

**MESOCNEMIS TISI SPEC. NOV., A NEW PLATYCNEMIDID
FROM LIBERIA, WEST AFRICA
(ZYGOPTERA: PLATYCNEMIDIDAE)**

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The new sp. is described and illustrated from several ♂, taken in the lowland rainforest of Liberia (holotype ♂: Sinoe R., nr Juarzon, 28-II-1987; to be deposited in MNHN, Paris), and some notes on its biology are provided.

INTRODUCTION

During my studies on the Odonata of the lowland rainforests of Liberia (LEMPERT, 1988), I collected a platycnemidid, which turned out to be a new member of the genus *Mesocnemis*. It is described here as *M. tisi* sp.n.

MESOCNEMIS TISI SPEC. NOV.

Figures 1-3

Material. — **Holotype** ♂: Liberia, Sinoe R., nr Juarzon, 28-II-1987; to be deposited in MNHN, Paris; — **Paratypes**: 2 ♂, same data as holotype; — 2 ♂, Ni Dwe, nr Juarzon, 2/3-III-1987; all in Author's coll.

Etymology. — The new species is named after my brother, Matthias L e m p e r t, with whom I undertook the first collecting trip to the forests of Liberia.

MALE (holotype). — **Head** — Labium pale brown, with traces of white-blue pruinosity. Labrum dark brown, surrounded by an irregular lightbrown border, a central depression fused to the base of the labrum coloured black. Genae and anteclypeus dark brown; postclypeus black, on basal two thirds with pruinosity. Frons, dorsal surface and rear of head black, overlaid with pruinosity. Eyes in life dark blue.

Thorax. — Prothorax black, completely pruinose, synthorax black, thinly

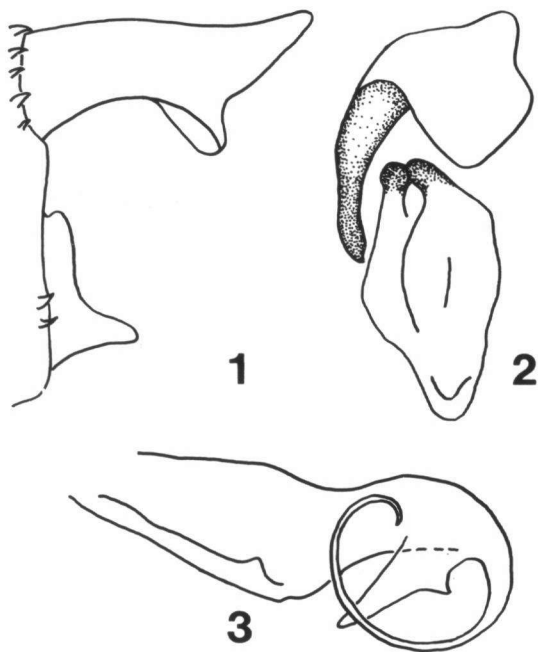
covered with pruinosity, which is more pronounced on metepimeron and metinfraepisternum. Venter brown, strongly pruinose.

Legs. — Coxae black, covered with pruinosity. Trochanters and bases of femora pale brown, the other parts of legs black. Femora and tibiae internally with pruinosity.

Wings. — Hyaline, very lightly tinged with brown. Pterostigma dark red-brown. Arculus distinctly proximal to second antenodal crossvein in hind- and forewing. 18 postnodal crossveins in left forewing, 18th not continuous to M_1 ; 19 in right forewing, 17th and 19th not continuous. In left hindwing 17 postnodal crossveins, the 17th not continuous; 18 in right hindwing, 15th and 18th not continuous to M_1 .

Abdomen. — Mainly dark brown to black, with a fine, pale brown mediodorsal strip reaching from segment 3 to middle of segment 8. Ventral margin of segment 2 and basal parts of 1-6 brown. Segment 9 dorsally strongly pruinose. Segment 1, 8 and 10 covered with thin pruinosity. Apical margin of 10 with dorsal and lateral excavation and with few short stout spines. Anal appendages black with traces of pruinosity. Superior appendages longer than dorsal length of segment 10.

Superior appendages in dorsal view almost oval, terminating in a conical, pointed tip. They are strongly excavated ventrally, in lateral view (Fig. 1) the excavation ends with a broad lip. The inner base is drawn out into a long projection ending with a small downturned hook (Fig. 2). This projection is hidden by the inferior appendages and becomes visible when the superior appendages are moved outward. The inferior appendages are compact, slightly concave dorsally and with two well developed dorsobasal tubercles (Fig. 2). Prophallus with slender ligula and long flagella (Fig. 3).



Figs 1-3. *Mesocnemis tisi* sp.n.: (1) Appendages in left lateral view; — (2) Right appendages in caudal view; — (3) Prophallus in left lateral view.

Measurements (mm). — Abdomen (incl. app.) 35.0, — hindwing 25.5.
FEMALE unknown.

DISCUSSION

Mesocnemis tisi sp.n. can be easily differentiated from the other members of the genus — *M. dupuyi* Legrand, *M. robusta* (Selys) and *M. singularis* Karsch — by the form of the appendages and the prophallus (cf. figs in SCHMIDT, 1951, PINHEY, 1980; LEGRAND, 1982). Remarkable is the limited extension of pruinosity compared to other *Mesocnemis* spp., so in the field the main impression is of a black-blue instead of a white-blue coloration; further observations will have to reveal whether this is age-dependent.

BIOLOGICAL NOTES

The new species was found at two locations, rivers of 15 m and 60 m width, the smaller being a tributary to the other. At the larger river *M. tisi* sp.n. occurred sympatrically with *M. singularis*. Both species seemed to prefer different microhabitats.

M. singularis occurred in sunny parts, mainly on the fully insolated rocks in the middle of the river, while *M. tisi* sp.n. was found on shaded perches at the bank under overhanging trees. The different extension of pruinosity in the two species might be correlated with these habitat preferences (cf. PAULSON, 1983).

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REFERENCES

- LEGRAND, J., 1982. *Elatoneura pluotae* spec. nov. (Protonneuridae) et *Mesocnemis dupuyi* spec. nov. (Platycnemididae), Zygoptères nouveaux du Sénégal. *Odonatologica* 11: 153-158.
- LEMPERT, J., 1988. *Untersuchungen zur Fauna, Ökologie und zum Fortpflanzungsverhalten von Libellen (Odonata) an Gewässern des tropischen Regenwaldes von Liberia, Westafrika*. Dipl.-Arb. Univ. Bonn.
- PAULSON, D.R., 1983. A new species of dragonfly, *Gomphus* (*Gomphurus*) *lynnae* spec. nov., from the Yakima River, Washington, with notes on pruinosity in Gomphidae (Anisoptera). *Odonatologica* 12(2): 59-70.
- PINHEY, E.C.G., 1980. A review of the *Metacnemis* group (Odonata: Platycnemididae). *Arnoldia* 9(2): 1-13.
- SCHMIDT, E., 1951. Über neue und weniger bekannte afrikanische Platycnemididen (Odonata). *Mitt. münch. ent. Ges.* 41: 217-240.