STUDIES OF NEOTROPICAL CADDISFLIES, 
LII: THE GENUS WORMALDIA IN NICARAGUA, 
WITH THE DESCRIPTION OF A NEW SPECIES 
(TRICHOPTERA: PHILOPOTAMIDAE).

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RESUMEN

Wormaldia matagalpa, nueva especie, se describe del norte de Nicaragua. Es miembro del grupo arizonensis, muy similar a W. cornuta Bueno & Holzenthal, conocida del sur de México. La especie W. planae Ross & King, de amplia distribución, es reportada por primera vez de Nicaragua.

ABSTRACT

Wormaldia matagalpa, new species is described from northern Nicaragua. It is a member of the arizonensis group, most similar to W. cornuta Bueno & Holzenthal, known from southern Mexico. The widespread species, W. planae Ross & King, is recorded for the first time from Nicaragua.

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INTRODUCTION

The genus *Wormaldia*, as defined by Ross (1956), is almost worldwide in distribution. It is most diverse and speciose in the Northern Hemisphere of Europe, Asia and North America, but reaches Madagascar off southern Africa, Sumatra in southeastern Asia, and Peru in South America. A number of species have been described from Baltic Amber, probably of Upper Eocene time, 35-40 millions years of age. Fourteen species have been described from the United States and Canada, eight from Mexico (an additional species is known from both USA and Mexico), two from Colombia, and one from Peru. *W. planae* Ross & King, originally described from southern Mexico, is very wide ranging and commonly encountered: Mexico, Guatemala, Nicaragua, Costa Rica, Panama, Colombia, Ecuador, Venezuela, Guiana, Brasil, Trinidad, Tobago, Granada, and St. Vincent. *W. prolixa* Flint, also inhabits a considerable area: Colombia, Panama, and Costa Rica. All the others, however, are only known from the type locality or a few adjacent sites. Here are recorded the first two species of the genus taken in Nicaragua, one the wide-ranging *W. planae*, the other a new species that is probably one of those with a very circumscribed distribution (further examples of the species have not been found in the 7 or 8 undescribed species of the genus known from Costa Rica).

The immature stages of a number of European (Nielsen 1942, Lepneva 1970) and North American (Ross 1944, Wiggins 1977) species have been described. They are all remarkably similar in structure and appearance. They construct elongate, tubular, silken nets in which they live and which serve to strain their food from the water that flows through them. The larvae spin several layers of meshes, each mesh narrow and rectangular, about 0.4 x 3.7 μm, and then superimpose each layer at different angles, thereby even further restricting the effective mesh opening (Wallace & Malas 1976). Larvae are found in flowing water, usually springs or small spring-fed streams. They are often extremely difficult to find, perhaps due to a tendency to be hyporheic.

Figs. 1-3: *Wormaldia matagalpa*, n. sp. male genitalia: 1, lateral; 2, dorsal; 3, phallus, lateral.
SYSTEMATICS

Wormaldia planae Ross and King

Wormaldia planae Ross & King, in Ross, 1956:64; Flint, 1991:31 (distribution, male genitalia).

This species, described from Chiapas in Mexico, has since been found to be widely distributed throughout Central America, northern South America, and the southern Lesser Antilles (see above). Its presence in Nicaragua was expected.


Wormaldia matagalpa, new species

This distinctive new species is a member of the arizonensis group, most closely related to W. cornuta Bueno & Holzenthal. The shape of the tenth terga in the two species is very similar, but the basolateral lobe in matagalpa is more pronounced. However, the eighth tergum in the two is very different: in cornuta the posterior margin bears a submesal pair of elongate, pointed process separated by a deep, U-shaped, mesal excision, while in matagalpa there are a pair of paddle-shaped submesal processes, but mesally there is a small, projecting, quadrate lobe.

Genitalia. Eighth tergum with posterior margin produced into a short, truncate, mesal lobe, flanked laterally by small, paddle-shaped lobes. Ninth segment with anterior margin slightly convex. Tenth tergum long, slender, with a strong, erect, basolateral shoulder, a midlength hump, and with apex strongly reflexed and pointed; in dorsal aspect with divergent basolateral shoulders meeting on midline, a laterally directed, triangular expansion at midlength, tip spear-shaped. Cercus about half as long as tenth tergum, clavate. Clasper with basal segment short and broad, equidimensional, apical segment much narrower, more than twice as long as broad, with a circular patch of dark spicules apicomally.

Phallus with two curved spines, apicalmost only half as long as basalmost, with lateral, rodlike sclerites supporting apical membraneous portion with small sclerized structure basomesally between these sclerites.

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LITERATURE CITED


