

## *Agroeca dentigera* and *Entelecara omissa* (Araneae: Liocranidae, Linyphiidae), found in Sweden

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**Abstract:** The rare spider species *Agroeca dentigera* Kulczyński, 1913 (Liocranidae) and *Entelecara omissa* O. P.-Cambridge, 1902 (Linyphiidae), have been found in a small coastal freshwater fen in Lomma (55°42'N 13°4'E), north of Malmö in Scania in southernmost Sweden. *A. dentigera* was also found on a salt water meadow south of Malmö. Both species have been found only in a few wet localities in Europe. *Entelecara depilata* Tullgren, 1955, is a junior synonym of *Entelecara omissa* O. P.-Cambridge, 1902, **new synonymy**.

**key words:** *Entelecara depilata*, faunistics, fen, new record, new synonymy

In a study of the spider fauna, 1990-1992, of a small open freshwater fen on the coast in Habo, Lomma, Scania, southernmost Sweden, 55°42'N 13°4'E, the rare spider species *Agroeca dentigera* Kulczyński, 1913 and *Entelecara omissa* O. P.-Cambridge, 1902 were found.

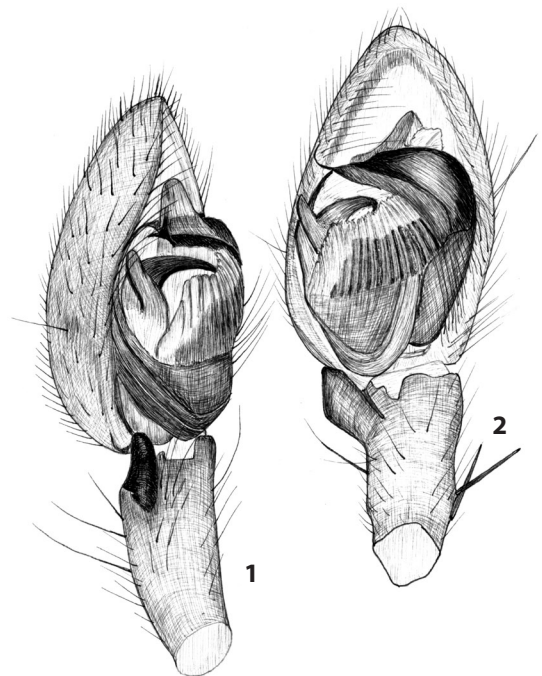
### *Agroeca dentigera* (Liocranidae)

*A. dentigera* Kulczyński, 1913 was found on and in tussocks of *Carex elata* in a small semi-open mesotrophic coastal marsh surrounded by alder trees. In pitfall traps one female and one juvenile were trapped (26 March - 5 Apr. 1991), one juvenile (14 May - 3 June 1991), one male (7 - 30 Nov. 1991) the top of tussocks. Two males were found in the middle of a tussock that was cut in small pieces (27 Oct. 1991). *Agroeca dentigera* has also been found previously at another locality on the coast of Scania. S. Almquist (pers. com.) found one female in a drift of *Phragmites australis* on a coastal pasture used by horses south of Klagshamn (55°30'N 12°55'E), 3 Sept. 1976. The female was found in the area between the pasture and a belt of *Phragmites* in sea water.

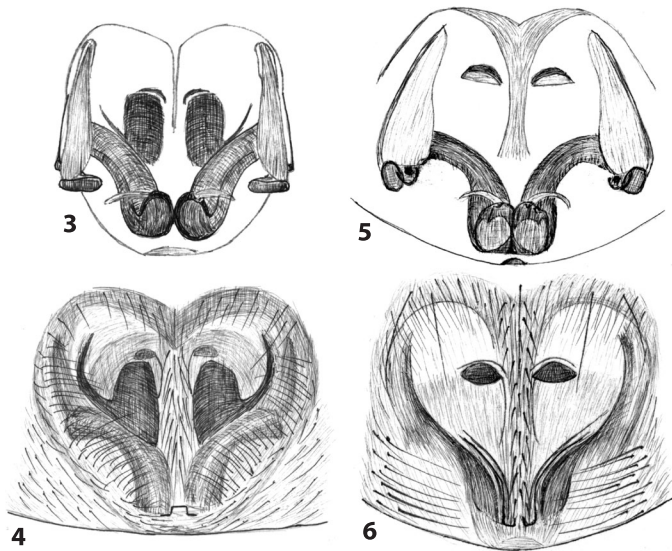
*Agroeca dentigera* has been reported from a few places in Germany (BRAUN 1967, WUNDERLICH 1975, PLATEN et al. 1999), Belgium (JOCQUÉ 1977, JANSSEN 1991), Romania (OLTEAN 1973, STERGHIU 1985), Poland (KUPRYJANOWICZ 1997), the Netherlands (v. HELSDINGEN 1999), Wales (FELTON et al. 2004), Finland, Lithuania (KOPONEN et al. 2000, RĚLYS & DAPKUS 2002,

RĚLYS et al. 2002), Belarus (MIKHAILOV pers. comm.), Ukraine (MIKHAILOV 1997) and in Russia (KULCZYŃSKI 1913), eastwards to the Urals (ESYUNIN & EFIMIK 1996).

The female originally described by KULCZYŃSKI, 1913, has later been figured by several arachnologists (BRAUN 1967, OLTEAN 1973, JOCQUÉ 1977, STERGHIU 1985, ROBERTS 1998 and FELTON et al. 2004). The drawing of the heart-shaped epigyne



**Fig. 1-2:** *Agroeca dentigera* Kulczyński, left male pedipalp: 1- ventral view, 2- retrolateral view. Drawings by Sven Almquist.



**Fig. 3-6:** *Agroeca dentigera* Kulczyński, female epigyne: 3- dorsal view, newly moulted female, 4- ventral view, newly moulted female, 5- dorsal view, old female, 6- ventral view, old female. Drawings by Sven Almqvist.

by GRIMM (1986) and the copy in HEIMER & NENTWIG (1991) is somewhat atypical. The male has been figured by WUNDERLICH (1975), JOCQUÉ (1977), ROBERTS (1998) and FELTON et al. (2004). Figs. 1-2 show the pedipalp of a male and figs. 3-6 the epigyne of females from Sweden.

WUNDERLICH (1975) found *A. dentigera* in a marsh with *Carex lasiocarpa* surrounded by an alder fen. JOCQUÉ (1977) found it among heather, *Calluna vulgaris*, on dry ground near water and among the grass *Molinia caerulea* on wet ground. According to him *A. dentigera* needs "the vicinity of wet acid soils". It has also been reported from mosses of *Sphagnum* (BRAUN 1967, STERGHU 1985, JANSSEN 1991). In Romania it has been found in a floating belt of *Phragmites* in the Danube delta and in association with *Sphagnum* (OLTEAN 1973, STERGHU 1985). The records in Finland and Lithuania are from peatbogs, both open and with pines (KOPONEN et al. 2001, RĚLYS et al. 2002). The report from Wales is from a somewhat different environment, from a hollow in a fixed sand dune with *Ammophila arenaria* dominant (FELTON et al. 2004). It seems that *A. dentigera* needs wet, thick heaps of vegetation, e.g. tussocks or mosses. It is obviously hygrophilous. Probably it spends the day in tussocks, mosses or other wet heaps and wanders,

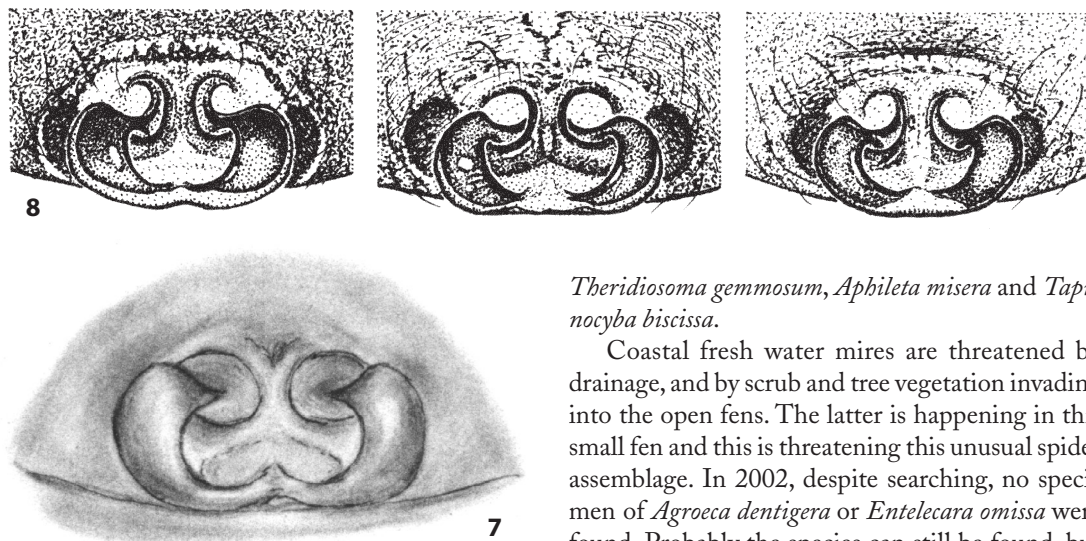
at least some of the time, on the surface during the night. The species is active in autumn and spring, but can also fall into pitfall traps during the winter. It is red-listed as vulnerable in Sweden (GÄRDENFORS 2005).

#### *Entelecara omissa* (Linyphiidae)

*Entelecara omissa* was described by PICKARD-CAMBRIDGE (1902), but was named without any detailed description as a nomen nudum two years earlier (PICKARD-CAMBRIDGE 1900). The first drawings of the male palp were published later (PICKARD-CAMBRIDGE 1903), although the drawing of the female's epigyne was of *Entelecara errata* (O. P.-Cambridge, 1913) (see PICKARD-CAMBRIDGE 1913). O. P.-Cambridge never made any drawings of the female of *E. omissa*. It has been reported from mesotrophic fens in England and

from Ireland (RUSSEL-SMITH 2002), from a fen area in Belgium (DECLÉER 1992), from fens in Poland (KUPRYJANOWICZ 1997), from Ukraine (K. Mikhailov pers. com.), from a reed swamp in the Czech Republic (BUCHAR & RŮŽIČKA 2002), the Netherlands (van HELSDINGEN 1999) and from an ombrotrophic mire in Germany (SCHIKORA 1994) and also from two other localities in Germany (STAUDT 2004). The latter two records in STAUDT (2004) are probably misidentifications and need confirmation (Blick, pers. com.). In England the species is found among tussocks and litter, cut sedge, reed-beds and similar habitats at ground level in fens (RUSSEL-SMITH 2002).

In the same fen in Lomma as *Agroeca dentigera* a female of *Entelecara omissa* was found (7 Nov. 1990). *E. omissa* has also been found at three different lakes near Stockholm as reported by TULLGREN (1955) as a new species: *Entelecara depilata*. By comparing the drawings and description by TULLGREN (1955) and by checking the types in the NRM in Stockholm with the drawings made by LOCKET & MILLIDGE (1953), ROBERTS (1987) and TAZOE (1993), it is obvious that *Entelecara depilata* Tullgren is a junior synonym of *Entelecara omissa* O. P.-Cambridge, new synonym. In Sweden two females of *Entelecara depilata* have also been reported from the open mire



**Fig. 7-8:** *Entelecara omissa* O. P.-Cambridge, female epigynes: 7- from TULLGREN (1955: Taf. IV, Fig. 8a, sub *E. depilata*), 8- from ROBERTS (1987: p. 41, fig. 11f).

Knisa myr (ALMQUIST 1984). Those females have been checked and are *E. omissa*. *Entelecara depilata* has also been reported from Estonia (VILBASTE 1987) and is probably also *E. omissa*.

The syntypes of *E. depilata* in the NRM are small, total length approx. 1,5 mm, cephalothorax approx. 0,65 mm. They are rather dark, with yellowish legs bearing dark annulation on the coxae. They have trichobothria on metatarsus I-III, but no trichobothrium on leg IV. Anterior median eyes slightly larger than anterior lateral eyes (Tullgren, 1955; pers. obs.). Trichobothria on metatarsus I approx. 0,45. This is in accordance with the descriptions of *Entelecara omissa* by LOCKET & MILLIDGE (1953) and ROBERTS (1987). Fig. 7 shows the drawing of the epigyne of *E. depilata* made by TULLGREN (1955) and fig. 8 shows the epigynes by ROBERTS (1987).

### The fen and its spiders

In the fen 83 species were found and 1025 specimen collected. The most common spider species on the tussocks of *Carex elata* in Lomma were: *Pardosa amentata*, *Pardosa prativaga*, *Pirata piraticus*, *Trochosa spinipalpis*, *Pachygnatha clercki*, *Gongyliidiellum murcidum*, *Erigonella ignobilis*, *Walckenaeria unicornis* and *Zora spinimana*. Rare species found in the fen include *Hypomma fulvum*, *Lophomma punctatum*,

*Theridiosoma gemmosum*, *Aphileta misera* and *Tapirocya biscissa*.

Coastal fresh water mires are threatened by drainage, and by scrub and tree vegetation invading into the open fens. The latter is happening in this small fen and this is threatening this unusual spider assemblage. In 2002, despite searching, no specimen of *Agroeca dentigera* or *Entelecara omissa* were found. Probably the species can still be found, but in small numbers. The fen is subject to a drainage proposal.

### Acknowledgements

Thanks to Sven Almquist for information and loan of specimen and for allowing to use his drawings on *A. dentigera*, to Michael J. Roberts for allowing to use his drawings on *E. omissa*, to Theo Blick, Jason Dunlop, Oliver-D. Finch and Kirill Mikhailov for valuable information and suggestions, and to Torbjörn Kronestedt for loan of specimen from NRM.

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