

**The genus *Tegenaria* LATREILLE in Bulgaria:
A critical review with descriptions of two sibling species**
(Arachnida, Araneae: Agelenidae)¹⁾

by

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**Die Gattung *Tegenaria* LATREILLE in Bulgarien:
Eine kritische Übersicht mit Beschreibung von zwei Zwillingarten**
(Arachnida, Araneae: Agelenidae)

Synopsis: All data available on the genus *Tegenaria* in Bulgaria are revised and discussed. Eleven species are confirmed, among them two new sibling species: *T. montana* n. sp. and *T. rilaensis* n. sp. from Pirin and Rila mountains respectively. Two important new records are *T. nemorosa* and *T. bithyniae*. Species which have been misidentified and which must be deleted from the regional fauna include: "*T. annulata*" (= *T. montana* n. sp.), "*T. dentifera*" (= *T. montana* n. sp.), "*T. pagana*" (= *T. bithyniae*), "*T. picta*" (= *T. silvestris*), *T. argaica* and *T. atrica*. The Bulgarian fauna of *Tegenaria* is discussed from ecological and zoogeographic viewpoints.

DRENSKY (1936) in his "Katalog der echten Spinnen (Araneae) der Balkanhalbinsel" reported 13 species of the genus *Tegenaria* from Bulgaria: *T. agrestis* (WALCKENAER), *T. annulata* KULCZYNSKI, *T. argaica* NOSEK, *T. atrica* C.L. KOCH, *T. campestris* (C.L. KOCH), *T. conveniens* KULCZYNSKI [misidentification = *Histopona torpica* (C.L. KOCH)], *T. dentifera* KULCZYNSKI, *T. derhami* (SCOPOLI) [= *T. domestica* (CLERCK)], *T. ferruginea* (PANZER), *T. pagana* C.L. KOCH, *T. parietina* (FOURCROY), *T. picta* SIMON, *T. silvestris* L. KOCH. Some years later the same information was presented again with some additional faunistic data (DRENSKY 1942). Further faunistic data can be found in the papers of DELTSHEV (1967, 1972a, 1972b, 1973, 1976, 1982, 1992). In the present contribution a critical taxonomic and faunistic review of these data is attempted, together with a zoogeographic discussion.

***Tegenaria agrestis* (WALCKENAER):**

T. agrestis: DRENSKY (1915: 122; 1921: 38; 1936: 24, 1942: 44 - 48, 51), DELTSHEV & BLAGOEV (1992: 31).

The species occurs in open and grassy areas, under stones and bark. It is confined to low elevations, not exceeding 200 m a.s.l. The statement of DRENSKY (1921, 1942) about its common occurrence on Pirin mountain up to 1500 m has not been confirmed in recent collections and is probably erroneous. *T. agrestis* is distributed mainly in the southwestern (DELTSHEV & BLAGOEV 1992) and eastern (JURINITCH & DRENSKY 1917) regions of Bulgaria.

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Tegenaria argaieica NOSEK, *T. atrica* C.L. KOCH

These two species were recorded by DRENSKY. At present, reference specimens are no longer available. As these two species have not been collected since the days of DRENSKY, their occurrence in Bulgaria is highly doubtful.

Tegenaria bithyniae BRIGNOLI (Fig. 1)

T. pagana: DELTSHEV (1982: 101).

T. bithyniae was described from Turkey, Bolu mountain 1400 - 1600 m (BRIGNOLI 1978). The new record from Bulgaria, from two caves in Strandzha mountain, ca. 1200 m (DELTSHEV 1982), therefore indicates a wider distribution also in SE Europe. Apparently Bulgarian specimens agree well with the types, as can be seen from the vulval structures (Fig. 1).

Tegenaria campestris (C.L. KOCH) (Figs 2 - 8)

T. campestris: DRENSKY (1913: 65 - 66; 1936: 25), DELTSHEV & BLAGOEV (1992: 30).

The species occurs in grassy areas up to 1200m, under stones, under bushes and bark. *T. campestris* is distributed in western (DRENSKY 1913, DELTSHEV & BLAGOEV 1992), southern (DRENSKY 1913) and eastern Bulgaria (DELTSHEV 1976). Bulgarian specimens agree perfectly with their conspecifics from Austria, Figs 4 vs. 5.

Tegenaria domestica (CLERCK)

T. domestica, *T. derhami*: DRENSKY (1911: 42; 1913: 64 - 65; 1915: 153; 1921: 38; 1931: 11 - 12, 1932: 327; 1936: 25; 1942: 46 - 47, 50), JURINITCH & DRENSKY (1917: 130), DELTSHEV (1972: 173; 1973: 41, 44, 45).

The species is distributed all over Bulgaria, occurring in houses and cellars and outside buildings in caves.

Tegenaria ferruginea (PANZER)

T. ferruginea: DRENSKY (1915: 120; 1921: 38; 1936: 26), DELTSHEV (1972: 172; 1973: 41 - 45), DELTSHEV & BLAGOEV (1992: 30).

The species occurs mainly in forests, under stones and in caves. It is known from southwestern Bulgaria (DRENSKY 1915, DELTSHEV & BLAGOEV 1992). The species has been recorded from caves in northern (3 caves), central (1 cave) and southern Bulgaria (2 caves, DELTSHEV 1972, 1973).

Tegenaria montana n.sp. (Figs 9 - 13)

T. annulata: DRENSKY (1921: 41).

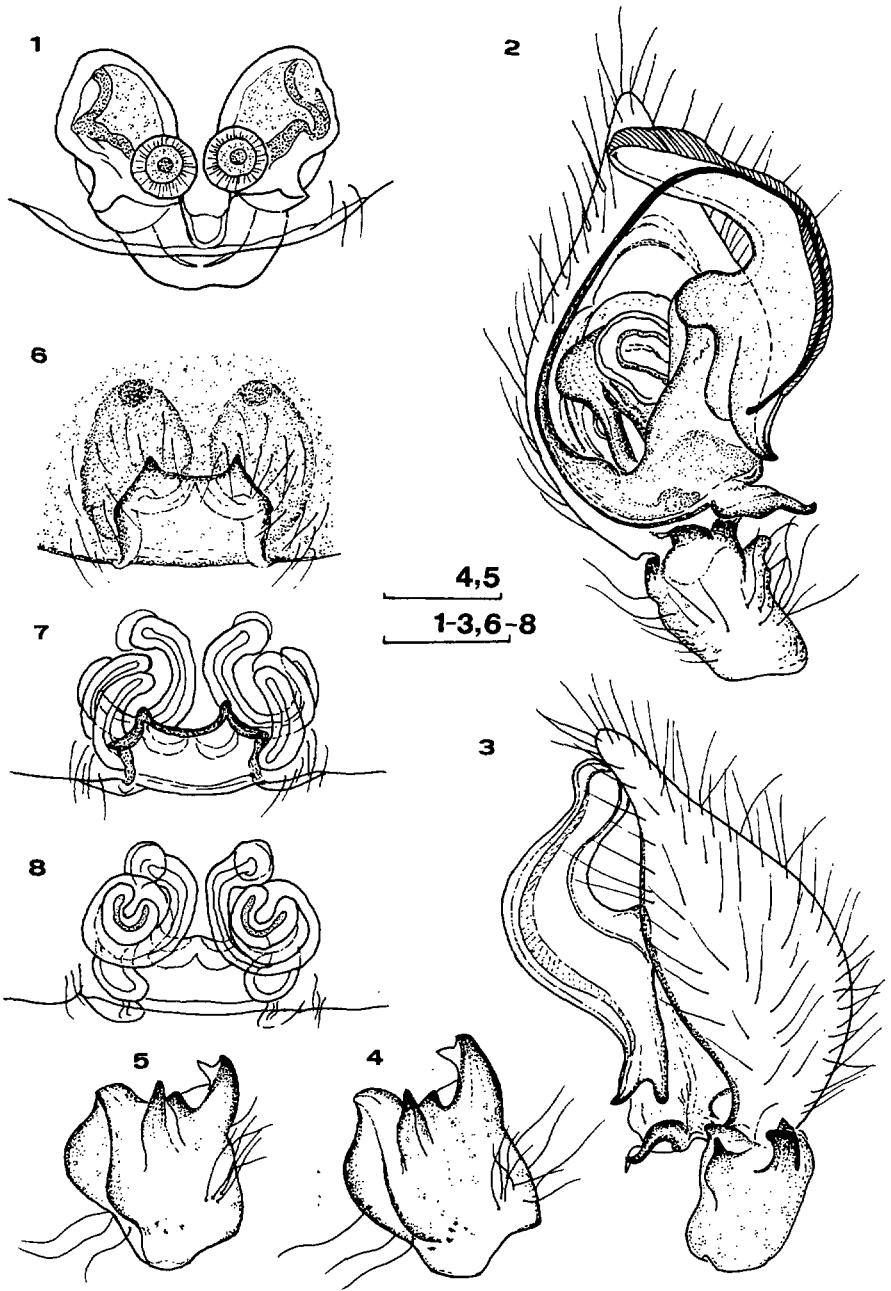
T. dentifera: DRENSKY (1921: 39 - 40).

T. pagana: DRENSKY (1921: 39).

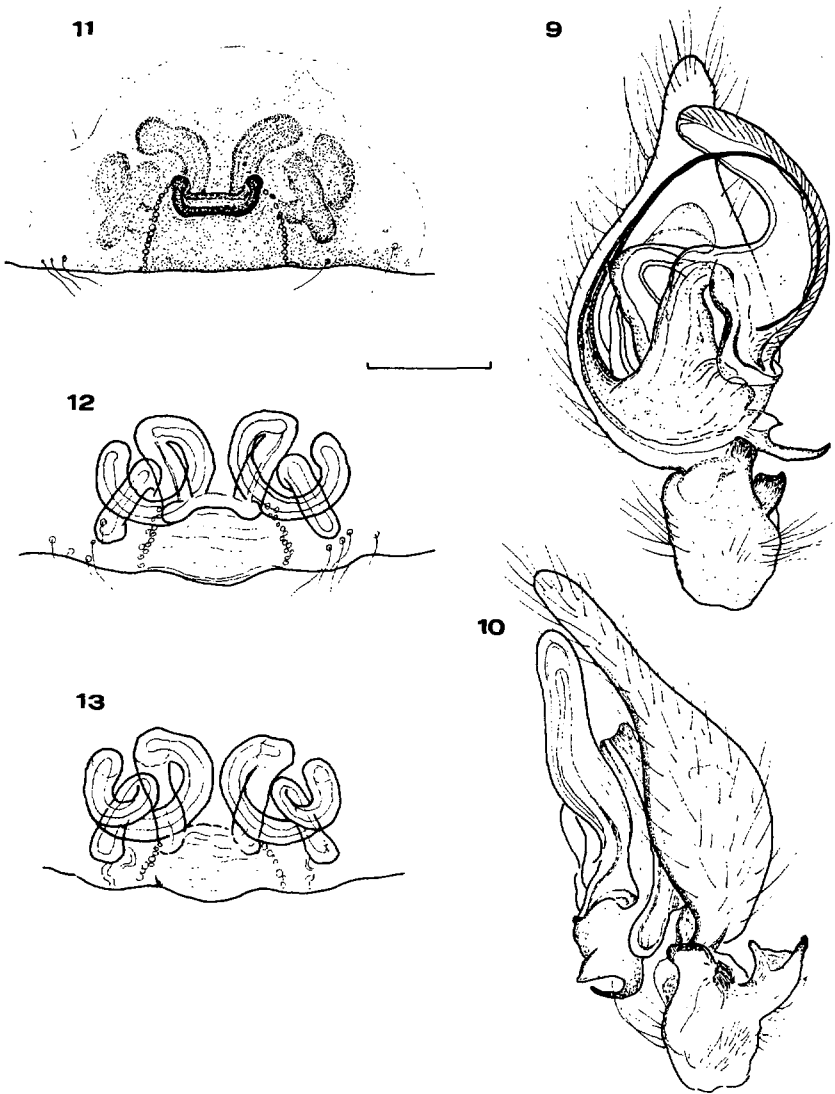
Diagnosis: *T. montana* n.sp. is close to *T. campestris* and *T. rilaensis* n.sp. The ♂ is characterized by the palp and its tibial apophysis (Figs 9 - 10). The ♀ can be recognized from the genital atrium, which is a narrow furrow between the genital openings, and the characteristic sperm ducts of the vulva, Figs 11 - 13.

Derivatio nominis: lat. *montanus*, adjectival.

♂/♀ (measurements in mm): Total length 7.1/6.4. Cephalothorax length 3.4/3.0, width 3.0/2.6. Abdomen length 3.4/3.4. Sternum length 1.7/1.7, width 1.5/1.5. Cephalothorax similar in both sexes, brown to brown grey. Borderline distinct, with some dark markings diffusing inwards. Anterior median eyes touching anterior laterals. Posterior eyes nearly equal and almost equally spaced. Chelicerae brown, anterior (posterior) margin with 3 (4) teeth. Pattern of sternum and abdomen typical.



Figs 1 - 8: *Tegenaria bithyniae* BRIGNOLI (1). *T. campestris* (C.L. KOCH) (Bulgaria: 2 - 4, 6 - 8, Austria: 5). - Epigyne (6). Vulva, ventral (7) and dorsal view (1, 8). σ palp, ventral view (2), retrolateral view (3). σ palpal tibia (4, 5). - Scale lines: 0.30 mm (1 - 3, 6 - 8), 0.10 mm (4 - 5).



Figs 9 - 13: *Tegenaria montana* n.sp. — Epigyne (11). Vulva, ventral (12) and dorsal view (13). ♂ palpus, ventral view (9), retrolateral view (10). — Scale line: 0.30 mm.

Legs: 4123, distinctly annulated (♂♀).

♂ palpus: Figs. 9, 10. Tibia short, with distinct bifid dorsal apophysis, lateral apophysis rounded. Cymbium spoon-like, tegular apophysis hook-like. Conductor large, evenly curved, embolus long and slender.

Epigyne-vulva: Figs 11 - 13.

Discussion: *T. montana* n.sp., *T. rilaensis* n.sp. and *T. campestris* apparently are closely related. They can be separated clearly by the following characters. The palpal organ is smallest in *T.*

montana, in which the dorsal tibial apophysis is most complicated (Fig. 10 vs. 3 - 5, 20). Furthermore, there are small differences in the shape of the tegular apophysis (Figs 9, 10 vs. 2, 3 and 19, 20). The epigyne and vulva are also similar, but distinct (Fig. 11 vs. 6, 21).

Habitat: *T. montana* n. sp. inhabits mountainous and high mountain areas 1200 - 2700 m. It can be found under stones, logs and under bark.

Material, localities: Pirin mountain: Ribno ezero 2400 m, 1 ♂ holotype, 2 ♀ paratypes, 9 Aug. 1983, leg. Deltshv. Paratypes: Cott. Bunderitsa 1500 m, 1 ♂ 3 ♀ 10 July 1915, 4 ♀ 13 July 1915; Bunderitsa 2200 m, 4 ♀ 11 July 1915; cott. Demjanitsa 2000 m, 1 ♀ 15 July 1915; Haidushki izvor 1500 m, 1 ♂ 2 ♀ 17 July 1915, leg. Drensky. Mitrovsko ezero 2400 m, 3 ♀ 20 July 1981; cott. Demjanitsa 1700 m, 1 ♀ 21 July 1981; mt. Vihren 2700 m, 1 ♀ 21 July 1981; Demjanishka poljana 1700 m, 1 ♀ 23 July 1981; Todorina ornitsa 1500 m, 1 ♀ 10 Aug. 1982; cott. Javorov 2400 m, 4 ♀ 10 July 1983; Vasilashki ezera 2400 m, 1 ♂ 4 ♀ 25 July 1985; cott. G. Delchev 1700 m, 2 ♀ 31 July 1985; Valjavishki ezera 2500 m, 1 ♀ 27 July 1985; Muratovo ezero 2400 m, 2 ♀ 24 Aug. 1987; cott. Sinanitsa 2000 m, 1 ♀ 25 Aug. 1987; Gazeiski ezera 2500 m, 2 ♀ 26 Aug. 1987; Prevalski ezera 2400 m, 1 ♀ 28 Aug. 1987; cott. Begovitsa 1700 m, 1 ♀ 28 Aug. 1987, leg. Deltshv. Depository: Institute of Zoology, Sofia. 1 ♂, 1 ♀ paratypes (Valilashki ezera 2400 m) will be deposited in Naturhistorisches Museum, Wien.

Tegenaria nemorosa SIMON (Figs 14 - 18)

T. nemorosa occurs only in South Bulgaria: vill. Uzundzhovo, distr. of Haskovo (2 ♂ 2 ♀ 15 June 1988). It was found under stones in open sites.

Tegenaria parietina (FOURCROY)

T. parietina: JURINITCH & DRENSKY (1917: 120), DRENSKY (1921: 38, 1936: 27).

T. parietina is widespread in Bulgaria. It occurs mainly in buildings, where it is more abundant than *T. domestica*.

Tegenaria regispyrri BRIGNOLI

The species has been found only in southwestern Bulgaria (DELTSHEV & BLAGOEV 1992) and on the coast of the Black sea (Varna, new locality). It occurs in forests as well as in open grassland.

Tegenaria rilaensis n. sp. (Figs 19 - 23)

Diagnosis: close to *T. campestris* and *T. montana* n. sp. The ♂ is characterized by the palpus, esp. its tibial apophysis (Fig. 20). ♀: epigyne-vulva see Figs. 21 - 23, genital openings separate, not situated in a common furrow.

Derivatio nominis: Specific name derived from the type locality.

♂/♀ (measurements in mm): Total length 6.0/7.1. Cephalothorax length 3.0/3.0, width 2.6/2.3. Abdomen length 3.0/4.5. Sternum length 1.7/1.5, width 1.5/1.4. Cephalothorax similar in both sexes, brown to brown grey. Borderline distinct, with some dark markings diffusing inwards. Anterior median eyes touching anterior laterals. Posterior eyes almost equally spaced. Chelicerae brown, anterior (posterior) margin with 3 (3) teeth. Pattern of sternum and abdomen typical.

Legs: 4123, distinctly annulated (♂♀).

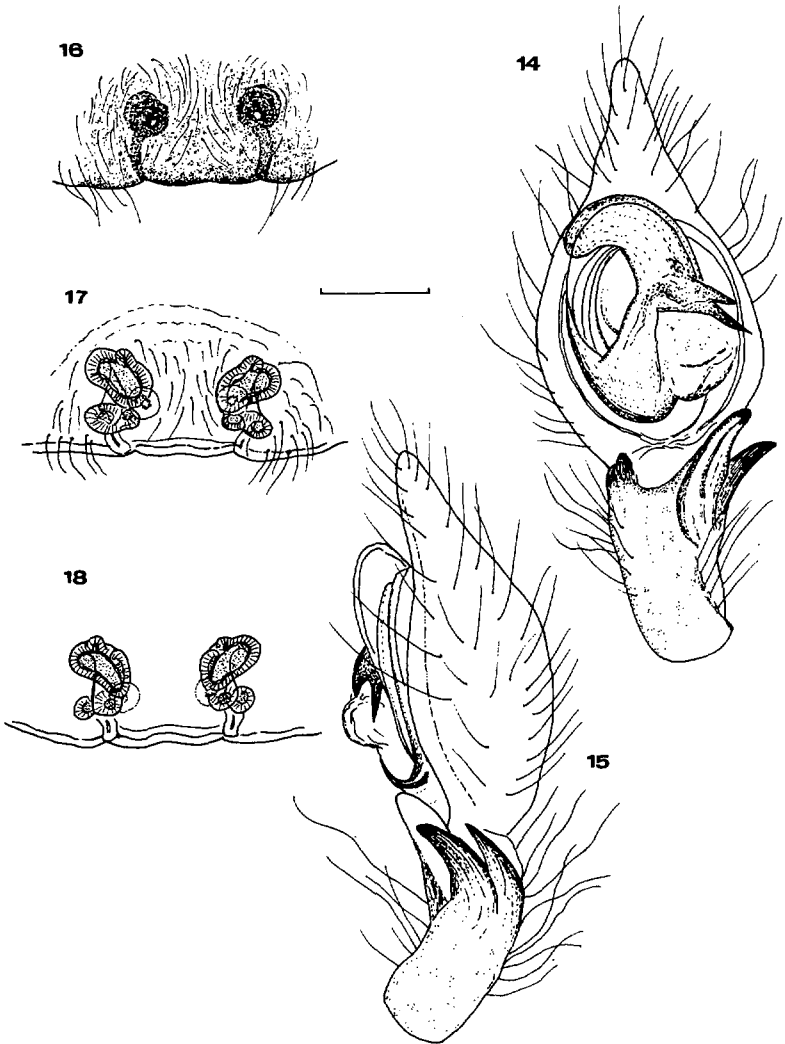
♂ palpus: Figs 19, 20. Tibia short, dorsal apophysis large and distinct, distally bifid. Cymbium spoon-like. Tegular apophysis hooked. Conductor large, evenly curved. Embolus slender, tapering.

Epigyne-vulva: Figs. 21 - 23.

Discussion: Closely related to *T. campestris* and especially to *T. montana* n. sp., but with distinct tibial apophysis (Fig. 20 vs. 3, 10). Epigyne without furrow, Fig. 21 vs. 11.

Habitat: Mountain and high mountain areas of mt. Rila 1500 - 2500 m. It was found mainly under stones.

Material, localities: Rila mountain, cott. Granchar 2200 m, 1 ♂ holotype, 3 ♀ paratypes, 15 July 1986, leg. Deltshv. Paratypes: Cott. Maliovitza 2050 m, 1 ♀ 7 June 1964; cott. Maliovitza 2550 m, 1 ♀ 23 Aug. 1973, leg.



Figs 14 - 18: *Tegenaria nemorosa* SIMON. — Epigyne (16). Vulva, ventral (17) and dorsal view (18). ♂ palp, ventral view (14), retrolateral view (15). — Scale line: 0.30 mm.

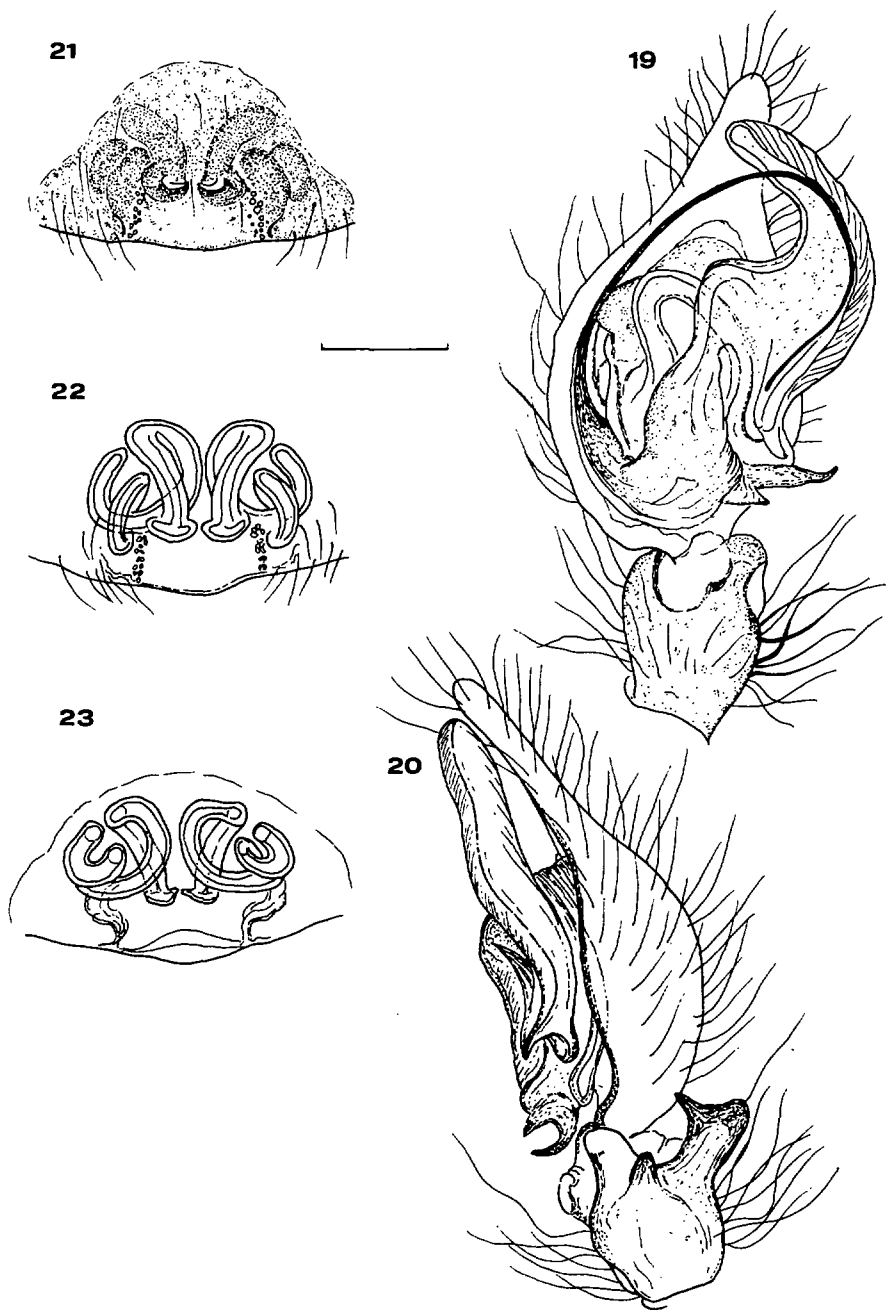
Beron; cott. Zavrachitsa 2200 m, 1 ♂ 3 ♀ 14 Aug. 1986; cott. Semkovo 1800 m, 20 Aug. 1986, leg. Deltshev. Depository: Institute of Zoology, Sofia. 1 ♂, 1 ♀ paratypes (cott. Zavrachitsa) will be deposited in Naturhistorisches Museum, Wien.

Tegenaria silvestris L. KOCH

T. picta: DRENSKY (1913: 65).

T. silvestris: DRENSKY (1931: 12, 1936: 27), DELTSHEV (1972: 173, 1973: 41 - 45).

T. silvestris is widespread in Bulgarian caves. It is known from 17 caves, distributed in all regions of Bulgaria.



Figs 19 - 23: *Tegenaria rilaensis* n. sp. — Epigyne (21). Vulva, ventral (22) and dorsal (23) view. ♂ palp, ventral view (19), retrolateral view (20). — Scale line: 0.30 mm.

General Discussion:

The genus *Tegenaria* is represented in Bulgaria by 11 species. They occur in caves, in buildings or close to them, in lowland, in forest and in the mountains. Among the synanthropic species, the most frequent is *T. parietina*, almost restricted to buildings, followed by *T. domestica*. This species and *T. silvestris*, *T. ferruginea* and *T. bithyniae* are commonly found in the entrances of caves. On mountains especially, they also occur in open country. Only *T. montana* n. sp. on Pirin mountain and *T. rilaensis* n. sp. on Rila mountain occur also above the treeline, living under stones and in rock interstices. *T. agrestis*, *T. nemorosa* and *T. regispyrri* occur only in lowland areas.

According to their current distribution the Bulgarian species of *Tegenaria* can be split into 6 faunal elements: cosmopolitan (1, *T. domestica*), middle-south European (3, *T. agrestis*, *T. parietina*, *T. silvestris*), middle-southeast European (2, *T. campestris*, *T. ferruginea*), north mediterranean (2, *T. nemorosa*, *T. regispyrri*), Euro-minorasian (1, *T. bithyniae*), endemics (2, *T. montana* n. sp., *T. rilaensis* n. sp.). Therefore, there are two main groups involved, i.e. a mid-European species group which is predominant, and a mediterranean species group. The two endemics may be also regarded as derivatives of the mid-European *T. campestris*.

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