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The Ilha de Maraca is a riverine island of some 92,000 ha formed by the bifurcation of the Rio Uraricoera, located in the Municipality of Boa Vista, Territory of Roraima, Brazil (Figure 1). It has been maintained as an ecological reserve since 1978 by the Brazilian Secretaria Especial do Meio Ambiente (SEMA). At the invitation of SEMA, the Royal Geographical Society (RGS) and the Instituto Nacional de Pesquisas da Amazônia (INPA) mounted the Maraca Rainforest Project to carry out a general ecological survey of the island. A total of approximately 200 people participated in the project, carrying out fieldwork on the island from February 1987 to March 1988 (Milliken & Ratter 1989). The following general comments on the island are extracted wholly from the preliminary results of this survey (Hemming et al. 1988, Milliken & Ratter 1989).

The island is 60 km long and up to 25 km wide, and located approximately 110 km west of Boa Vista. The research station, near which most of the Trichoptera were collected, is situated at 3°22'N: 61°26'W on the eastern end of the island. Most of the island is fairly flat and about 100 m in elevation above sea level, but in the center and west some low peaks composed of metamorphic rock reach 200-300m. The rest of the island is underlain by gneisses with a few granitic outcrops and is mostly overlain by more recent riverine deposits. The soils are, in general, weathered acidic residues on the older surfaces and younger alluvial soils on the most recent superficial deposits.

The climate is tropical seasonal with a mean annual temperature of about 26°C (range 14-43°C) and an annual precipitation of 1750-2250 mm. The wettest months are May-July with a dry season from November-March, however some of the heaviest rainstorms may occur in the dry season.

The island is situated near the junction of the Amazonian forest and the dry savanna. Most of the island is in Amazonian forest, which runs westwardly unbroken into southern Venezuela and the foothills of the Andes, although on the island a fringing form of the forest is typical. The savanna, which becomes more extensive to the south and east, only occurs in a few small patches on the eastern end of the island.

The branches of the Rio Uraricoera, the Furo de Santa Rosa to the north and the Furo de Maraca to the south, surround the island. The island is drained by a system of

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relatively small streams and slow-flowing marshes, most of which will dry out during the dry season. There are also small ponds and seasonally flooded marshes and forests around the island.

Most of the Trichoptera were taken (Rafael, pers. comm.) by light traps operated near borrow pits formed by dredging the savanna to create the causeway from the river to the Station (Figure 2, number 2). However, it would appear that a large part of this collection was attracted from the nearby Furo Maraca, as it is a typically lotic fauna rather than a lentic one. Trichoptera were also taken near a small temporary igarape and at the river (Figure 2, numbers 1 and 3). Analyses of water samples from these sites (Volkmer-Ribeiro, et al. 1989) have the typical characteristics of central Amazonas: low conductivity, slightly acidic pH and extreme scarcity of calcium and other nutrients.

### Distribution

Because most of the trichopterous species taken on the Ilha Maraca were already known and have been recorded or collected on other occasions, a rather clear picture of the affinities of the caddisfly fauna is apparent. The distribution of the 26 species identified with certainty is plotted in Figure 3. The term "north Amazon", denotes the area in Brazil north of the Amazon-Solimoes River, while "south Amazon" is that part immediately south of the river, basically the states of Amazonas and Para, while other states of Brazil south of this immediate region of the river are termed "Brazil".

Including "south Amazon" into the region encompassing the rest of South America north of the Amazon-Solimoes River, we find that species (46%) are included in this pattern. Another 13 species (50%) are included in a very widespread pattern both north and south of the river. Only a single species (4%), *Tricholeiochiton neotropicalis* n. sp., is presently endemic to the island.

Unquestionably many more species will be taken in future collecting on the island, but I predict that nearly all will be widely distributed species, at least in the lowlands north of the Amazon. I also expect that future collecting will expand to the south the known distributions of many of the species that now seem to be restricted to the northern region. Undoubtedly, the single endemic species will be found in other localities in the Amazonian lowlands once its exact breeding habitat has been discovered.

Family Glossosomatidae  
*Protoptila ensifera* Flint

***Protoptila ensifera* Flint, 1971:16. - Rafael et al., 1989:8.**

The species was described from Amazonas. It has since been recorded from Suriname and I have seen examples from Para, Brazil. A single male of this species was taken at Ilha Maraca, and two females that agree in coloration are probably this species

also.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 21-30 Nov 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino; 1♂; 02-13 May 1987, 2 ♀.

**Protophila** species

**Protophila** sp. B.- Rafael et al., 1989:8.

A single female of a species quite different in appearance from the preceding was found on the island. This species has a forewing length of a full 3 mm the other size is 1.5-2 mm. The color is a uniform olive-brown, as opposed to fuscous with distinct white spots in **ensifera**.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 1 ♀.

Family Philopotamidae

**Chimarra (Curgia) scopuloides** Flint

**Chimarra (Curgia) scopuloides** Flint, 1974:19.- Rafael et al., 1989:8.

Originally described from Suriname, I have since seen examples from state of Para, Brazil.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 2♂.

Family Psychomyiidae

**Cernotina spinosior**, n. sp.

Figures 4-7

**Cernotina** sp. nov.- Rafael et al., 1989:8.

This species shows some relationship to **C. intersecta** Flint, in that both lack a free basodorsal lobe on the clasper, both have the apex of the dorsolateral lobe of the cercus produced into a spine, and both have the tenth tergum membranous. There are numerous differences between them, however, in the shape and structure of the cercus and tenth tergum, the shape of the claspers, and especially in the phallus which in **spinosior** possesses strong internal spines that are lacking in **intersecta**.

Adult.- Length of forewing 2-2.5 mm. Color brown, head and thorax middorsally with white hair, antennae cream colored; forewing brown, posterior margin with a narrow stripe of white hair. Male genitalia: Ninth segment with anterior margin produced anterolaterally. Tenth tergum very lightly sclerotized, ventral surface with a small but distinct lobe at midlength. Cercus with dorsolateral lobe ovoid, apex bearing a

sharp, dark spine; ventromesal lobe elongate, enlarged basa, tip truncate. Clasper elongate, basodorsal lobe reduced to a row of setae on dorsal surface of clasper; apicomesal lobe small, directed ventromesad, with mesal margin bearing 3 strong setae. Phallus with 2 pairs of stout spines apically, ventral pair half length of dorsal pair; basally with another pair of spines (in Venezuelan material each is divided into a pair of spines from a common base, in Brazilian example they appear undivided); a lightly sclerotized, vase-shaped structure overlying basal spines; with a long slender dorsal rod.

Material.- Holotype, male: Venezuela, Bolivar State, Rio Cuyuni, El Dorado, 10 Feb 1976, C. M & O. S. Flint, Jr. Type in NMNH. Paratypes: Venezuela T. F. Amazonas, San Carlos de Rio Negro (1°56'N, 67°03'W), 13-17 Dec 1984, R. L. Brown, 22 ♂; same but 6-12 Dec 1984, 4 ♂; same, but 5-12 Mar 1984, Flint & Louton, 1 ♂. Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 18-28 Aug 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 1 ♂.

Family Hydropsychidae

**Smicridea (Smicridea) palifera** Flint

**Smicridea (Smicridea) palifera** Flint, 1981:23.- Raphael et al., 1989:8.

This species was described from the states of Aragua, Barinas and Bolivar in Venezuela. This is the first known record of the species outside of Venezuela.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 21-30 Nov 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 3 ♂, 2 without abdomens.

**Smicridea (Rhyacophylax) abrupta** Flint

**Smicridea (R.) abrupta** Flint, 1974:93; 1978:380, 398.- Raphael et al., 1989:8.

Originally described from Surinam, this species has been recorded from the states of Amazonas and Mato Grosso in Brazil.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 4 ♂; 18-28 Aug 1987, 1 ♂; 21-30 Nov 1987, 3 ♂.

**Smicridea (Rhyacophylax) columbiana** (Ulmer)

**Rhyacophylax columbianus** Ulmer, 1905a:106.- Fischer, 1963:136.

**Smicridea (R.) columbiana** (Ulmer).- Flint, 1974:96; 1978:398.- Raphael et al., 1989:8.

This species is widespread across northern South America, being recorded from Colombia, Suriname, and the state of Amazonas in Brazil.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 48 ♂, 26 ♀; 18-28 Aug 1987, 11 ♂, 31 ♀; 21 Aug 1987, 5 ♂, 9 ♀; 21-30 Nov 1987, 50 ♂, 27 ♀.

**Smicridea (Rhyacophylax) scutellaris** Flint

*Smicridea* (R.) *scutellaris* Flint, 1974:96; 1978:381, 399.- Raphael et al., 1989:8.

This species too, is widespread across northern South America. It is recorded from Suriname and the states of Amazonas and Para in Brazil. I have seen other examples from Guyana and Venezuela.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 21-30 Nov 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 1 ♂.

**Synoestropsis furcata** Flint

*Synoestropsis furcata* Flint, 1974:117; 1978:396.- Raphael et al., 1989:8.

There are scattered records for this species, mostly north of the Amazon in Guyana, Suriname, Venezuela and the state of Para and now Roraima in Brazil.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino 1 ♂, 1 ♀; 18-28 Aug 1987, 2 ♀, 1 without abdomen; 21-30 Nov 1987, 3 ♀, 7 without abdomens.

**Synoestropsis grisoli** Navas

*Synoestropsis grisoli* Navas, 1924:252.- Flint, 1974:118; 1978:396, 404.- Raphael et al., 1989:8.

This comparatively small and well marked species is quite frequently encountered in tropical South America: Guyana, Suriname, Venezuela, the States of Amazonas, Mato Grosso and Para in Brazil, and I have seen examples from several sites in Peru.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 4 ♀; 21 Aug 1987, 1 ♀; 21-30 Nov 1987, 5 ♀, 2 without abdomens.

**Leptonema aspersum** (Ulmer)

and/or

**Leptonema rostratum** Flint, McAlpine & Ross

*Neoleptonema aspersum* Ulmer, 1907:61.- 1907:61.- Fischer, 1963:175.- Flint, 1974:103; 1978:386, 400.

**Leptonema aspersum** (Ulmer).- Flint, McAlpine & Ross 1987:29.

**Leptonema rostratum** Flint, McAlpine & Ross 1987:30.

**Leptonema aspersum** (Ulmer) or **rostratum** Flint, McAlpine & Ross.- Raphael **et al.**, 1989:8.

As frequently happens with light trap collections, only females were taken and in this sex the species **aspersum** and **rostratum** cannot be distinguished. In distribution, **aspersum** is most frequently encountered north of the Amazon with records from Guyana, Suriname and Venezuela, but with isolated records from Mato Grosso, Para and possibly Minas Gerais in Brasil. In contrast, **rostratum** is generally found more to the south with records from Argentina and Uruguay and in Brasil from Amazonas, Mato Grosso, Para and a single record from Roraima. Thus, I can not be certain of the specific identity of these specimens, although it seems most probable that they are **aspersum** based on overall distribution.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 25 ♀; 18-28 Aug 1987, 6 ♀; 21 Aug 1987, 4 ♀; 21-30 Nov 1987, 6 ♀, 3 without abdomens.

#### **Leptonema sparsum** (Ulmer)

**Macronema** (?**Leptonema**) **sparsum** Ulmer, 1905a:76.

**Leptonema sparsum** (Ulmer).- Fischer, 1963:172.- Flint, 1974:98; 1978:384, 399.- Flint, 1978:384, 399.- Flint, McAlpine & Ross, 1987:32.- Raphael **et al.**, 1989:8.

Absent from the Chilean Subregion, this species is found over most of the rest of South America and southern Central America (Argentina, Ecuador, Guyana, Panama, Paraguay, Peru, Suriname and Venezuela). In Brasil it is recorded from the states of Amazonas, Distrito Federal, Goias, Mato Grosso, Para, Rondonia, Santa Catarina and Sao Paulo.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 21-30 Nov 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 1 ♀.

#### **Macronema hageni** Banks

**Macronema hageni** Banks, 1924:452.- Fischer, 1963:187.- Flint, 1967:10; 1974:112; 1978:392, 402.- Raphael **et al.**, 1989:8.

This species is found frequently throughout the lowlands of South America with records from Argentina, Bolivia, Ecuador, Guyana, Paraguay, Suriname and Venezuela. I have seen other examples from Colombia and Peru, and know it from Amazonas and Para in Brasil.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 4 ♀; 21-30 Nov 1987, 1 ♀, 1 without abdomen.

**Blepharopus diaphanus** Kolenati

**Blepharopus diaphanus** Kolenati, 1859:242.- Fischer, 1963:164.- Flint, 1978:395, 404.-  
Flint, 1978:395, 404.- Flint & Wallace, 1980:179.- Raphael et al., 1989:8.

This species seems to be most common and abundant southeast of the Amazon, with records from north of the river less common. It is known from Argentina, Uruguay and Venezuela. It is most widespread in Brasil: Amazonas, Mato Grosso, Para, Parana, Rio de Janeiro and now Roraima.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 21 Aug 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 1♀.

**Plectromacronema comptum** Ulmer

**Plectromacronema comptum** Ulmer, 1906:63.- Fischer, 1963:163.- Flint, 1974:115; 1978:395,  
403; 1983b:226.- Raphael et al., 1989:8.

This species is found predominantly in northern South America, with a few records south of the Amazon River. It is recorded from French Guiana, Guyana, Suriname and Venezuela. In Brasil it is known from Amazonas and Para.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 18-28 Aug 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 1♀; 21 Aug 1987, 1♀.

Family Hydroptilidae

**Acostatrichia brevipenis** Flint

**Acostatrichia brevipenis** Flint, 1974:54.

**Betrichia** sp. nov.- Raphael et al., 1989:8.

This is the first record of the species subsequent to its original description from Suriname. It is the only species of the tribe Leucotrichiinae taken during the survey of Ilha Maraca.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 21-30 Nov 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 2♂, 1♀.

**Neotrichia**, near **rotunda** Flint

**Neotrichia rotunda** Flint, 1974:76.

**Neotrichia** nr. **rotunda** Flint.- Raphael et al., 1989:8.

**Neotrichia rotunda** was described from Suriname. This example agrees quite closely to the published figures, but I can not make out with certainty the shape of the subgenital plate, and the phallus appears to have a second short, lateral spine. Lacking adequate material, I can not determine if these differences are real or apparent.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 1♂.

***Oxyethira merga* Kelley**

***Oxyethira merga* Kelley, 1983:45.- Raphael et al., 1989:8.**

This species was recently described from the State of Bolivar in Venezuela; this is the second record for the species.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 1♂.

***Tricholeiochiton neotropicalis*, n. sp**

Figures 8-12

Possibly ***Tricholeiochiton* sp. nov.**- Raphael et al., 1989:8.

The discovery of a species of the genus ***Tricholeiochiton*** in the center of South America, when no other species has been reported from the New World is most unexpected. The genus is most speciose in Australia (5 species), with single species reported from Indonesia, Burma and Europe. However, ***neotropicalis*** agrees with the generic diagnoses and illustrations of heads and thoraces presented by Marshall (1979) and Well (1982), and the appearance and structure of the genitalia are also in agreement with the plan of its congeners.

It is to be recognized by details of the male genitalia. The inconspicuous, membranous dorsomesal region of the genitalia distinguishes the species from most of the Australian species which have a well-developed lobe in this area. The long, slender (in lateral aspect) dorsal lobes distinguishes it from the ***fagesii*** (European). The structure of the subgenital plate, especially the paired ventrolateral lobes is wholly distinct from what can be seen in any other species.

Adult.- Length of forewing, 1.5-2 mm. Color dark grey, antennae cream-colored, forewing and thorax maculate with silvery hair, especially subapically on the forewing whose tip is upturned and fuscous. Seventh sternum with a long ventromesal process, tapered apically. Male genitalia: Ninth segment with anterolateral margin rounded, produced lateroventrally as a narrow lobe laterad of the clasper. A flat, declivious dorsolateral plate, slightly curved apicomesally from dorsolateral shoulder of ninth segment (d.pl. of Wells 1982). Subgenital plate, large, massive, dorsomesal area rounded and produced ventrad and shallowly divided mesally; with a pair of rounded ventrolateral lobes above clasper bases. Clasper thin, elongate, lying just inside ventrolateral lobe of ninth segment. Phallus short, stocky with a short, spiral titillator; apical portion enlarged apicad, with ejaculatory duct protruding slightly. Female genitalia: Tenth segment short, triangular with a pair of apicolateral cerci. Ninth segment lightly sclerotized ventrally, broadly rectangular, with long anterolateral



apodemes. Eighth segment broad, anterolateral angles produced and bearing long apodemes, ventral surface with a darkened mesal ornamentation. Internally with a ring-like vaginal sclerite deeply indented anteromesally.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino. Holotype in INPA. Paratypes: same data, 18 ♂, 63 ♀ (INPA & MNMH).

Family Leptoceridae

*Achoropsyche duodecimpunctata* (Navas)

*Setodes duodecimpunctata* Navas, 1916a:22.

*Achoropsyche duodecimpunctata* (Navas).- Holzenthal, 1984:182.- Raphael et al., 1989:8.

This is a widespread and frequently abundant species over most of tropical South America. It is recorded from Argentina, Bolivia, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay and Venezuela. In Brazil it is known from the states of Amazonas, Espírito Santo, Para and Santa Catarina.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 22 ♂, 53 ♀, 5 without abdomens; 18-28 Aug 1987, 1 ♀; 21-30 Nov 1987, 1 ♂, 3 ♀.

*Nectopsyche diminuta* (Banks)

*Leptocella diminuta* Banks, 1920:353.- Flint, 1967:21.

*Nectopsyche diminuta* (Banks).- Flint, 1974:133.- Raphael et al., 1989:8.

I have seen this species from Guyana and Suriname, as well as the States of Amazonas and Para in Brazil.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 18-28 Aug 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 1 ♀.

*Nectopsyche muhni* (Navas)

*Leptocella muhni* Navas, 1916b:68.

*Nectopsyche muhni* (Navas).- Flint, 1974:132; 1982:58.- Raphael et al., 1989:8.

This species, widespread over South America, is known from Argentina, Bolivia, Ecuador, Guyana, Paraguay, Peru, Suriname and Venezuela. In Brazil it is known from Amazonas, Distrito Federal, Espírito Santo, Goias, Para, Rio de Janeiro, Rio Grande do Sul, Santa Catarina and will certainly be found in most other states.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, J. A. Rafael, 02-13 May 1987, J. E. B. Brasil & L. S. Aquino, 6 ♂, 9 ♀; 18-28 Aug 1987, 2 ♀; 21 Aug 1987, 2 ♀; 21 Aug 1987, 1 ♀; 21-30 Nov 1987, 8 ♂, 7 ♀.

***Nectopsyche multilineata* Flint**

***Nectopsyche multilineata* Flint, 1983a:73.-Raphael et al., 1989:8.**

The species was described from Argentina and Venezuela, thus its presence in Brazil is hardly surprising although unrecorded heretofore.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 1♂, 16♀.

***Nectopsyche punctata* (Ulmer)**

***Leptocella punctata* Ulmer, 1905b:75.- Flint, 1966:9.**

***Nectopsyche punctata* (Ulmer).- Flint, 1974:131.- Raphael et al., 1989:8.**

This is a very widely distributed species over Central and South América. I know it from Argentina, Bolivia, Colombia, Costa Rica, Ecuador, Guyana, Mexico, Panama, Paraguay, Peru and Venezuela. In Brazil it is also widely distributed: Amazonas, Minas Gerais, Para, Rio de Janeiro and Sao Paulo,

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 2♂, 1♀; 21-30 Nov 1987, 2♂, 1 without abdomen.

***Nectopsyche splendida* (Navas)**

***Leptocella splendida* Navas, 1917:403.**

***Nectopsyche splendida* (Navas).- Flint, 1982:60.- Raphael et al., 1989:8.**

The species is frequently taken in lowland South America near larger rivers: Argentina, Bolivia, Colombia, Ecuador, Guyana, Paraguay, Peru and Venezuela. Although the species is undoubtedly widely distributed in Brazil, it has not been taken frequently: Espírito Santo, Goias and Rio de Janeiro.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 18-28 Aug 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 2♀; 21-30 Nov 1987, 2♂, 1♀.

***Nectopsyche*, possibly *fuscomaculata* Flint**

***Nectopsyche fuscomaculata* Flint, 1983a:73.**

**N., possibly *fuscomaculata* Flint.- Raphael et al., 1989:8.**

The forewings of this species are white with scattered black flecks (see Flint 1983a, fig. 341 for a photo) in a distinctive pattern. However, when badly rubbed the pattern of this species and several others are easily confused; the present material has hardly a hair left on the forewings. Therefore, I can not be fully certain of the identity of this material, especially as it is from considerably to the north of the known range of the species and no males are present.

*N. fuscomaculata* is recorded from Argentina and Paraguay as well as the states of Espirito Santo and Rio de Janeiro in Brasil.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 1♀; 18-28 Aug 1987, 3♀; 21 Aug 1987, 1♀.

#### *Nectopsyche*, possible *gemmoides* Flint

*Nectopsyche gemmoides* Flint, 1981:35.

*N.*, possibly *gemmoides* Flint.- Raphael et al., 1989:8.

This species is quite distinctive in combination of color pattern (see Flint 1981, fig. 169 for a photo) and male genitalia. However, the example is a bit rubbed and a female, thus rendering its identity questionable. Another source of potential error is an apparently undescribed species from Amazonas that appears to be like *gemmoides* in color, but not in genitalia.

*N. gemmoides* has a widely recorded distribution in Central and South America: Bolivia, Colombia, Costa Rica, Ecuador, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Trinidad and Venezuela. It has not yet been recorded with certainty from Brazil.

Material.- Brazil, Estado Roraima, Ilha Maracá, Rio Uraricoera, 21-30 Nov 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 1♀.

#### *Nectopsyche*, *gemma* group

*N.*, *gemma* group.- Raphael et al., 1989:8.

This specimen is badly damaged and totally lacking the hairs that would give it a more distinctive appearance. What little can be made of its color pattern from the membrane is suggestive of the species I treated as *gemma* (1974:129, fig. 4A), but which I now realize is not the true *gemma*.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 18-28 Aug 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 1♀.

#### *Oecetis punctipennis* (Ulmer)

*Pseudosetodes punctipennis* Ulmer, 1905b:77.

*Oecetis punctipennis* (Ulmer).- Flint, 1966:10; 1982:53.- Raphael et al., 1989:8.

The species is frequently encountered in southern Central America and South America. I know it from Argentina, Bolivia, Colombia, Ecuador, Guyana, Nicaragua, Panama, Peru, Suriname, Uruguay and Venezuela. It must be more widespread in Brazil than records would indicate: Para and Rio de Janeiro.

Material.- Brazil, Estado Roraima, Ilha Maracá, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 4♂, 23♀; 21-30 Nov 1987, 3♂, 2♀, 3 without abdomens.

**Oecetis rafaelli**, n. sp

Figures 13-15

**O. n. sp.**- Raphael et al., 1989:8.

The male genitalia of this distinctive new species do not show an obvious close similarity to any other described Neotropical species of *Oecetis*. The elongate, pointed lateral lobes of the tenth tergum, and long, evenly tapering claspers are quite distinctive. The wing venation is typical of the majority of the species in the genus, and the dark points at the junctions of the veins and crossveins and along the wing margin are also common in a number of species groups such as the *avara*, *punctata* and *falicia* groups.

Adult.- Length of forewing, 5 mm. Color pale yellowish-brown; forewing pale yellowish-brown, membrane with dark spots at forks of veins, over crossveins, and along margins at ends of veins. Venation of forewing with R2+3 forked just basad of s; hindwing with R2+3 and Cu with small apical forks, M forked more deeply. Male genitalia: Ninth segment annular, anterior margin nearly vertical; dorsomesally with a low, paired lobe and a pair of longer, very slender posteromesal processes (these processes lacking in male paratype). Curcus slightly longer than wide, tapering apicad. Tenth tergum divided into long, slender, lateral lobes, pointed apicad and overlaying phallus dorso-laterally. Claspers slightly enlarged basad, evenly tapering apicad in both lateral and ventral aspects, apex narrowly truncate. Phallus cylindrical, membranous apically; internally with an apical sclerite, ringlike with a central spine (sclerite apparently lacking in male paratype).

Material.- Holotype, male; Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 18-28 Aug 1987, J. A. Rafael, L. S. Aquino, J. F. Vidal & E. Binda. Type in INPA. Paratypes: Same data, 3♀; same, but 02-13 May 1987, 2♀; same, but 21 Aug 1987, 1♀; same, but 21-30 Nov 1987, 4♀. Estado Amazonas, AM 010, km 246, 20 km W Itacoatiara, 12-15 Jul 1979, J. Arias et al., 1♂, 1♀ (NMNH).

*Oecetis*, possibly *inconspicua* (Walker)

*Leptocerus inconspicuus* Walker, 1852:71.

*Oecetis inconspicua* (Walker).- Betten & Mosely, 1940:67.- Fischer, 1966:149.- Flint, 1981:32.

*O.*, possibly *inconspicua* (Walker).- Raphael et al., 1989:8.

*Oecetis inconspicua* has a huge area of distribution over all of North and Central America and the West Indies, as well as Venezuela in South America. Unfortunately it is similar to *O. amazonica* Banks, and I can only separate these two species on the basis of the male genitalia, the females seemingly being indistinguishable. *O. amazonica* is known from Argentina, Peru, Venezuela and Amazonas in Brazil. Thus there is no assurance at this time as to the specific identity of these females.

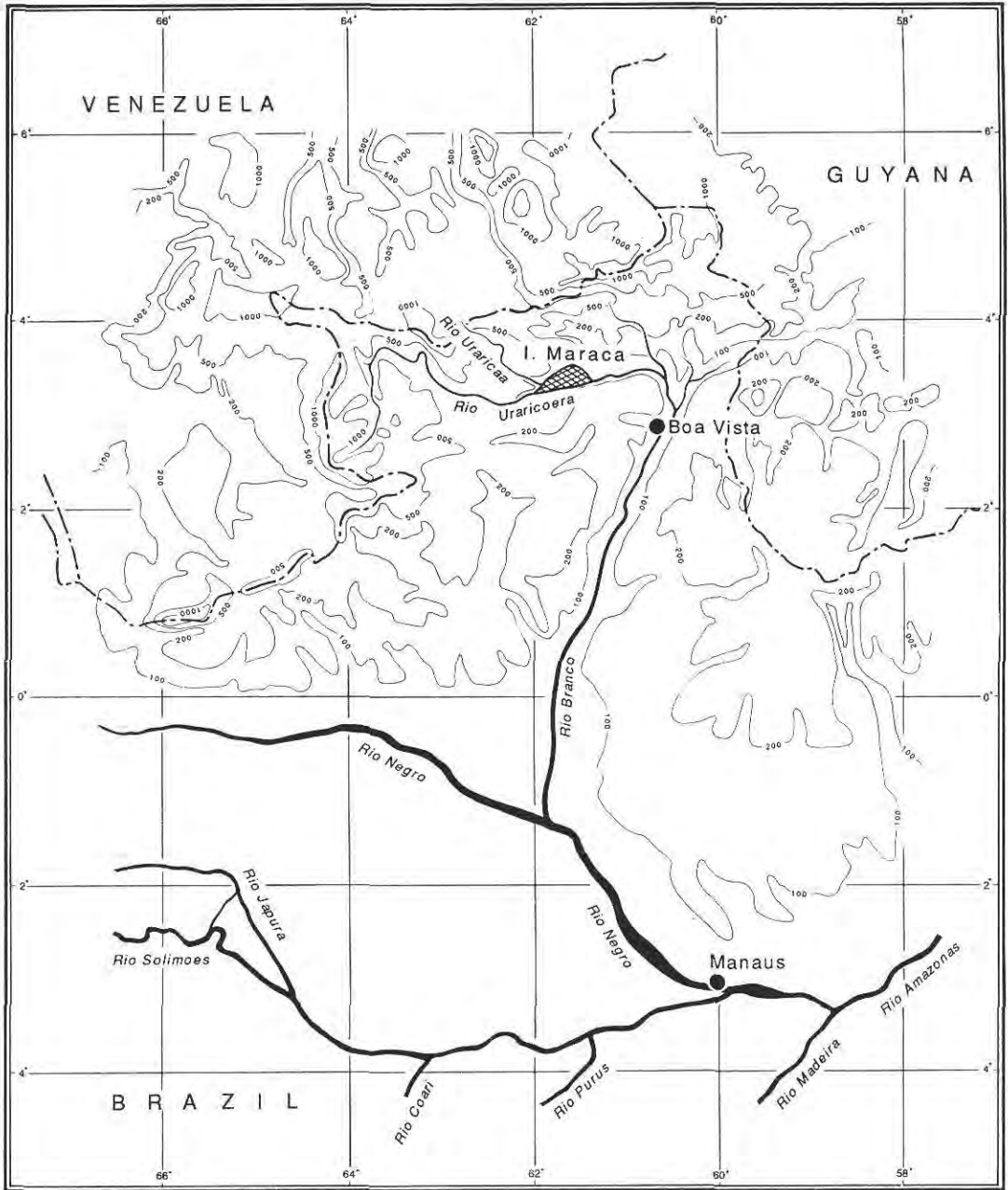


Fig. 1. Map of northcentral Brazil, showing placement of Ilha Maracá.

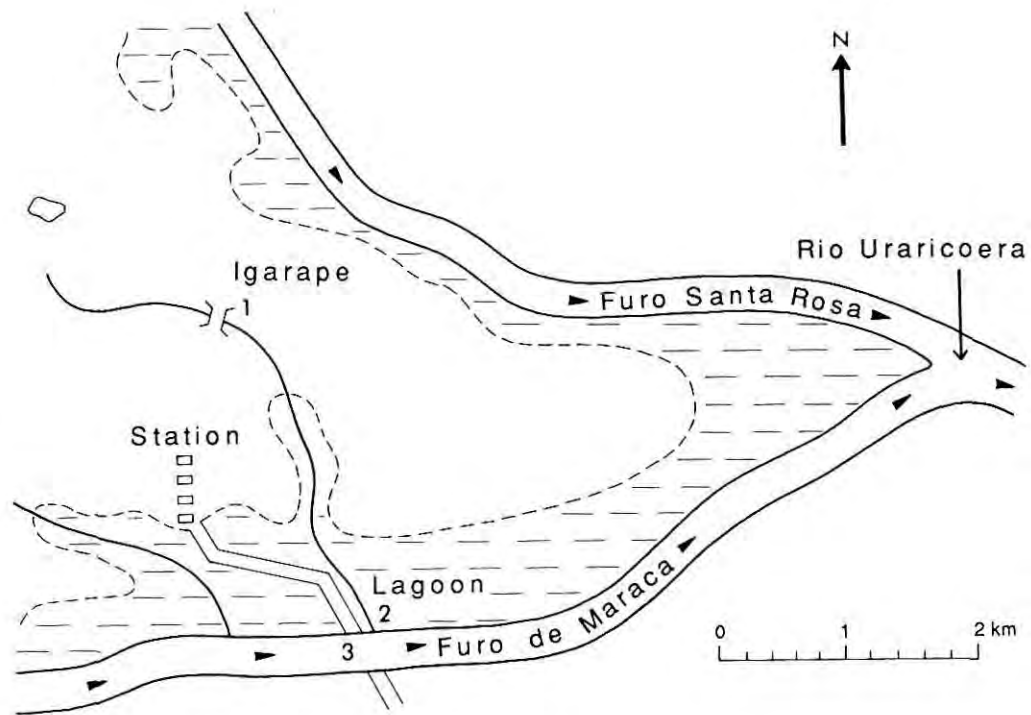
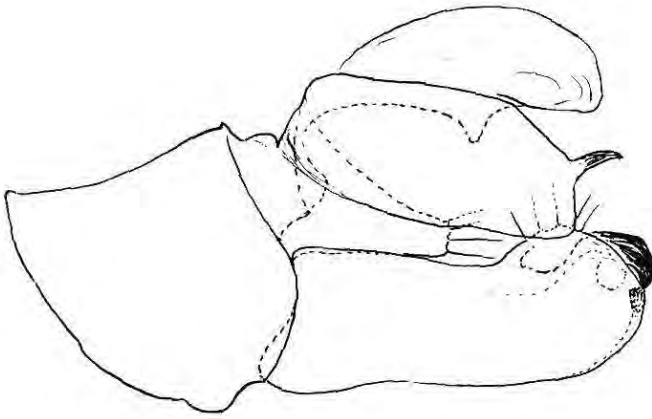


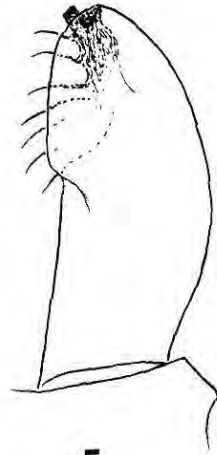
Fig. 2. Map of eastern end of Ilha Maracã, showing collecting sites.

Species	DIST.														North	Wide	Endem.	
	Col.	Ecu.	Ven.	Guy.	Sur.	Fr. G.	No. Amaz.	MAR.	So. Amaz.	Bra.	Uru.	Par.	Arg.	Bol.				Per.
P. ens.					X	X	X	X									X	
C. sco.					X		X	X									X	
C. spi.			X				X										X	
S. pal.			X				X										X	
S. abr.					X	X	X		X									X
S. col.	X				X	X	X										X	
S. scu.			X	X	X	X	X	X									X	
S. fur.			X	X	X		X	X									X	
S. gri.			X	X	X	X	X	X	X					X				X
L. spa.		X	X	X	X	X	X	X	X		X	X		X				X
M. hag.	X	X	X	X	X	X	X	X			X	X	X	X	X			X
B. dia.			X			X	X	X	X	X		X						X
P. com.			X	X	X	X	X	X	X									X
A. bre.					X			X										X
O. mer.			X					X										X
T. neo.								X										X
A. duo.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X
N. dim.				X	X	X	X	X	X									X
N. muh.		X	X	X	X	X	X	X	X		X	X	X	X	X			X
N. mul.			X					X					X					X
N. pun.	X	X	X	X		X	X	X	X		X	X	X	X	X			X
N. spl.	X	X	X	X			X		X		X	X	X	X				X
O. pun.	X	X	X	X	X		X	X	X	X		X	X	X				X
O. raf.						X	X											X
M. qua.	X		X				X		X		X		X					X
C. opa.		X	X	X	X	X	X	X	X	X	X	X	X	X				X
	Northern Pattern														12	13	1	
	Wide Spread Pattern																	

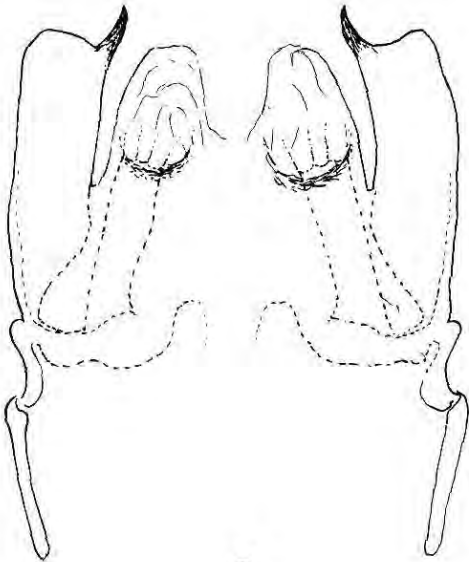
Fig. 3. Known distributions of identified species of Trichoptera collected on Ilha Maracá.



4



5



6



7

Fig. 4-7. *Cernotina spinosior*, n. sp., male genitalia. 4, genitalia, lateral; 5, clasper, ventral; 6, ninth and tenth terga and cerci, dorsal, 7, phallus, dorsal.



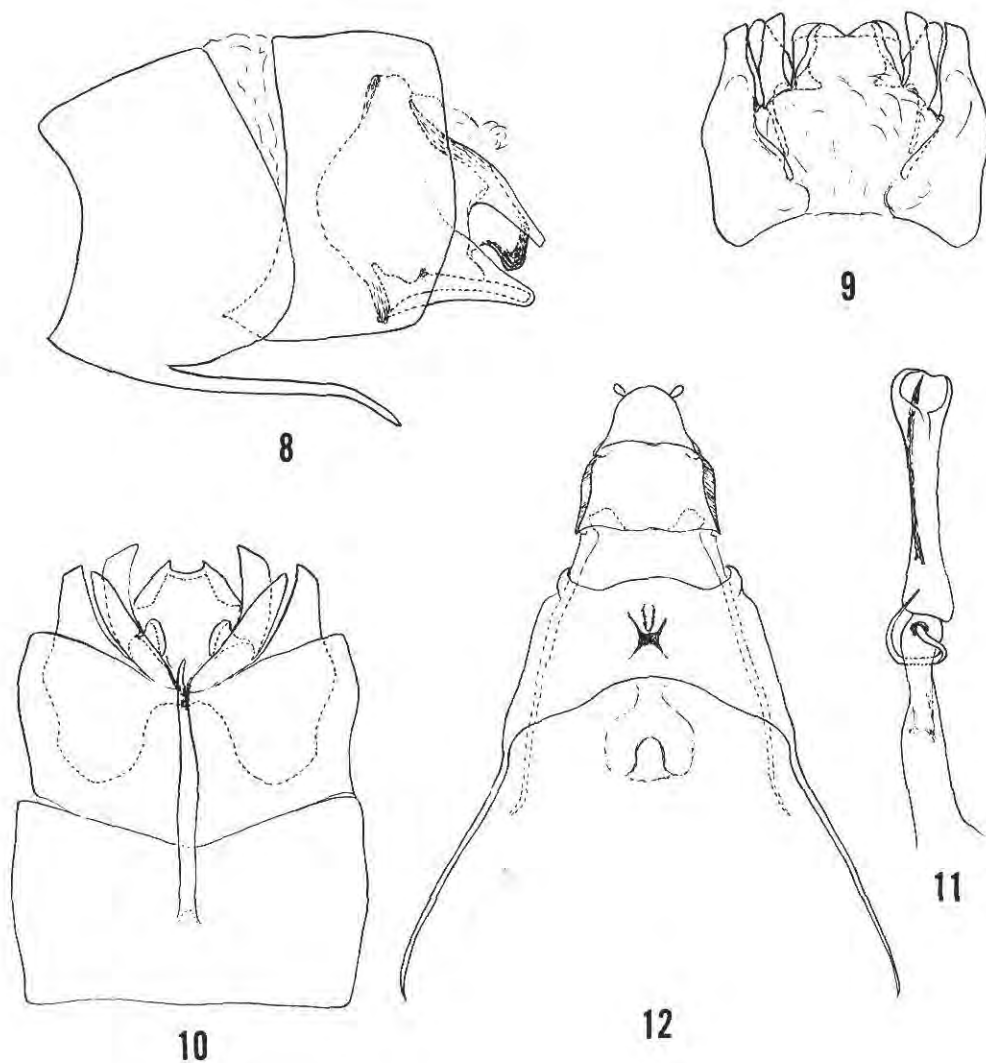


Fig. 8-12. *Tricholeiochiton neotropicalis*, n. sp. 8, male genitalia, 9, male genitalia, dorsal; 10, male genitalia, ventral; 11, phallus, dorsal; 12, female genitalia, ventral.

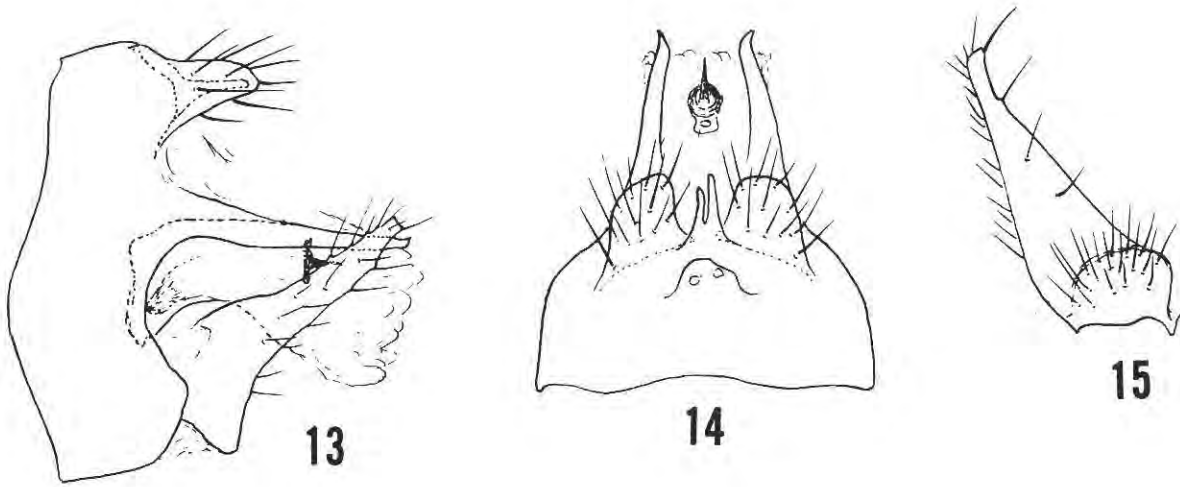


Fig. 13-15. *Oecetis rafaelli*, N. sp., male genitalia. 13, genitalia, lateral; 14, ninth and tenth terga, cerci, and phallus, dorsal; 15, clasper, ventral.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 4♀; 21 Aug 1987, 1♀; 21-30 Nov 1987, 5♀.

Family Odontoceridae

*Marilia guaira* Flint

*Marilia guaira* Flint, 1983a:82.- Raphael et al., 1989:8.

This species was described from Paraguay and Goias, Brasil, but I have since seen it from Bolivia, Colombia and Venezuela.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 21-30 Nov 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 1

Family Helicopsychidae

*Cochliopsyche opalescens* Flint

*Cochliopsyche opalescens* Flint, 1972:245.- Raphael et al., 1989:8.

This species described from Argentina has been found commonly near large rivers over much of South America: Ecuador, Guyana, Paraguay, Peru, Suriname and Venezuela. In Brazil I have seen the species from Para and Rio de Janeiro, but it must be more widely distributed.

Material.- Brazil, Estado Roraima, Ilha Maraca, Rio Uraricoera, 02-13 May 1987, J. A. Rafael, J. E. B. Brasil & L. S. Aquino, 5♂, 14♀; 18-28 Aug 1987, 1♂, 9♀; 21-30 Nov 1987, 1♂, 9♀, 2 without abdomens.

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