

**BRECHMORHOGA LATIALATA SPEC. NOV. FROM MEXICO  
(ANISOPTERA: LIBELLULIDAE)**

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The discovery of a new species of *Brechmorhoga* from the states of Hidalgo and Veracruz, Mexico, gives a total of 8 spp. of that genus in Mexico. The new sp. (holotype ♂: Veracruz state, Puente Texolo, Mpio. de Teocelo 1150 m 24-VII-1983; allotype: same data as holotype but 23-VII-1983, deposited at CNIN, UNAM) is closely related to *Brechmorhoga rapax* Calvert from which it is easily differentiated by the wide anal area of the hind wing and the pattern of abdominal maculation, among other characters.

INTRODUCTION

The neotropical dragonfly genus *Brechmorhoga* is constituted by 14 species (BRIDGES, 1993). Members of the genus are remarkably similar in morphology and coloration, being dark brown bodied anisopterans with a pattern of green or yellowish-green maculation. In Mexico, the genus is represented by seven species (GONZALEZ & NOVELO, 1996), all inhabitants of lotic habitats. They, along with members of the closely related genus *Macrothemis*, are among the commonest libellulids inhabiting running waters in tropical and subtropical areas of Mexico.

**BRECHMORHOGA LATIALATA SP. NOV.**

Figures 1-5

**Material.** – **Holotype** ♂: MEXICO: Veracruz state: Puente Texolo, Mpio. de Teocelo 1150 m 24-VII-1983 (E. Gonzalez S.); – **allotype** ♀: same data as holotype but 23-VII-1983. Both held at Colección Nacional de Insectos (CNIN), Universidad Nacional Autónoma de México. Additional material (12 ♂♂, 3 ♀♀ **paratypes**) same data but: –12-VIII-1980 (R. López P.) 2 ♂♂; –24-VII-1983 (E. González) 2 ♂♂ 1 ♀; –25-VII-1983 (E. González) 2 ♂♂; –26-VIII-1988 (E. González) 1 ♂; – El Trapiche, Mpio. de Teocelo, 1100 m., 7-VI-1980 (R. López y A. Garcés) 1 ♂ 1 ♀; – Parque Javier

Clavijero, Jalapa, 1320 m., 5-VIII-1981 (R. López) 1 ♂; – same locality but 16-VIII-1983 (E. González) 1 ♂. Hidalgo state: Río Zacuala, Pemuxtitla, 1000 m., 20-IV-1984 (R. Novelo, V. García & J. Peña) 1 ♂; – same locality but 22-IV-1984 (R. Novelo, V. García & J. Peña) 1 ♂; same but 22-V-1984 (J. Peña) 1 ♂. Paratypes to be placed at Colección de Insectos, Instituto de Ecología, Jalapa (IEXA), and National Museum of Natural History, Washington, D.C.

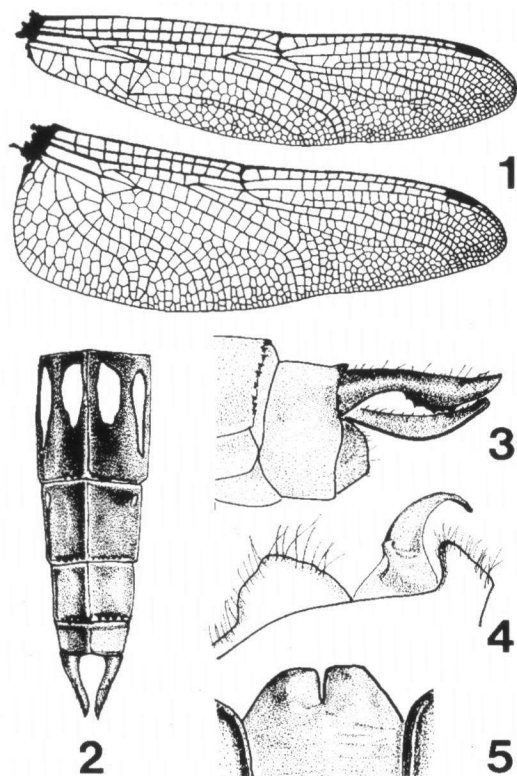
**Etymology.** – From the Latin: *latus*= broad and *alatus*= wing, referring to the unusual wide anal area of the hind wing.

**MALE (Holotype).** – **Head.** – Labium pale brown with central dark brown spot at middle portion; basal half of mandibles pale brown, apical half glossy reddish brown; labrum black with pair of laterobasal pale spots, clypeus and genae grayish; frons nearly black, with metallic blue reflections except at sides and along frontoclypeal suture, with a deep median sulcus; vertex same color as frons, with

pair of lateral subconical tubercles; occiput dark brown with black hairs, rear of head dark brown.

**Thorax.** – Prothorax pale brown, unspotted, posterior lobe low and rounded; pterothorax dark brown, patterned with pale green as follows: mesepisternum with a «7» shaped stripe on each side, mesepimeron with longitudinal stripe on its median portion; metepisternum with traces of green near antealar sinus and below metastigma, with a small stripe above metastigma; metepimeron with long longitudinal stripe slightly expanded dorsally.

Wings (Fig. 1): Venation and pterostigma black, nodal formula: 12:17 1/2-17 1/2:13 fore wing (FW) and 14:13/14:15 in hind wing (HW), discoidal index (DI)= 1.26. Forewing triangle two-celled, internal triangle three-celled; discoidal field beginning with three rows of cells, in hindwing beginning



Figs. 1-5. *Brechmorhoga latialata* sp. n.; (1) right pair of wings (paratype); -(2) abdominal maculation of segs. 7-10 (holotype); -(3) abdominal appendages, left profile view (holotype); -(4) accessory genitalia, right profile view (holotype); -(5) vulvar lamina of allotype.

with two rows increasing to three after a distance of two cells. Anal field wide, with four rows of cells at level of  $A_2$  and anal angle of wing; MSPL in forewing with double row of cells occupying a space of 5-6 cells.

Legs: Coxae, trochanters and anterior portion of femora pale reddish brown, remainder black; prothoracic legs black with pale grayish green stripes on internal surface of trochanters and femora; third femora with 20 (R) and 21 (L) short squarish spines, their proximal corner pointed and directed proximally.

**A b d o m e n.** – Black, patterned with pale green on each side as follows: segment 1 pale laterally; segment 2 with four spots, one lateral before transverse carina (TC) and two after TC, a fourth spot just above ventral carina (VC); segments 3-4 with two lateral spots before TC and two elongated spots after TC; segment 5 with a small dorsolateral spot before ill-defined TC and one elongated spot after TC; segment 6 with traces of a dorsal green spot; segment 7 with two large spots (Fig. 2), one dorsolateral and one elongated above lateroventral carina (LVC); segments 8-10 dark, with only a tiny anterolateral spot in 8. Abdominal appendages black, shaped as in Figure 3; superior appendages with inferior row of seven denticles, inferior appendage nearly as long as superior appendages. Accessory genitalia as in Figure 4.

**M e a s u r e m e n t s** (in mm). – Total length (incl. apps) 49.4, abdomen (incl. apps) 33.9, hind wing 42.2, cerci 2.0, epiproct 1.7.

**FEMALE (Allotype).** – Coloration similar to male but: abdominal segments 4 and 5 with similar maculation pattern; abdominal segment 6 with traces of basal spots and with elongated spot above LVC. Vulvar lamina (Fig. 5) 0.20 length of sternum of abdominal segment 9, with deep median excision and rounded lobes. Third femora with outer row of 14 stout spines gradually increasing in length towards knee. Wings with 13:18/17:13 (FW) and 15:12/13:17 (HW).

**M e a s u r e m e n t s** (in mm). – Total length: 49.9 (incl. apps), abdomen 35.0, hind wing 43.9, cerci 1.3.

**VARIATION.** – Paratype males: total length 45.2-51.1, abdomen 32.2-36.1, hind wing 42.2-45.0, cerci 1.8-2.3, epiproct 1.6-1.9. Two males have the two spots on each side of abdominal segment 7 fused, but still constricted across midline. Paratype females: total length: 48.3-51.0, abdomen 33.1-36.1, hind wing 43.3-45, cerci 1.1-1.2.

## DISCUSSION

*Brechmorhoga latialata* is similar to the closely related *B. rapax* Calvert. However, the former can easily be distinguished by the unusual wide basal area of the hind wing of both males and females (four rows of cells vs three). Also, in the new species there are two distinct spots on each side of abdominal segment 7, or at least a constriction that tends to split this single spot into two. In *B. rapax* (at least in *B. rapax crocosema* Ris) (RIS, 1913) there is only one lateral yellow (instead of green) spot on each side of this abdominal segment. Finally, individuals of the new spe-

cies have abdominal segments 3-4 less constricted than *B. rapax*.

**BIONOMICS.**— Members of *Brechmorhoga* as well as those of the closely related genus *Macrothemis* are an important component of stream and river faunas in tropical and subtropical localities of Mexico, and the rest of the Neotropics. Individuals of *B. latialata* were captured while patrolling back and forth along a small seepage in inclined terrain at Puente Texolo (males), or while perched on nearby vegetation (males and females). The seepage drains into a fast running river within a few meters. At this river, male *Brechmorhoga pertinax* Hagen were commonly seen at high numbers defending territories along the shore. Some individuals of the less common *B. tepeaca* Calvert were seen as well. *B. latialata* was never collected at the fast flowing river, and were apparently restricted to the seepage microhabitat. Other odonates collected at this microhabitat were *Paraphlebia zoe* Selys and individuals of an undescribed species of *Palaemnema*.

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