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# *Blestia*, a new genus of erigonine spider with clypeal sulci (Araneae: Linyphiidae)

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## Summary

*Oedothorax sarcocuon* Crosby & Bishop, 1927 has clypeal sulci similar to those of the linyphiid subfamily Mynogleninae. The new genus *Blestia* is erected for this species, and its taxonomic position is discussed.

## Introduction

The male of a North American erigonine spider, originally described under *Oedothorax*, has been found to possess clypeal pits (subocular sulci) which are generally similar in position and structure to those of the Mynogleninae. This species requires a new genus; a description is given of this genus, and the species is redescribed. All measurements are in mm.

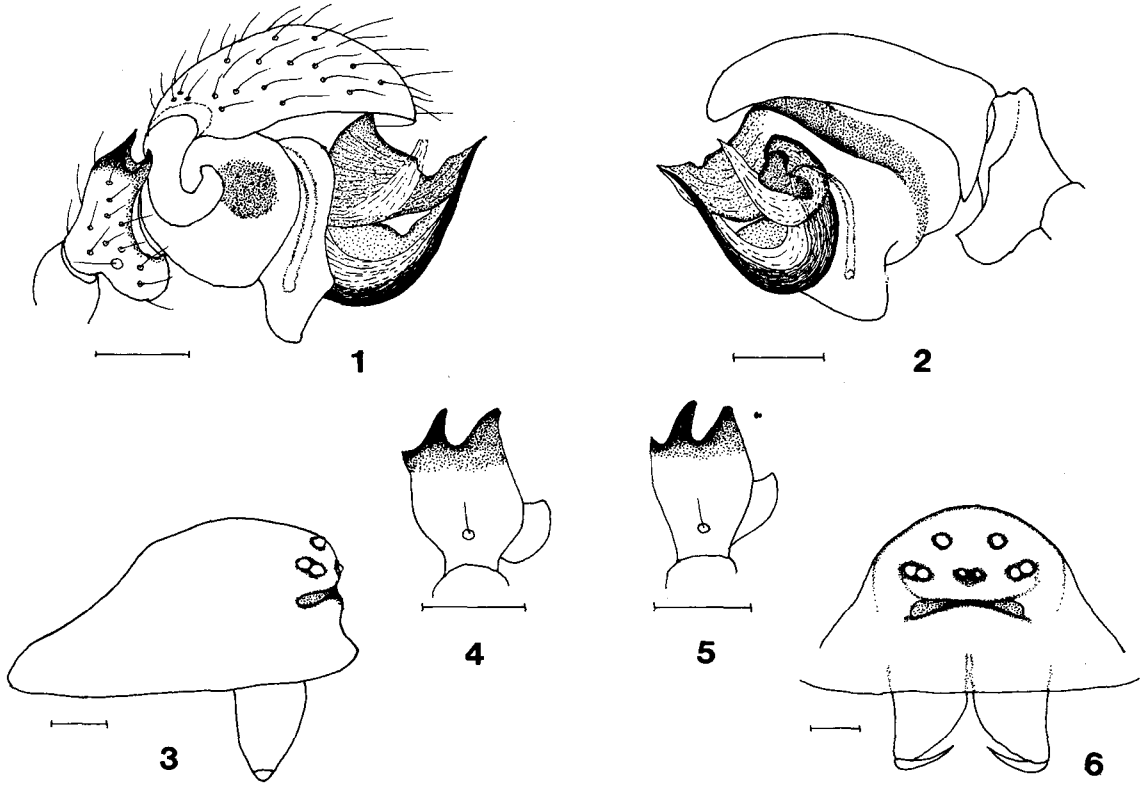
## Genus *Blestia*, new genus

*Type species: Oedothorax sarcocuon* Crosby & Bishop, 1927.

*Etymology:* A patronym in honour of A. D. Blest, in recognition of his work on the Mynogleninae.

*Diagnosis:* Both sexes are diagnosed as erigonine by the tracheal form (Blest, 1976; Millidge, 1984). Females can be diagnosed only by the chaetotaxy, the epigynum (Figs. 7, 8, 10) and association with the male. Males are diagnosed by the clypeal sulci (Figs. 3, 6, 13, 14), which distinguish *Blestia* from all other known erigonine genera.

*Description:* Total length 1.35–1.70. Female carapace unmodified except for a small, shallow pit on clypeus below anterior median eyes; this pit contains no pores. Male carapace raised anteriorly into a shallow lobe (Fig. 3). Clypeus fairly high, and carries two sulci (Figs. 3,6); these are relatively shallow (Fig. 9), and lack the deep invagination characteristic of erigonine post-ocular sulci (Fig. 12) (Blest, 1979). The sulci have long recumbent spines on the margins, and the floor of each sulcus contains small, irregular groups of pores (Figs. 13, 14), but few, if any, spines. The sulci were described by Crosby & Bishop (1927) as a transverse groove on the clypeus; the groove does not in fact extend across the clypeus, and a ridge of thickened integument lies between the sulci, which are not connected to one another (Fig. 9). Chelicerae in both sexes with weak lateral files. Abdomen more or less unicolorous. Legs fairly short and stout, with tibia I l/d (female) *c.* 5.0–5.5. Dorsal tibial spines 1111 in female, but short and rather weak; male tibiae spineless. Femora and metatarsi spineless in both sexes. Metatarsi I-III have a trichobothrium, with TmI *c.* 0.3. Female palp clawless. Tracheal form erigonine, with median tracheae split into numerous tracheoles which extent into prosoma. Epigynum (Figs. 7, 10) with a flask-shaped median area, which carries a small socket; spermathecae large (Fig. 8), and the duct follows a simple pathway around a laminar structure to the openings, which appear to lie posteriorly on or near to the margins of the median area. Male palpal tibia with short apophyses (Figs. 4, 5); paracymbium fairly stout (Fig. 1), and tegulum with a rounded projection ventrally. Suprategular apophysis large, lightly




Figs. 1–6: *Blestia sarcocuon*, male. **1** Palp, ectal; **2** Palp, mesal; **3** Carapace, lateral; **4** Palpal tibia, dorsal, holotype; **5** Palpal tibia, dorsal, Virginia specimen; **6** Carapace, anterior. Scale lines = 0.1 mm.

sclerotised (Fig. 1). Embolic division with a small rounded radical part which carries a small, projecting section and a curved, transparent lamina which projects anterodorsally (Fig. 2); embolus curved, stout basally but slender distally, with its end resting on suprategular apophysis.

*Included species:* Only the type species.

*Distribution:* Known only from Pennsylvania and Virginia, eastern USA.

*Taxonomic relationships:* The genus is clearly erigonine in respect of the tracheal form, the genitalia and the somatic characters. As in other erigonines, cephalic sulci are present only in the male, but the position (clypeus) and form (shallow pits, carrying pores but no deep invagination) of the sulci are sharply different from those of typical erigonines. The sulci resemble those of some members of the Mynogleninae, particularly those of *Protoerigone* females (Blest, 1979: fig. 612), though with fewer pores.

The presence in *Blestia*, in most respects a typical erigonine, of clypeal sulci of this kind gives support to the suggestion (Blest & Taylor, 1977; Blest & Pomeroy, 1978; Blest, 1979) that the post-ocular sulci of the erigonines may be homologous with the clypeal sulci of the Mynogleninae. On this hypothesis, the post-ocular sulci would have arisen from the sub-ocular sulci by migration posteriorly, coupled with a change in the glandular system and in the function. The clypeal sulci of *Blestia* would represent a relict erigonine character which has been retained in the single *Blestia* species alone out of some two thousand erigonine species so far described.

The post-ocular sulci of the erigonines are present in adults of the male sex only, and probably have a sexual function (Blest & Taylor, 1977; Blest, 1979); in the Mynogleninae, the sulci are present in adults and juveniles of both sexes, and their function, though not definitely known, is not sexual (Blest & Taylor, 1977; Blest & Pomeroy, 1978). The function of the sulci in *Blestia* is not known, but their position indicates that it may not be sexual.

The taxonomic position of the Erigoninae *vis-à-vis* the Mynogleninae has been discussed by Blest (1979). The discovery of the clypeal sulci of *Blestia* must give some support to the view that these two subfamilies are probably fairly closely related; their relationship will be considered in more detail in a forthcoming paper.

Within the Erigoninae, *Blestia* is perhaps most closely related to the genus *Baryphyma* Simon. The male palp is somewhat similar in form to that of *B. trifrons* (O. P.-Cambridge), and the internal epigynal structure is basically of the same form as in the *Baryphyma* species (Fig. 8 cf. Fig. 11); the external epigynal form, however, differs from that of *Baryphyma*. The presence of the clypeal sulci makes it unlikely that *Blestia* and *Baryphyma* can be particularly closely related.

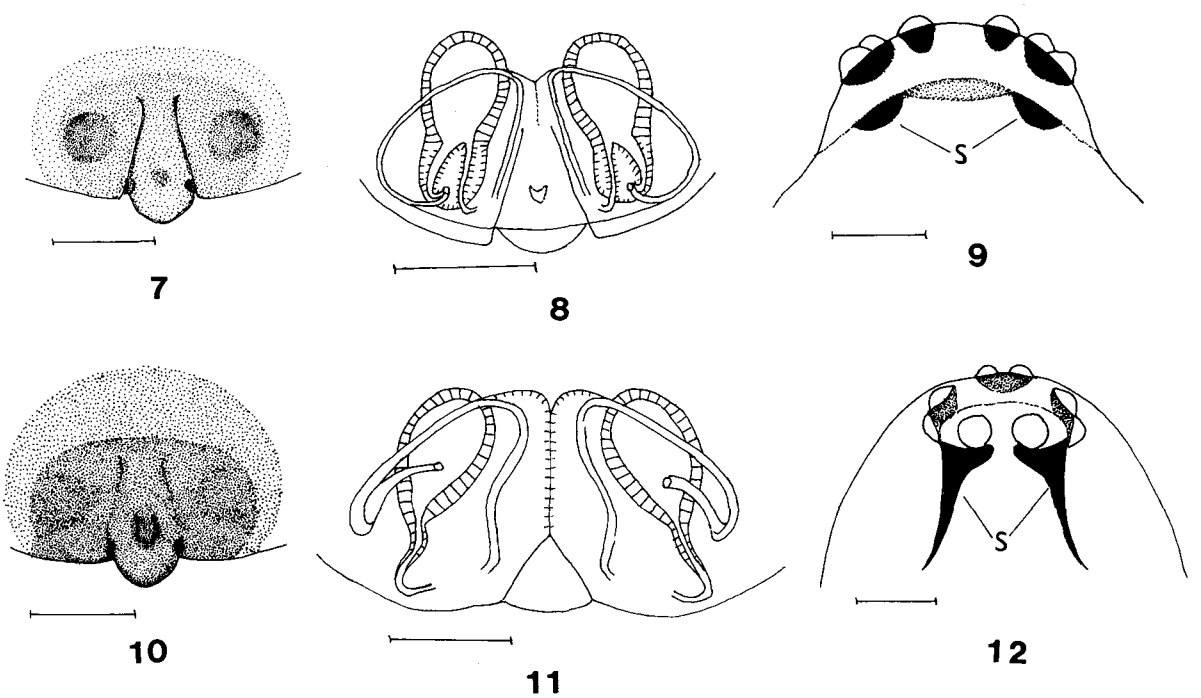
### *Blestia sarcocuon* (Crosby & Bishop), new combination
(Figs. 1–10, 13, 14)

*Oedothorax sarcocuon* Crosby & Bishop, 1927: 149 (♂ holotype from Pennsylvania, USA, 31 Oct. 1924; in AMNH, examined); *sarcocuon* is a noun.

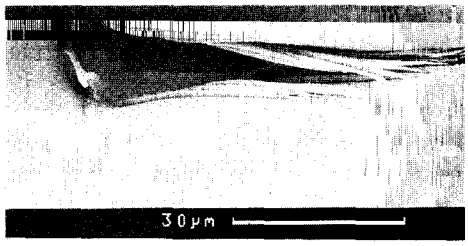
*Maso sarcocuon:* Bishop & Crosby, 1935: 232 (figs. 1a, 1b; *not* figs. 1c, 1d, which must refer to some other species). Roewer, 1942: 620. Bonnet, 1957: 2734.

*Diagnosis:* The female is diagnosed by a combination of the chaetotaxy and the epigynum (Figs. 7, 8, 10); the locality of capture must also be taken into account. The male is diagnosed by the clypeal sulci (Figs. 3, 6) and by the palp (Figs. 1,2).

*Female:* Total length 1.35–1.6. Carapace, length 0.6–0.65, yellow to brown, with narrow blackened margins; there is a tiny shallow pit below anterior median eyes.




Figs. 7–12: **7–10** *Blestia sarcocuon*. **7** Epigynum, pale specimen; **8** Epigynum, internal, dorsal; **9** Male carapace, dorsal, cleared to show outlines of clypeal sulci: **10** Epigynum, dark specimen. **11** *Baryphyma duffeyi* (Millidge), epigynum, internal, dorsal. **12** *Monocephalus fuscipes* (Bl.), male carapace, dorsal, cleared to show outlines of clypeal sulci. Abbreviation: S = sulci. Scale lines = 0.1 mm.

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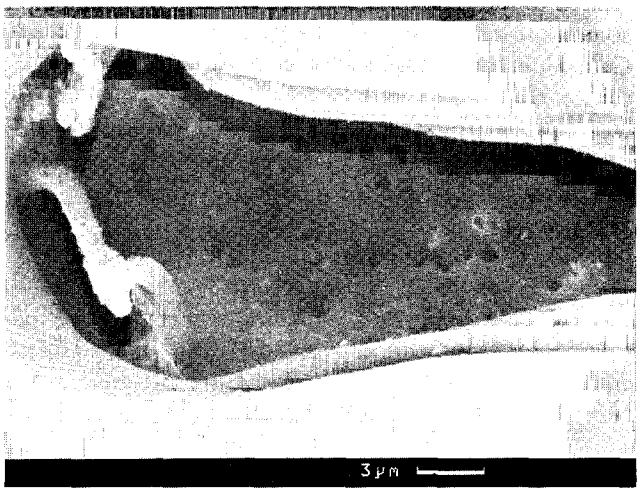


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Figs. 13–14: *Blestia sarcocuon*, male. Left sulcus, anterior view, scanning electron micrographs.

Eyes of moderate size, posteriors *c.* 1d apart. Abdomen grey to almost black. Sternum brown, heavily suffused with black. Legs pale yellow to pale brown; TmI *c.* 0.3. Epigynum (Figs. 7, 8, 10).

*Male:* Total length 1.65–1.7. Colour as female. Carapace, length 0.7–0.75, raised anteriorly (Fig. 3), with sulci on clypeus (Figs. 3, 6, 9, 13, 14). Palp (Figs. 1, 2); tibia slightly wider in the type (Fig. 4) than in the Virginian specimens (Fig. 5).

*Material examined:* Male holotype, with one male paratype, from Potters Mills, Pennsylvania, USA; 8♀, 5♂, from Otter Creek, Blue Ridge Parkway, Virginia, USA (79°27′ W, 37°34′ N), 18 Oct. 1965 (J. & W. Ivie) (in AMNH).

*Distribution:* Known only from Pennsylvania and Virginia, USA.

*Natural history:* Both sexes adult in October; habitat not known.

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