

***Drepanotylus pirinicus* n.sp. from Pirin Mountain
(Bulgaria), with Comparative Remarks on the
Other Species of the Genus**
(Arachnida, Araneae: Linyphiidae) *

by

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Synopsis: *Drepanotylus pirinicus* n.sp. is described and illustrated (♂, ♀) from Pirin mountain, Bulgaria. The new species is close to *D. uncatus* (THORELL) and to *D. borealis* HOLM, which are also figured. The recent distribution of these species is discussed.

HOLM (1945) based the new genus *Drepanotylus* on the type species *Erigone uncata* THORELL and his new species *D. borealis*. WUNDERLICH (1978) synonymized *Drepanotylus* with the genus *Notiomaso* BANKS from South Georgia, but this change has not been accepted by later authors (MERRETT et al., 1985, PLATNICK, 1989). In this paper *D. pirinicus* n.sp. is described from the high alpine zone of Pirin mountain, which is apparently the southernmost occurrence of the genus in Europe.

***Drepanotylus pirinicus* n.sp.** (figs 1, 4, 7 - 9)

D. uncatus: DELTSHEV (1989).

Diagnosis: Close to *D. uncatus* and *D. borealis*. The male is characterized by the palp and tibial apophysis (figs 1, 4), the female by the duct structures of the vulva (figs 7 - 9).

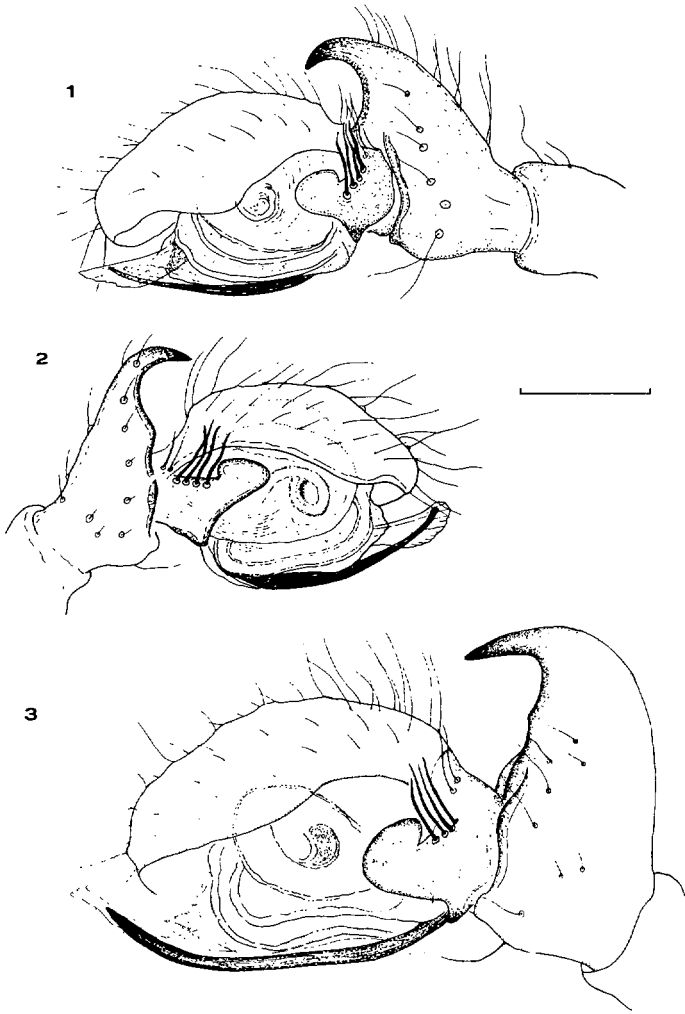
Derivatio nominis: specific name derived from the type locality.

♂/♀ (measurements in mm): Total length 3.0/3.0. Cephalothorax length 1.5/1.5, width 0.97/0.97; abdomen length 1.5/1.75; sternum length 0.75/0.75, width 0.60/0.60. Cephalothorax slightly elevated behind eyes, similar in both sexes, brown to yellow brown, with few hairs in ocular area. Posterior median eyes (ME) 1 diam. apart and 1.5 diam. from laterals (LE), anterior ME close together, distance from LE ca. 1 diam. Chelicerae brown to yellow brown, anterior margin with 5 teeth. Sternum yellow brown to yellow. Abdomen greyish.

Legs: yellow to yellow brown. Tibial spines 2.2.2.2, Tibia I with prolateral spine. Trichobothrium metatarsus I 0.50, metatarsus IV without trichobothrium.

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Figs 1 - 3: ♂ palp, external view. *Drepanotylus pirinicus* n.sp. (1), *D. borealis* HOLM (2), *D. uncutus* (THORELL) (3). — Scale line: 0.20 mm.

Male palp (figs 1, 4): Palpal tibia produced dorsally into a prominent hook-like apophysis. Paracymbium with a group of stout spines. Embolus long and slender, with blunt tip.

Epigyne-vulva: figs 7 - 9.

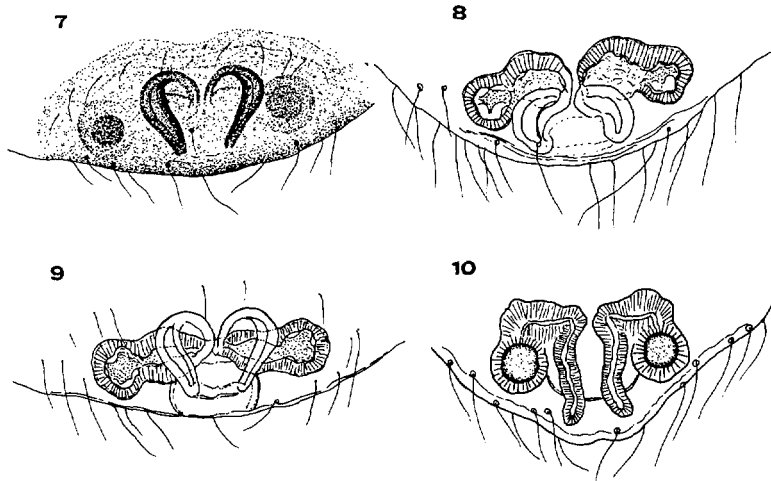
Discussion: *D. pirinicus* n.sp., *D. uncutus* and *D. borealis* appear to be closely related, but they may be separated clearly by the following characters. The palpal organs are largest in *D. uncutus* (figs 3, 6), while they are smaller and more similar in *D. borealis* and *D. pirinicus* n.sp. The tibial apophysis is also most bulky in *D. uncutus* (fig. 3), intermediate in *D. pirinicus* n.sp. (fig. 1) and most slender in *D. borealis* (fig. 2). The same trend is shown in the paracymbium. In the three



Figs 4 - 6: ♂ palp, internal view. *Drepanotylus pirinicus* n.sp. (4), *D. borealis* HOLM (5), *D. uncatus* (THORELL) (6). — Scale line: 0.20 mm.

species the embolic part is similar, but there are differences in the tip of the embolus. Concerning the female, the most characteristic is *D. borealis* with its parallel ducts (fig. 10), whereas the curved ducts of *D. pirinicus* n.sp. (figs 8, 9) resemble those of *D. uncatus* (see WIEHLE, 1956).

Distribution and habitat: *D. pirinicus* n.sp. has been found in a single locality in Pirin mountain, in a swampy place above the treeline (ca. 2550 m). The other species of the genus occur in the same kind of habitat in lowlands < 700 m. *D. uncatus* is known from Central and Northern Europe (BRAUN & RABELER, 1969), while *D. borealis* is known only from Northern Europe (Sweden, Finland; HOLM, 1945, PALMGREN, 1969). *D. pirinicus* n.sp. from the high alpine zone of Pirin mountain therefore may have evolved as a peripheric isolate, thus forming a remnant of the invasion of northern species to the South during the glaciations.



Figs 7 - 10: Epigyne (7), vulva (8 - 10). — *Drepanotylus pirinicus* n.sp. (7 - 9), *D. borealis* HOLM (10). — Scale line: 0.20 mm.

Material and locality: *D. pirinicus* n.sp.: Pirin mountain, peak Vihren (2550 m), 1 ♂ holotype, 3 ♀ paratypes, 6.10.1980, leg. Deltshev. Depository: Institute of Zoology, Sofia. 1 ♀ paratype will be deposited in Naturhistorisches Museum, Wien.

D. uncatus (THORELL): 1 ♂ 1 ♀ Coll. Thaler (LÖSER et al., 1982).

D. borealis HOLM: 1 ♂ 3 ♀ Coll. Holm (HOLM, 1945).

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Literature:

- BRAUN, R. & W. RABELER (1969): Zur Autökologie und Phänologie der Spinnenfauna des nordwestdeutschen Altmoränengebietes. — Abh. senckenberg. nat. Ges., **522**: 1 - 89.
- DELTSHEV, C. (1989): The high-altitude spiders (Araneae) in the Pirin Mountains, Bulgaria. — Acta zool. Fennica, **190**: 111 - 115.
- HOLM, A. (1945): Zur Kenntnis der Spinnenfauna des Torneträsk-Gebietes. — Ark. Zool., **36**: 1 - 80.
- LÖSER, S., E. MEYER & K. THALER (1982): Laufkäfer, Kurzflügelkäfer, Asseln, Webespinnen, Weberknechte und Tausendfüßer des Naturschutzgebietes "Murnauer Moos" und der angrenzenden westlichen Talhänge (Coleoptera . . . Diplopoda). — Entomofauna (Linz), Suppl. **1**: 369 - 446.
- MERRETT, P., G.H. LOCKET & A.F. MILLIDGE (1985): A check list of British spiders. — Bull. Br. arachnol. Soc., **6**: 381 - 403.
- PALMGREN, P. (1969): Die Spinnenfauna der Gegend von Kilpisjärvi in Lappland. — Acta zool. Fennica, **110**: 1 - 70.
- PLATNICK, N.I. (1989): Advances in spider taxonomy 1981 - 1987. — Manchester, 673 pp.
- WIEHLE, H. (1956): Spinnentiere oder Arachnoidea (Araneae). 28. Familie Linyphiidae-Baldachinspinnen. Tierwelt Deutschlands **44**: 8, 1 - 337.
- WUNDERLICH, J. (1978): Die Synonymie der Gattungen *Notiomaso* BANKS 1914, *Drepanotylus* HOLM 1945, *Perimaso* TAMBS-LYCHE 1942 und *Micromaso* TAMBS-LYCHE 1954 (Arachnida . . . Linyphiidae). — Senckenbergiana biol. **58**: 253 - 255.