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LEPTOBASIS MELINOGASTER SPEC. NOV., A NEW SPECIES FROM MEXICO (ZYGOPTERA: COENAGRIONIDAE)

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The new sp. is described, illustrated and compared with *Leptobasis vacillans* Hag. in Sel. and *L. candelaria* Alayo. A key to separate ♂♂ of Mexican and Central American spp. of *Leptobasis* is provided.

INTRODUCTION

The genus *Leptobasis* Sélys,1877 is represented in Mexico by the common and widespread *L. vacillans* Hagen in Sélys, 1877 and by the rare and locally distributed *L. candelaria* Alayo, 1968. Collections around the Biological Preserve of Chamela, Jalisco (19°30'N, 105°00'W) yielded the first male of an undescribed species of this genus representing the third species recorded for Mexico and Central America, and the seventh of the genus *Leptobasis* in America (PAULSON, 1982; GARRISON, 1991; GONZALEZ & NOVELO, 1996).

For consistency with previous works the notation used here for terminology of veins follows WESTFALL & MAY (1996).

LEPTOBASIS MELINOGASTER SP. NOV.

Figures 1-6

M a t e r i a l. – **Holotype** ♂: MEXICO: Jalisco state, Estación de Biología Chamela (19°30'N, 105°00'W), 5-VII-1984 (R. Ayala leg.); **paratype** ♂: Oaxaca state, along Rt 175, N of La Soledad (15°58.99' N, 96° 31.421'), 24-VI-2000 (Karl Kjer leg.). Material is deposited at Colección Nacional de Insectos (CNIN), Instituto de Biología, UNAM.

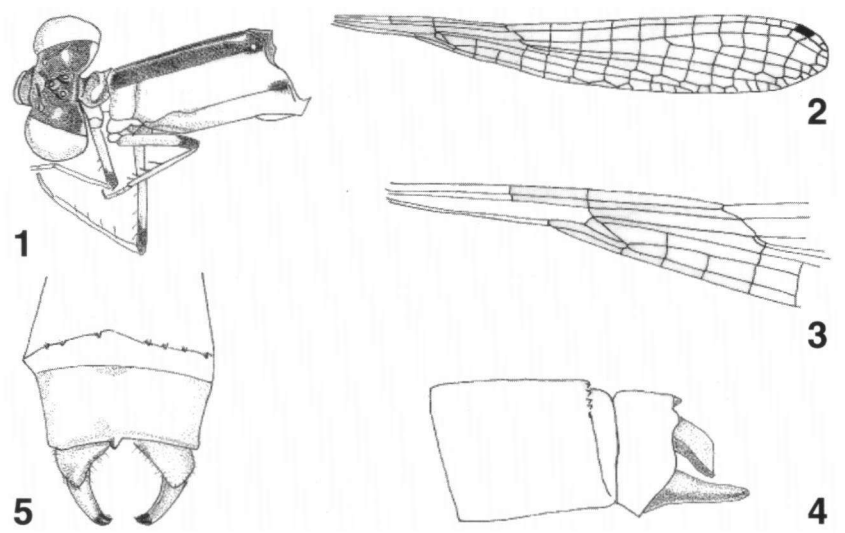
Etymology. – From the latin "melinus" or yellow-honey colored, refering to the coloration of dorsum of last three abdominal segments.

MALE (**holotype**). – Head. – Labrum dirty green with narrow pale line on distal margin; anteclypeus and genae yellow-green; postclypeus, frons and vertex dark brown with slight cupreous luster and small pale reddish-brown spots situated laterally at both sides of lateral ocelli, a small narrow transverse pale stripe between vertex and occipital margin; labium pale ivory, rear of the head pale, this pale coloration partially extends dorsally above and to sides of occipital margin but not forming typical pale postocular spots.

Thorax. – Dorsum of prothorax pale, sides pale green with two dark-green middorsal stripes, dorsum of pterothorax brown with two narrow green middorsal stripes each gradually widening at its upper end, sides green, darker in area of mesepimeron and metepisternum, dark brown spots on metapleural fossae (Fig. 1), venter of thorax pale, with a touch of brown medially.

Legs pale excepting distal parts of femora and spines which are black, tarsi pale excepting black claws, supplemental teeth on tarsal claws reduced.

Wings hyaline, venation and pterostigma black, wings petioled to level of Ac, arculus at the level of second antenodal in all wings, postnodals 10 in all wings, M_2 arising just before fifth postnodal in all wings, M_{1a} arising at fourth postnodal of second series before pterostigma in RFW, 3 in LFW and RHW, and 2 in LHW, pterostigma surmounting one cell in all wings (Figs 2-3).



Figs 1-5. *Leptobasis melinogaster* sp. n.: (1) diagram of head and thoracic color pattern (holotype); – (2) forewing (holotype); – (3) base of forewing (holotype); – (4) male abdominal appendages, lateral view (holotype); – (5) male abdominal appendages, dorsal view (holotype).

Abdomen. – Segments 1-2 and extreme base of 3 olive green; segment 1 with a black dorsal suboval spot covering 0.75 lenght of segment, dorsum of segment 2 with a pair of twin black spots on distal half. Segments 3-6 pale-ivory at sides, with dark brown cast on dorsum connected with black apical annulus on each of these segments; segments 7-10 ochre dorsally. Appendages: cerci light brown, paraprocts luteous with black on tips. Cerci bent down in right angle in their apical half, with tips acute (Fig. 4), in dorsal view its base wider than long, diverging and narrowing apically, paraprocts longer than seg. 10, in dorsal view with tips converging (Fig. 5).

Measurements (in mm). – Total length (incl. app.) 41.5; – abdomen 34.6; – hindwing 20.0.

Paratype. – The single paratype male differs in the following aspects: Head: labrum pale green, vertex olive green entirely with no traces of reddish spots nor a transverse pale stripe between vertex and occipital margin. Thorax: dorsum of pterothorax green-brown with middorsal pale stripes inconspicuous. Wings: one wing (LHW) is petioled little beyond the level of Ac, postnodals 10 in FW and 8 in HW, M_2 arising just before 5th postnodal in FW and 4 in HW, M_{1a} arising at 2 postnodal of second series before pterostigma in all wings, the origin of M_3 nearly coincides with the origin of Rs in all wings.

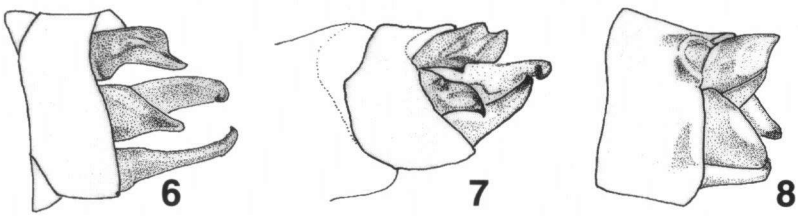
Measurements (in mm). – Total length (incl. app.) 40.3; – abdomen 33.0; – hindwing 19.4.

FEMALE unknown.

NOTES. – In spite of exhaustive searching I was unable to find additional specimens of *L. melinogaster* from Chamela. Ricardo Ayala (pers. comm,) stated that the specimen he captured was collected from the edge of a temporary stream while perched. I saw no specimens during several visits to this site over several years and at approximately the same dates. In Mexico *L. vacillans* frequents shore of lakes, "aguadas", temporary ponds and grassy banks of some rivers. *L. vacillans* often rest among marginal vegetation (grasses, sedges) in shady areas. They are rarely seen flying over open water. At Chamela region *L. melinogaster* may also prefer shady lentic habitas coincident with *L. vacillans*, their capture at streams may represent strays.

DISCUSSION

Members of the genus *Leptobasis,* historically have been difficult to characterize as can be seen by synonymic changes of several of its species (GARRISON, 1991; BRIDGES, 1993). When I examined the first male of this species from Jalisco state, I hesitated assigning it to any known genus of Coenagrionidae because the specimen has some unusual characters (M_2 arising just before fifth antenodal in all wings, M_{1a} recessed to third postnodal cell of second series proximal to pterostigma). However, I thought it belonged to the Leptobasinae (sensu DAVIES & TOBIN, 1984) by its overall morphology and coloration, and eventually assigned it in accordance with MUNZ (1919) and GARRISON (1986) to *Leptobasis*. This genus is characterized in having M_2 arising at the 3rd or 4th postnodal in hindwing and M_{1a} recessed to only the first postnodal cell of second series proximal to pterostigma. After examinating the second



Figs 6-8 Mediodorsal view of male abdominal appendages: (6) *Leptobasis melinogaster* sp. n.; – (7) *L. candelaria* Alayo (Campeche: Aguada in Zoh Laguna, Calakmul Biosphere Reserve, 26-IX-1997, E. González leg. & det.); – (8) *L. vacillans* Hagen in Selys (Campeche: Aguada in Hormiguero Archaeological Zone, Calakmul Biosphere Reserve, 19-III-1997, E. González leg. & det.).

(paratype) specimen I assigned it to *Leptobasis* in spite of the slight venational differences mentioned above.

Leptobasis melinogaster resembles *L. vacillans* because both possess the characteristic decumbant cerci, bent as described above. However, *L. melinogaster* differs from *L. vacillans* by having long paraprocts with tips converging, a condition similar to *L. candelaria*.

KEY TO SEPARATE MALES OF MEXICAN AND CENTRAL AMERICAN SPECIES OF THE GENUS *LEPTOBASIS*

(Modified from WESTFALL & MAY, 1996)

1 Paraprocts not curving strongly inward and only slightly longer than cerci (Fig. 8) ..... ***vacillans***
– Paraprocts curving strongly medially and much longer than cerci 2
2 Larger species, total length more than 40 mm, cerci with no distinct dorsal notch (Fig. 6), in lateral view bent down in right angle in its apical half, dorsum of terminal segments of abdomen yellow ..... ***melinogaster***
– Smaller species, total length at most 35.5 mm, cerci with a dorsal anteapical notch (Fig. 7), in lateral view not bending down in right angle in its apical half, abdomen reddish ..... ***candelaria***

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