

***NEOCORDULIA MATUTUENSIS* SPEC. NOV. FROM BRAZIL
(ANISOPTERA: CORDULIIDAE)**

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The new sp. (♂ holotype: Aiuruoca, Minas Gerais, Brazil, 30-XII-1999; deposited in A.B.M. Machado collection) is described. It differs from all the congeners by having the sternal protuberance of segment 8 conical whereas in other spp. it is either absent or biconical.

INTRODUCTION

It is well known that, except for some species of *Navicordulia* (MACHADO & COSTA, 1995) the neotropical Corduliidae are rare in the field, scarce in collections and poorly represented in South America. Out of 36 species of Corduliidae (COSTA & SANTOS, 2000a) known to occur in the neotropical region, 10 belong to the genus *Neocordulia*, 6 of which are part of the Brazilian fauna as recorded by SELYS (1871, 1874, 1882), MARTIN (1906), SANTOS (1967, 1968), MAY (1991) and COSTA & SANTOS (2000b). To these we add now *N. matutuensis* sp. n. from Aiuruoca, south of Minas Gerais State.

***NEOCORDULIA MATUTUENSIS* SP. NOV.**

Figures 1-4

Material. – **Holotype** ♂: BRAZIL: Minas Gerais, Aiuruoca, Matutu Valley, 30-XI-1999 (at 3 p.m.), P.A. Machado & M. França leg.; deposited in the collection A.B.M. Machado, in Belo Horizonte.

Etymology. – *matutuensis* is a reference to the type locality, the Matutu Valley.

MALE (holotype). – **Head.** – Labium, labrum yellowish. Remaining parts

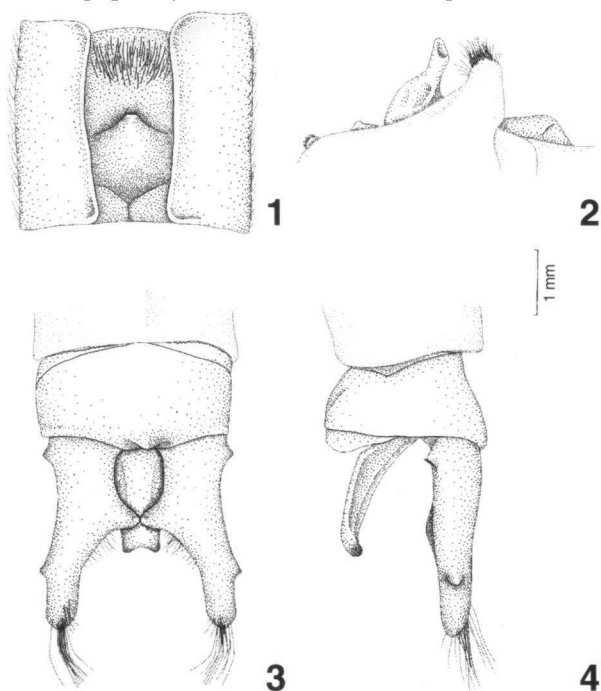
of face olive brown. Occipital triangle dark brown, frons divided by a deep median furrow with facets flattened.

T h o r a x . — Prothorax brownish yellow. Pterothorax brown, covered with yellowish pilosity with bright metallic green areas on the antero-superior part of the mesepisternum, the whole mesepimeron, the lateral part of the metepimeron and the extreme upper part of the metepisternum. Femura brownish with the distal third or fourth black. Tibiae black except for the keels that are yellow. Tarsi black. Protibiae and mesotibiae keels occupying their distal half. That of the metatibiae occupying almost their entire length.

Wings hyaline slightly suffused with yellow, venation black, pterostigma dark brown. Venation: Antenodals in forewings 9-10; in hindwings 7. Postnodals in forewings 7-8; in hindwing 9. Triangles, subtriangles and supratrangles free in fore and hindwings. Anal triangle with 2 cells. Anal loop with 14 cells. Cubito-anal crossveins in forewings 1; in hindwings 2. Discoidal field in the fore and hindwings with two rows of cells for a distance of 4 cells increasing to 11 rows at the margin. Rsp1 and Mspl poorly defined. Arc in forewing at one fourth of the distance between

the 1st and 2nd antenodal or slightly proximal to that; in hindwing slightly proximal or coinciding with the 2nd antenodal. Bridge crossveins in forewings 2; in hindwings 1-2. One row of cells between MA and R4+5 in FW and HW. MA slightly undulate in FW, not undulate in HW.

A b d o m e n . — Segments 1-3 and proximal half of 4 reddish brown; distal half of 4 and 5-8 dark; 9-10 reddish brown; lateral tergal areas of segments 5-8 with yellowish hairs forming pilose areas more conspicuous on segment 7. Segments



Figs 1-4. *Neocordulia matutuensis* sp. n., holotype ♂: (1) abdominal segment 8, ventral view, showing the cone-shaped sternal prominence and the pilose area; — (2) genitalia of segment 2, lateral view; — (3) anal appendages, dorsal view; — (4) same, lateral view.

7-8 strongly widened and depressed dorsoventrally. Anterior half of the sternum of segment 8 with a conic protuberance (Fig. 1); distal part with a pilose area. Segment 10 with middorsal keel vestigial except for a blunt apical tooth. Superior appendages (Figs 3-4) brown with the apex dark, in dorsal view provided with a very large mediobasal projection, (Fig. 3). Apex straight and provided with a prominent tuft of distal setae (Figs 3-4). In dorsal (Fig. 3) and lateral view (Fig. 4) there is a small basal tubercle and another at $\frac{3}{4}$ length (Figs 3-4). Inferior appendage much shorter than the superior (Fig. 3-4). Genitalia of 2nd segment (Fig. 2) with the genital lobe rounded and bearing dense stiff hairs. Internal branches of hamules broad, bearing no tooth. External branch elongated with the tip higher than the genital lobes (Fig. 2).

Measurements (mm). — Abdomen with appendages 41.2. Forewing length 36.3. Forewing base to nodus length 20.2. Hindwing base to nodus length 16.4. Forewing pterostigma length 2.3. Hindwing length 36.2. Hindwing pterostigma length 2.4. Posterior femur length 8.6. Eye seam length 0.9.

DISCUSSION

N. matutuensis sp. n. belongs to the Gomphomacromiinae as defined by GEIJSKES (1970) and has all characters given by GEIJSKES (1970) and MAY (1991) for the genus *Neocordulia*. This genus has been divided by MAY (1991) into two subgenus, *Neocordulia sensu stricto* and *Mesocordulia*. The species of *Neocordulia* have a prominent biconical protuberance on the sternum of abdominal segment 8 and a ventro-basal tooth on the superior appendages, whereas those of *Mesocordulia* have no sternal protuberance or ventro-basal tooth on the appendage. *N. matutuensis* belongs to *Neocordulia: strictu sensu* but the sternal prominence of segment 8 is shaped like a cone, not a double cone as in all the other species of the subgenus. In spite of that, I regard it as belonging to the subgenus *Neocordulia* whose definition needs to be expanded to accommodate species like *N. matutuensis*, in which the prominence of the sternum of segment 8 is shaped as a cone. Thus, couplet 1 of MAY's key (1991) to the genus *Neocordulia* should be modified as follows: "sternum of abdominal segment 8 with prominent conical or biconical protuberance". *N. matutuensis* will then key out to couplet 5 being closer to *N. setifera* (Hagen in Selys, 1871) than to *N. valxemi* (Selys, 1874). Besides the already mentioned shape of the sternal prominence of segment 8, it differs from *setifera* by having the apex of the superior appendage straight (convergent in *setifera*), by the presence of a lateral tubercle at $\frac{3}{4}$ length of the superior appendages (absent in *setifera*), by the external branch of the hamule extending beyond the genital lobe (about equal in *N. setifera*) and by the internal branch with no tooth (with a single prominent tooth in *setifera*). The finding in *N. matutuensis* of pilose areas on the lateral tergal part of abdominal segments 5-8 deserves further considerations. The presence of specialized pilose structures on the abdomen of neotropical Corduliidae has been studied by MACHADO

& COSTA (1995). Besides the pilose complex of genus *Navicordulia*, specialized pilose structures were reported to occur on the ventral tergites and sternites of abdominal segment 8 in *Aeschnosoma*, and on the sternites of *Neocordulia*. It seems, however, that the presence of these structures on the lateral tergal areas of segments 5-8 as now described for *N. matutuensis* had never been reported on neotropical cordulines. Thus, it is also a character that distinguish this species from all other species of the genus. Based on the male superior appendages MAY (1991) distinguished 2 species groups in the subgenus *Neocordulia*. One group includes *N. androgynis* (Selys, 1871), *N. biancoi* Racenis, 1970 and *N. carlochagasi* Santos, 1967. The other group includes *N. setifera*, *N. volxemi* and *N. mambucabensis* Costa & Santos, 2000b. *N. matutuensis* belongs to the second group, being closer to *N. setifera*.

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