 28.IV—12.V.70, 2 ♂♂ 2—10.IV.71, 1 ♂ 10—17.IV.71, 1 ♂ 17—24.IV.71, 1 ♂ 2 ♀♀ 24—29.IV.71, 1 ♀ 29.IV—8.V.71, 1 ♂ 1 ♀ 8—14.V.71 (all caught in traps). — Vallentuna, Kusta 8 ♂♂ 6 ♀♀ 6.X.73, 3 ♂♂ 1 ♀ 4.XI.73, 3 ♀♀ 31.III.74, 2 ♂♂ 9.XI.74. 5 ♂♂ 3 ♀♀ 24.XI.74 (incl. holo- and allotype) (all by hand collecting).

Habitat and phenology

When going through a rather extensive spider material collected by Dr. O. Näsmark at Lidingö, Furutorp (Näsmark 1964, Kronestedt 1968) several specimens of *L. holmi* were met with for the first time by me. The material was collected by pitfall traps. The study area included a grassy uncultivated field as well as part of an adjacent wood. *L. holmi* was only obtained in the field and at the edge of the wood. A few males were caught under snow cover.

L. holmi has also been found in traps on a grassy uncultivated field at Sånga, Sockar-

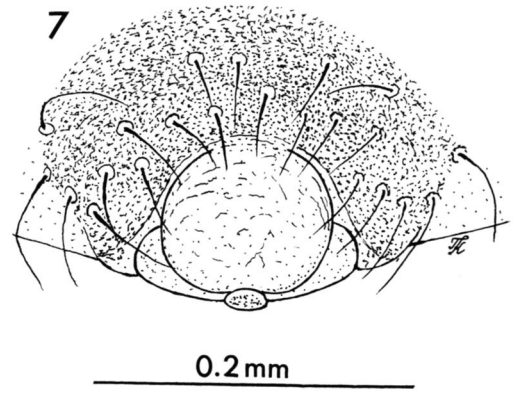
bytorp. In the same situation this species was obtained at Vallentuna, Kusta.

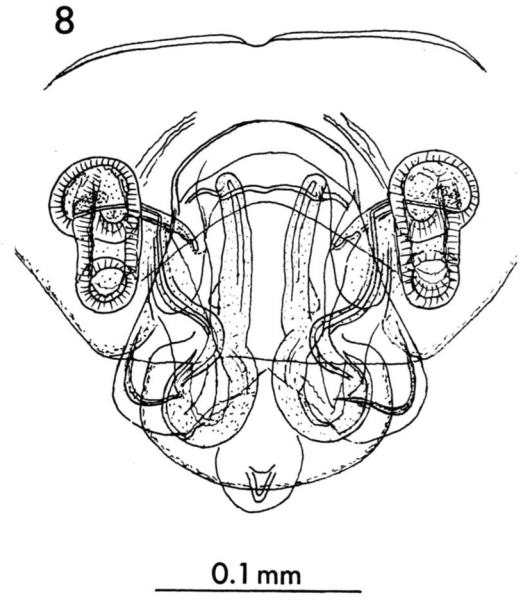
L. holmi seems to prefer undisturbed grassy vegetation (e.g. meadows, abandoned arable land, grassy edges of cultivated fields). I have sometimes found the species by pushing aside old lying grass covering runways of small mammals (e.g. rodents).

Adults have been found in autumn, winter, spring and early summer. From the scattered data obtained by trap catches (see Material), it seems that the activity is low during the autumn but increases through the winter and culminates during the spring. (Traps at Furutorp were operating during autumn, winter and spring in 1963—64, and traps at Sockarbytorp were operating during spring, summer and autumn, the winter traps were not operating satisfactorily.) The activity pattern is probably of the *Lepthyphantes cristatus* type (Tretzel 1954).

Taxonomic remarks

Lepthyphantes holmi sp.n. shows affinity to *L. geniculatus* Kulczyński (v. Broen 1965 /sub *L. wiehlei*/, 1966) and *L. nitidus* (Thorell) (Wiehle 1963 /sub *L. kochi*/, Moritz 1973) in respect of both male palp and epigyne. The epigyne of *L. holmi* is also rather similar to that of *L. decolor* (Westring). (Holm (1968) redescribed *Linyphia decolor* Westring placing it in the genus *Troglohyphantes*, and Moritz (1968) redescribed *Bathyphantes zebrinus* Menge placing it in the genus *Lepthyphantes*; both names indubitably refer to the same species, which owing to priority should be named *Lepthyphantes decolor* (Westring); the reasons for placing it in *Troglohyphantes* are not fully convincing.) However, the females of *L. holmi* and *L. decolor* can be easily distinguished by differences in their chaetotaxy (*L. holmi* normally has no spine on Mt IV in contrast to *L. decolor*; moreover the latter has a retrolateral spine on all tibiae).





Figs. 7—8. *Lepthyphantes holmi* sp. n. ♀. — 7. Epigyne, ventral view (allotype). — 8. Vulva, ventral view.

Acknowledgement

I would like to thank Prof. Å. Holm, Uppsala, for reading the manuscript.

Addendum

After finishing the manuscript I received a paper by P. Palmgren (Die Spinnenfauna Finn-

lands und Ostfennoskandiens VI. Linyphiidae I. — Fauna fenn. 28 (1975): 1—102), in which he gives some notes and figures of a male palp of a specimen that he assigns to "*Lepthyphantes complicatus* subsp.?" The specimen probably belongs to *L. holmi*.

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