

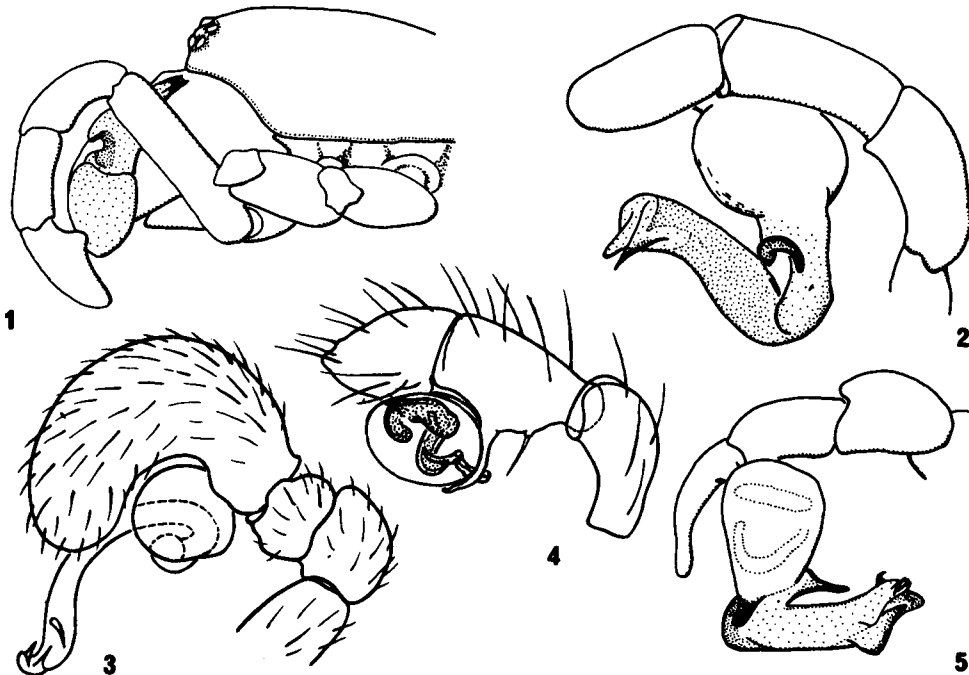
A New Genus and Species of Oonopid Spider from Colombia with a Curious Method of Embolus Protection

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The embolus of higher spiders is often long and fragile, but is protected from accidental damage by various means. In addition to protection afforded by adjacent toughened sclerites and apophyses, the delicate palpal structures are also rendered less vulnerable by being collapsed within a hollow depression on the ventral surface of the enlarged tarsus or cymbium. In contrast the palpal organs of haplogyne spiders

appear much more vulnerable, for they are rigid and cannot be withdrawn into the safety of a cup-like cymbium. Several different types of protective mechanism have evolved amongst the haplogyne spiders. In most but not all genera the embolus is short and the entire organ well sclerotised. In many species general protection is provided by the way in which the palp is carried when not in use, as shown in Fig. 1. In those species that do have a long embolus, such as the dysderid genera *Dasumia* (Fig. 2) and *Orsolobus* (Fig. 5) this structure is usually massive and well sclerotised, although that of *Scytodes* is an obvious exception. In this latter case it may be significant that the sperm duct opens near the base of the long terminal flagellum, which apparently functions as a locking device during the protracted process of copulation. In the ochyroceratid genus *Theotima* (Fig. 4) several species carry tibial apophyses that



Figs. 1-5: 1. *Dysdera crocata*, showing the resting position of the male palpal organ. 2. *Dasumia laevigata*, to show massive embolus. 3. *Caponia natalensis*, to show enlarged cymbium. 4. *Theotima moxicensis* (after Machado), to show tibial apophysis. 5. *Orsolobus chelififer*, to show massive embolus.

seem to guard the complex embolic apparatus, whilst in *Caponia* (Fig. 3) there is a tendency for the palpal organ to be almost enveloped by the hypertrophied cymbium, thus showing a degree of functional convergence with the entelegyne palp.

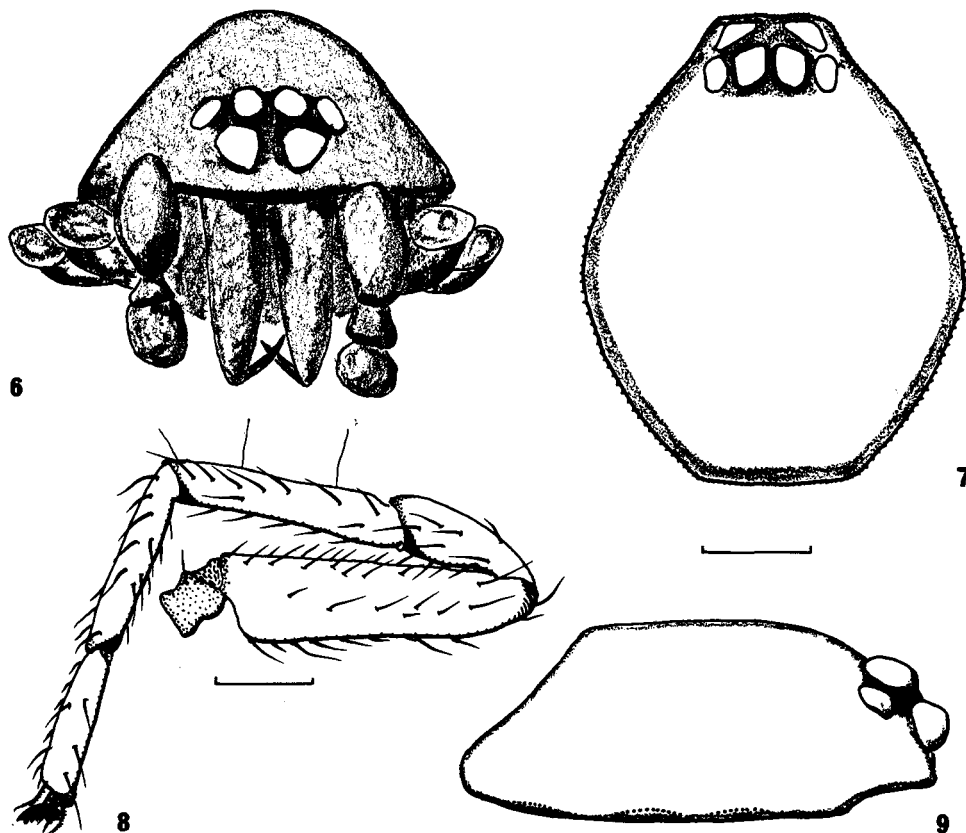
A quite different type of protective mechanism has come to light in a new species of oonopid spider from Colombia, *Marsupopaea sturmi*, described below. This curious spider, known only from a single male specimen collected by Dr. H. Sturm in the course of an ecological investigation into the fauna of the high paramos near Bogota, is most striking. In contrast to the palps of most Oonopidae, which possess short emboli, *M. sturmi* has a comparatively long, coiled embolus (Fig. 11) that is quite atypical of the family. The most striking feature, however, is the

manner in which the anterior portion of the sternum has been cut away to form a deep pouch. It is within this pouch that the long emboli are housed for protection when not in use, as shown semi-diagrammatically in Fig. 10. No comparable structure has been reported in any other spider.

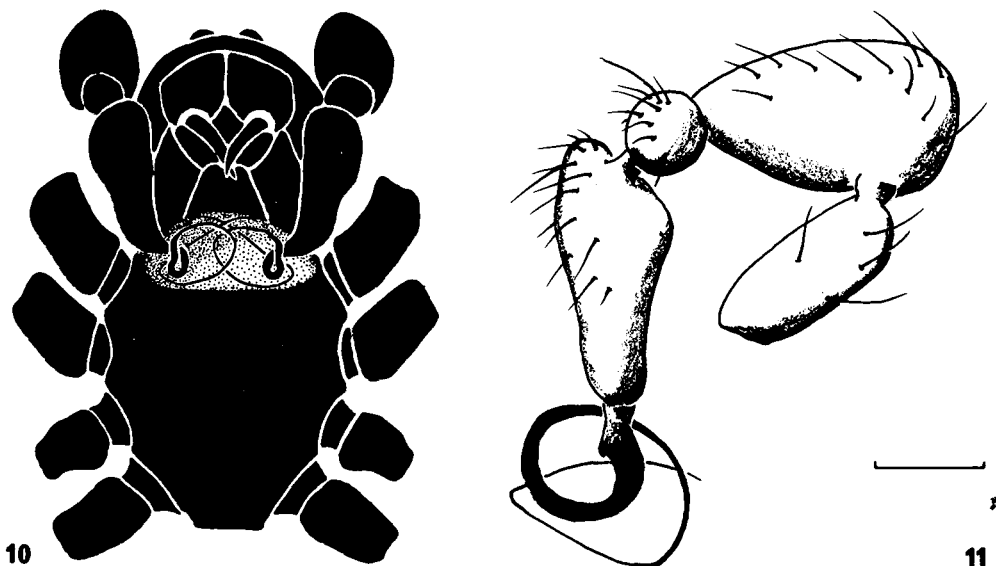
Marsupopaea, new genus

Type-species: Marsupopaea sturmi new species.

Generic characters: Abdomen totally encased by dorsal and ventral sclerites; carapace domed, quite abruptly truncated posteriorly; posterior row of eyes slightly recurved; sternum excavated anteriorly across whole width to form deep pouch; legs lacking spines;



Figs. 6-9: *Marsupopaea sturmi* gen. et sp. nov. 6. Cephalothorax from in front. 7. Carapace from above. 8. Leg II. 9. Carapace from side. Scale lines equal 0.20 mm.



Figs. 10-11: *Marsupopaea sturmi* gen. et sp. nov. 10. Cephalothorax from beneath (semi-diagrammatic) to show the manner in which the tips of the palps are inserted into the sternal pouch. 11. Left male palp from the side. Scale line equals 0.10 mm.

claws pectinate apparently in a single row; patella of male pedipalp greatly enlarged, femur small and somewhat globular.

Diagnosis: The long coiled embolus and sternal pouch set this spider clearly apart from any species described hitherto. In the form of the abdominal armour, palpal patella, raised carapace and absence of leg spines there is a strong similarity to *Opopaea* and *Gamasomorpha* (between which there is no clear distinction).

Marsupopaea sturmi, new species
(Figs. 6-11)

Description of Holotype: Body length 2.0 mm.; carapace length 0.9 mm.; carapace width 0.7 mm.

CARAPACE: reddish brown with darker border, uniformly covered in small pits and bearing a few short scattered hairs; uniformly elevated, dome-like from in front; lateral margins finely toothed; eyes six with anteriors largest, posterior row slightly recurved; clypeus width less than one-half diameter of anterior

eyes. ABDOMEN: same colour as carapace, totally enclosed by dorsal and ventral sclerites, bearing short scattered hairs more numerous ventrally. STERNUM: same colour as carapace, distinctly granular with short scattered hairs; anteriorly excavated across entire width to form protective pocket for palpal emboli. PALP: with patella much enlarged and tibia small, tarsus not clearly separated from 'bulb' and bearing long coiled embolus. LEGS: pale reddish brown and devoid of spines (first pair missing on holotype).

Material: Holotype male, COLOMBIA: Bogota, Paramo de Monserrate; 3,200 metres; May 31, 1968. H. Sturm coll. Type deposited in the American Museum of Natural History.

Etymology: The generic name reflects the possession of a sternal marsupium or pouch and the close relationship with *Opopaea*. The specific name honours the collector, Dr. Helmut Sturm of Koblenz.

Habitat: Between the leaves of *Espeletia grandiflora* H. & B. (Compositae).