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# *MACROTHEMIS NEWTONI* SPEC. NOV., A NEW DRAGONFLY FROM BRAZIL (ANISOPTERA: LIBELLULIDAE)

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The new sp. is described and figured from a single ♂ (Manas, Amazonas, XI-1959), deposited in Museu Nacional, Rio de Janeiro. It fits well in the tesselata group of F. RIS (1913, *Collns zool. de Selys-Longchamps* 15: 837-964, pl. 7 excl.) and is separated from the other spp. by the colour pattern of the metepisternum and metepimeron, the distribution of abdominal spots, the shape of the hamules, the number of spines of the hind femora and the morphology of the appendages.

## INTRODUCTION

The group in which *Macrothemis* is included ("group IX", Ris 1913; — "Macrothemini", Needham & Broughton, 1927; "Zygonictinae", Fraser, 1957) is characterized by showing the nodus of the fore wing clearly distal to the middle, and by the greatly developed anal loop of the hind wing, far away from the triangle (Fig. 1). Those characters, according to Ris (1913), have parallels in his "group VIII" (Tritheminae).

Of the 42 species of *Macrothemis,* 27 were reported from Brazil. *M. imitans* Karsch, 1890 is the most widespread and most common from northern (Amazonas) to southern (Rio Grande do Sul) states, Brazil.

*Macrothemis newtoni* sp. n. fits perfectly in the *tesselata* group, along with *M. tesselata* (Burmeister, 1839), *M. inequiunguis* Calver, 1895, *M. valida* Navas, 1916, *M. brevidens* Belle, 1983 and *M. aurimaculata* Donnelly, 1984, characterized by the apex of the claw longer than the tooth (Fig. 6), and by the squarish shape of the spines of hind femora (Fig. 5).

This new species is distinguished from the others by the colour pattern of the

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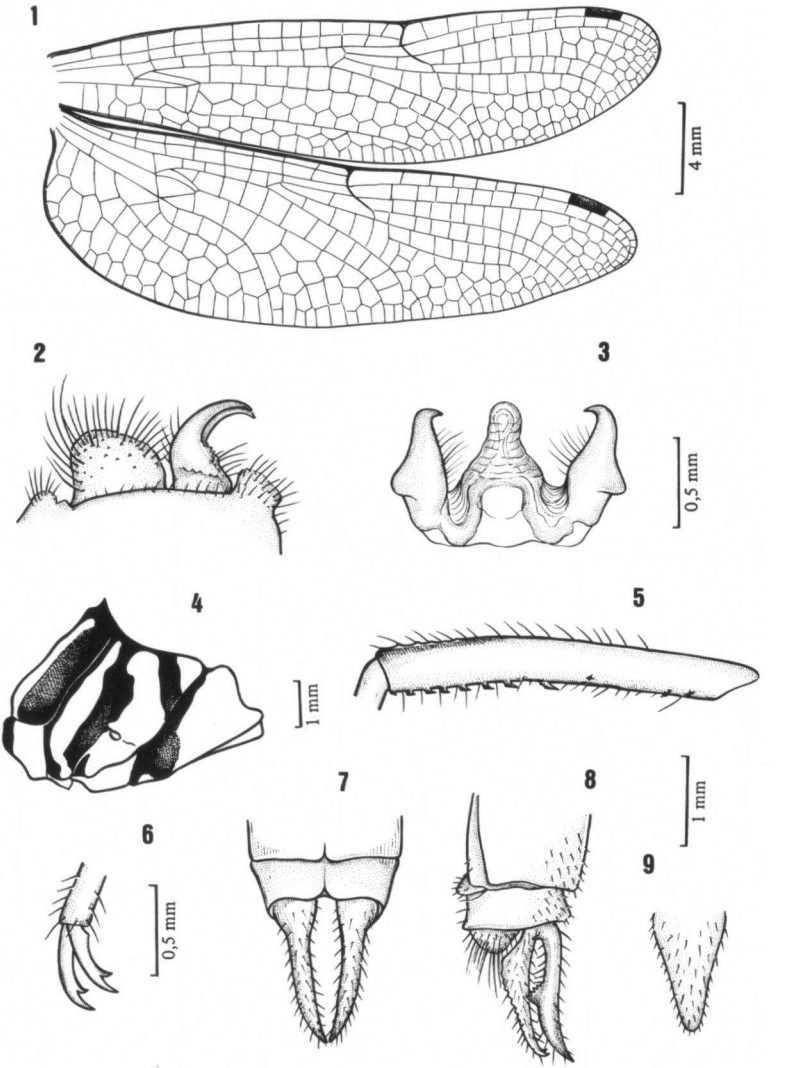
metepisternum and metepimeron (Fig. 4), the distribution of spots on the abdominal segments, the shape of the hamules (Figs 2-3), the number of spines of the hind .femora (Fig. 5) and the morphology of the terminal appendages (Figs 7-8).




Figs 1-9. *Macrothemis newtoni* sp. n., holotype ♂ (Amazonas, Manaus): (1) Venation; — (2) Male genitalia, lateral view; — (3) Hamulus, dorsal view; — (4) Pterothorax, lateral view; — (5) Hind femur; — (6) Hind tarsal claws; — (7) Abdominal appendages, dorsal view; — (8) same, lateral view; — (9) Inferior appendage.

## *MACROTHEMIS NEWTONI* SPEC. NOV.

Figures 1-9

Material. — Holotype ♂, Manaus, Amazonas, Nov. 1959, P. Elias leg.; depostited in Museu Nacional, Rio de Janeiro.

Etymology. — "Newtoni", substantive, proper noun, in the genitive of the second declination Latin, in homage to the late Dr Newton Dias dos Santos.

Coloration. — Head: Labrum yellow with black apical and lateral edges; labium yellow with black inner edge; clypeus olive-yellow; vertex dark brown

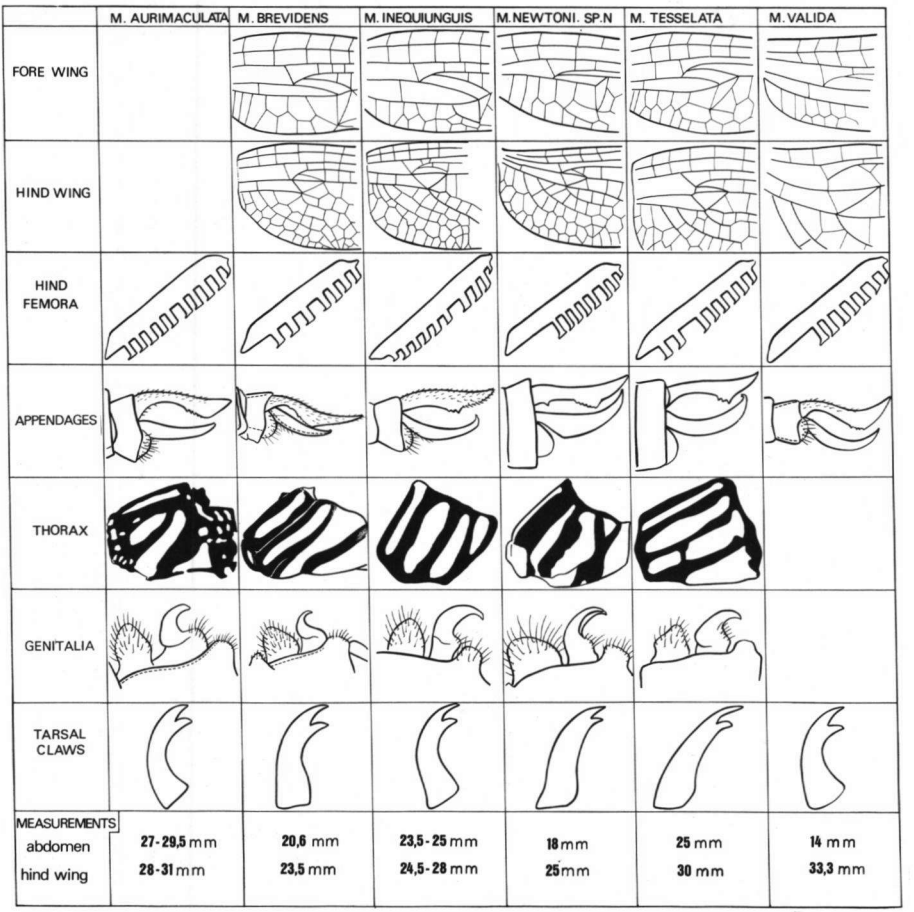



Fig. 10. Morphological features of the species in the *tesselata* group.

with a glitter. Clypeus, frons and vertex covered with short dark bristles. — Pterothorax: Dark brown with longitudinal greenish stripes distributed as follows; mesepisternum with detached longitudinal stripes, sharp-pointed anteriorly and abruptly widened posteriorly, covered with light-brown bristles, irregularly distributed, more thickly grouped in proximal part; mesepimeron with wide, club-like stripes, narrowed at apical end; metepisternum with broad stripe, occupying almost all the sclerite, except for the apical part, with a greenish spot on the ventral margin of sclerite; metepimeron with broad stripe occupying all the sclerite; coxa and trochanter yellowish-brown; femora, tibiae and tarsi blackish; wing hyaline, slightly shaded in yellow at the base; pterostigma dark brown. — Abdomen: First and second segments light brown; third segment dorsally black and latero-ventrally light brown; fourth to tenth segments black, with small light spots laterally (that of seventh larger than of sixth and smaller than of fifth); terminal appendages dark brown.

Venation. Antenodals, fore wings 13, right hind wing 8, left hind wing 9 (eight incomplete); postnodals, right fore wing 6, left 7; triangle free in both fore and hind wings; subtriangle with one cell; Rspl with 7 cells in each wing; without extra Br; arculus in fore wing next to second Ax; in left hind wing next third Ax; in right hind wing situated between second and third Ax; discoidal field of fore wing parallel, with two rows of cells from the triangle to the subterminal area; in the hind wing broadening from third cell, with a double row of cells, followed by a triple and a quadruple row, ending in the wing margin with eight cells; one Ac present in all wings; anal loop foot-shaped with its distal part about three cells beyond the triangle level; sole of anal loop with three cells; Cup and A slightly separated at their origin; between the anal loop and the margin of the wing, one and a half cells present at the triangle level, the same at Ac level.

Other characters. — Hind femora armed with 8 square spines with recurved points; median femora with a series of 6 sharp spines, pointed to the terminal part of the femoral joint; tarsal claw with inner spine smaller than outer. — Hamules slightly widened at base and narrowed at distal part, with terminal hook somewhat curved; distal part with same length as basal part; genital lobe rounded. — Superior appendage with apex cylindrical, with proximal borders not parallel; median ventral region swollen, armed with several teeth; distal part pointed; inferior appendage triangular, reaching the subterminal extremity of the superior appendage. — Abdomen cylindrical in median part; segments 7-9 swollen.

Measurements (in mm). — Total length (without appendages) 30.0, superior appendage 1.5, inferior appendage 1.0, fore wing 27.0, hind wing 25.0, pterostigma 1.0, abdomen (without appendages) 18.0.

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