A new millipede of the genus *Gonographis* from an inundation forest near Manaus, Brazil (Pyrgodesmidae)*

by

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Abstract

*Gonographis adisi* (Pyrgodesmidae, Diplopoda) is newly described from a blackwater inundation forest near Manaus, Amazonas, Brazil. The species is able to survive submersion of up to eleven months.

Keywords: millipede, Diplopoda, Neotropics, inundation, Brazil.

Resumo

*Gonographis adisi* (Pyrgodesmidae, Diplopoda), proveniente da floresta inundada, por água preta, perto de Manaus, é descrita. A espécie é capaz de sobreviver até onze meses de submersão.

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Among the Diplopoda collected by Dr. Joachim Adis during his ongoing studies of arthropods of an Igapó forest along the Rio Taramul Mirim near Manaus (ADIS 1984) and submitted to me for identification are several species of the edaphicolic family Pyrgodesmiidae. One of these is of special interest owing to its ability to survive prolonged submergence (up to 11 months), and forms the subject of a paper by Dr. Adis now in press (ADIS 1985).

Insofar as I can ascertain, this species appears to be an undescribed member of the so-far monotypic genus Gonographis SCHUBART 1945. It may be stressed, however, that knowledge of the large and multiformous family Pyrgodesmiidae is still in its infancy and the classification adopted here is subject to later modification.

Pyrgodesmiidae

Genus Gonographis SCHUBART


Type species: G. hastata SCHUBART, by monotypy.

Diagnosis: Male and female with 20 segments. Ozopores on short, inconspicuous pores on segments 5, 7, 9, 10, 12, 13, 15 - 16, and flash on paranotal surface on segments 17 - 19. Collum with ten marginal lobes. Surface of head uniform, no elevated or darkly-pigmented epicranial region. Tergal ornamentation (see HOFFMAN 1976 for nomenclature) with the usual PM and DL series of tubercles, but these not hypertrophied nor coalesced, 3rd PMs of segment 19 prolonged over base of epiproct in one species, not so in the second; five pairs of mid., int. in a single series on each side. LPs not thickened nor margin, LP 3 mostly displaced by pores on perificous segments. Legs of male not modified.

Coxae of gonopods globosely enlarged, their surface finely granulate and sparsely setose. Telepodite with transverse, densely setose prefurmer; major branch of acropodite a thin, laminate blade with rounded apex, a prominent, laterally-curved "rhiphium on anterior (oral) side at base and slender laminate-acicular selenomerite on posterior (aboral).

Distribution: The two members of this genus are known from the vicinity of Manaus (G. adisii), and from Rio de Janeiro and the interior of São Paulo (Pirassununga) (G. hastata), the latter perhaps synanthropic.

Gonographis adisii, new species

(Figures 1 - 3)


Holotype: Adult male, length ca. 6.8 mm. Coloration dorsally dirty testaceous yellow, ventrally shading into white.

Head episthognathous, distinctly flattened, epicanium with four indistinct posteriorly divergent ridges, the lateralmost two forming with the elevated genae a kind of groove into which the basal three antennomeres are accommodated. Antennae geniculate between articles 3 and 4, 6th article by far the largest. Collum subhemispherical, with ten marginal lobes, each slightly elevated distally; disk with six large conical tubercles in an irregular transverse median row, and four similar tubercles in a marginal posterior row. Surface irregularly ornamented with small granular tubercles.

Surface of pronotum and ventral parts of metazona densely microgranulate. Appearance of meta- terga as described under generic diagnosis and illustrated in fig. 1. Tubercles of series PM and DL largest, rather acutely conical, most prominent in anterior segments. Porostyles cylindrical with apex slightly flared.

Epiproct entirely exposed in dorsal aspect, series PM represented chiefly by a low short ridge and what appears to be PM 3; series DL present in marginal position, no tubercles enlarged and apex of segment this completely visible in dorsal aspect.

Legs unmodified, tarsi distinctly narrower than tibiae.

Gonopods large, of the form described in the generic diagnosis and illustrated in figs. 2 and 3. Paratype: Adult female, length ca. 8.0 mm, similar to male in coloration and details of tegral sculpture, except tubercles somewhat less prominent and acute. Sterna a little wider than in male, and paranota relatively smaller.

Remarks: G. adisii agrees rather closely with the type species G. hastata in gonopod structure, but differs in details of telepodite form such as the much broader prefurmer process and the large recurved apical spine. A major difference in external form is the enlarged condition of PM 3 of segment 19 in G. hastata which projects caudally enough to mostly conceal the epiproct.

G. hastata was first discovered in Tijuca, Distrito Federal, and later in cultivated areas around Pirassununga, S. P. SCHUBART (1944) considered it to be probably synanthropic. It would be interesting to test this species for any innate ability to resist submergence.

Although Gonographis and G. hastata are first published as new taxa in 1945, the names appeared one year earlier (August 1944) in a study of the diplopods of Pirassununga.

References


Fig. 1 - 3:
Gonographis adit spec. nov.
1: Segments 10 and 11, dorsal aspect, showing location of porestes, texture of prozona, and
arrangement of tubercles. 2: Left gonopod, oral (anterior) aspect. 3: Left gonopod, aboral (posterior)
aspect. — Drawings from male paratype.