

Ochteroidea (Hemiptera: Heteroptera: Nepomorpha) of Pará, Brazil, with new records from the western portion of the state

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Abstract: Ochteroidea (Hemiptera: Heteroptera: Nepomorpha) includes the families Gelastocoridae and Ochteridae. Most species inhabit the margins of water bodies, although some members of the genus *Nerthra* Say, 1832 (Gelastocoridae: Nerthrinae) may be found on epigeus far from aquatic environments. In northern Brazil, Gelastocoridae diversity is better known in the states of Amazonas and Pará. In turn, three species of Ochteridae have been reported from Amazonas, but none from Pará. Here, we provide an updated list of Ochteroidea recorded from Pará, including new records based on fieldwork conducted between November 2019 and February 2025 along the margins of 17 water bodies in the western portion of the state. Our findings include the first records from the state of *Gelastocoris amazonensis* Melin, 1929, *Ochterus aeneifrons surinamensis* Nieser, 1975, and *O. perbosci* (Guérin-Méneville, 1843). We also expand the known distributions of *G. flavus flavus* (Guérin-Méneville, 1835), *G. vandamepompanoni* Boulard & Jauffret, 1984, and *Nerthra raptoria* (Fabricius, 1803) in western Pará. Notably, *G. vandamepompanoni* is reported for the first time since its original description more than 40 years ago. These new records contribute to fill the Wallacean gap for Ochteroidea in the Amazon and highlight the importance of continued faunistic surveys in underexplored areas.

Keywords: Aquatic ecosystems; Aquatic insects; Eastern Amazon; Faunistics.

Ochteroidea (Hemiptera: Heteroptera: Nepomorpha) do Pará, Brasil, com novos registros na porção oeste do estado

Resumo: Ochteroidea (Hemiptera: Heteroptera: Nepomorpha) inclui as famílias Gelastocoridae e Ochteridae. A maioria das espécies habita as margens de corpos d'água, embora alguns membros do gênero *Nerthra* Say, 1832 (Gelastocoridae: Nerthrinae) possam ser encontrados em epígeo longe de ambientes aquáticos. No Norte do Brasil, a diversidade de Gelastocoridae é mais conhecida nos estados do Amazonas e do Pará. Por sua vez, três espécies de Ochteridae foram relatadas no Amazonas, mas nenhuma no Pará. Aqui, fornecemos uma lista atualizada de Ochteroidea registrados no Pará, incluindo novos registros baseados em trabalho de campo realizado entre novembro de 2019 e fevereiro de 2025 ao longo das margens de 17 corpos d'água na porção Oeste do estado. Nossos achados incluem os primeiros registros no estado de *Gelastocoris amazonensis* Melin, 1929, *Ochterus aeneifrons surinamensis* Nieser, 1975 e *O. perbosci* (Guérin-Méneville, 1843). Também expandimos as distribuições conhecidas de *G. flavus flavus* (Guérin-Méneville, 1835), *G. vandamepompanoni* Boulard & Jauffret, 1984 e *Nerthra raptoria* (Fabricius, 1803) no oeste do Pará. Notavelmente, *G. vandamepompanoni* é relatado pela primeira vez desde sua descrição original há mais de 40 anos. Esses novos registros contribuem para preencher a lacuna wallaceana para Ochteroidea na Amazônia e destacam a importância de levantamentos faunísticos contínuos em áreas pouco exploradas.

Palavras-chave: Amazônia Oriental; Ecossistemas aquáticos; Faunística; Insetos aquáticos.

Introduction

Ochteroidea is one of the five superfamilies of the infraorder Nepomorpha (Hemiptera: Heteroptera) and includes the families Gelastocoridae and Ochteridae (Wang et al. 2021). Most of these insects live on the margins of water bodies, but some *Nerthra* Say, 1832 (Gelastocoridae: Nerthrinae) can be found far away from them in forests, under leaves or debris (Woodward et al. 1979, Nieser and Melo 1997). They are saltatorial, have highly asymmetric male terminalia and can be distinguished from other nepomorphans by the presence of ocelli on the head, and the middle and hind legs not adapted for swimming (Barbosa and Rodrigues 2015).

Members of Gelastocoridae are commonly known as toad bugs. They are nearly cosmopolitan, but missing in the Palaearctic Region except its transitional marginal zones and represent more than 100 known species included in the subfamilies Gelastocorinae and Nerthrinae (Polhemus and Polhemus 2008, Barbosa and Rodrigues 2015). So far, 21 gelastocorid species have been recorded from Brazil, nine of which belong to *Gelastocoris* Kirkaldy, 1897 (Gelastocorinae) and 12 to *Nerthra* (Moreira et al. 2011). Northern and southeastern Brazil are the two regions of the country with the highest numbers of recorded species, while Amazonas and Pará are the two richest states in the former region (Moreira et al. 2011).

In turn, Ochteridae are commonly known as velvety shore bugs. They are found worldwide, except for cold regions and isolated Pacific Ocean islands, and compose three recent genera that include more than 80 species (Kment, Carapezza and Jindra 2020). Records from Brazil are very scarce and belong to only four species of *Ochterus* Latreille, 1807. Three of them have been reported from the state of Amazonas, in the northern region of the country, but none from the state of Pará (Cordeiro, Moreira and Silva 2014).

Aiming to decrease the knowledge gaps on Ochteroidea of Brazil, especially on Ochteridae, we present a list of the species known from Pará and new records from the western portion of the state.

Material and Methods

Fieldwork was conducted along the margins of 17 aquatic habitats—including rivers, streams, waterfalls, and lakes (Figure 1; Table 1)—across seven municipalities in western Pará: Alenquer, Belterra, Iaituba, Óbidos, Oriximiná, Monte Alegre, and Santarém. Sampling took place between November 2019 and February 2025. All sites are located within a tropical monsoon climate zone (Am), characterized by an average annual precipitation of approximately 2000 mm (Rodrigues 2001).

We collected the specimens manually with the aid of forceps and fixed them in vials with 70% ethanol solution, labeling them with locality, date and collector names. We obtained geographic coordinates of each sampling locality using a GPS receiver. We identified the material based on external morphology and male terminalia, following De Carlo (1954), Todd (1955), Nieser (1975), Boulard and Jauffret (1984) and Cordeiro, Moreira and Silva (2014).

To identify, dissect and obtain images of the specimens, we used a Leica S8APO stereomicroscope coupled with Leica M120 HD digital camera. After identification, we stored dissected structures in plastic microvials filled with glycerin, inside the vials containing the specimens. Specimens are deposited in the collection of the Laboratório

de Ecologia e Taxonomia de Insetos Aquáticos, Universidade Federal do Oeste do Pará, Santarém, Brazil. In the distribution section of each species, we include all known references for records from Brazil, while only the first known reference is cited for other countries or territories. We used QGIS v.3.34.1 (QGIS Development Team 2020) to produce maps.

Results

Gelastocoridae

Gelastocorinae

Gelastocoris amazonensis Melin, 1929

Figures 2A-B, 4; Table 1

Material examined. Brazil, Pará, Belterra: Igarapé Aramanai (−2.7155, −54.9997), 07.XI.2019, S.E. dos Santos col.: 1 ♀. Santarém: lago da Escola da Floresta (−2.5105, −54.9358), 12.I.2023, S.E. dos Santos col.: 1 ♂.

Distribution. Brazil: Amazonas (Melin 1929, Todd 1955, Nieser 1975), Pará (present study).

Distribution in Pará. Belterra, Santarém (present study).

Comments. First records from the state of Pará. Todd (1957a) examined a specimen from “Rio Branco” collected by J. D. Haseman. This is a river that runs through the Brazilian states of Roraima and Amazonas (Moreira et al. 2011). Schnack and Estévez (1979) recorded this species from “Rio Caraguatá, Brasil”, based on one male collected by Fritz Plaumann. They assumed that this river was in the state of Amazonas, when in fact it is in the state of Mato Grosso do Sul, more than 2000 km to the South (Moreira et al. 2011). This likely mistaken record (repeated by Moreira et al. 2011 and Floriano, Oliveira and Melo 2013) needs verification.

Gelastocoris angulatus (Melin, 1929)

Distribution. Argentina (De Carlo 1954). Bolivia (Martin 1929). Brazil (Melin 1929, Todd 1957a): Amazonas (Todd 1957a), Bahia (Melin 1929), Ceará (Takiya et al. 2016), Goiás (Todd 1957b), Mato Grosso (Todd 1955, Nieser 1977), Minas Gerais (Nieser and Melo 1997, Barbosa 2002, Pelli, Nieser and Melo 2006, Souza, Melo and Vianna 2006), Pará (Todd 1957a), Rio de Janeiro (Melin 1929), São Paulo (Castanhole et al. 2013, Pereira et al. 2015). Guyana (Todd 1957a). Paraguay (Martin 1929). Suriname (Nieser 1975).

Distribution in Pará. Santarém (Todd 1957).

Comments. There is no clear agreement on the taxonomic limits and synonyms of this species. See Moreira et al. (2011: 38) for details.

Gelastocoris flavus flavus (Guérin-Ménéville, 1835)

Figures 2C-D, 4; Table 1

Material examined. Brazil, Pará, Alenquer: Cachoeira Vale do Paraíso (−1.4917, −54.5227), 04.VII.2024, S.R.M. Couceiro col.: 2 ♂, 2 ♀. Monte Alegre: Serra do Itauajuri (igarapé na estrada) (−1.8453, −54.0492), 28.VI.2023, S.E. dos Santos col.: 1 ♀. Same, except Lagoa Azul (−1.8509, −54.0455), 1 ♂. Óbidos: Igarapé Curuçambá (−1.8307, −55.4946), 29.V.2023, S.E. dos Santos col.: 3 ♂, 2 ♀. Same, except Igarapé Alegria (−1.8853, −55.5119), 29.V.2023, 1 ♂. Oriximiná: Cachoeira Jatuarana (−1.6530, −55.7083), 11.VI.2023, S.E. dos Santos col.: 3 ♀. Santarém: lago da Escola da Floresta (−2.5105, −54.9358), 12.I.2023, S.E. dos Santos col.: 3 ♂, 23 ♀. Same, except Universidade Federal do Oeste do Pará, Rio Tapajós (−2.4164, −54.7428), 03.I.2023,



Figure 1. Sampling localities in western state of Pará, Brazil. A. Igarapé Campo Grande, Alenquer. B. Igarapé Aramanai, Belterra. C. Igarapé Ponte Fonte Azul, Itaituba. D. Cachoeira Jatuarana, Oriximiná. (E) Cachoeira da Cavada, Santarém. (F) Lago da Escola da Floresta, Santarém.

2 ♀. Same, except Ponte do Juá (−2.4444, −54.7892), 06.XII.2019, 4 ♂, 2 ♀. Same, except Lago do Juá (−2.4325, −54.7819), 04.XII.2019, 1 ♂, 3 ♀.

Distribution. Argentina (Berg 1879). Bolivia (Guérin-Méneville 1835). Brazil (Guérin-Méneville 1835, Todd 1955): Amazonas (Melin 1929, Pereira and Melo 2007), Bahia (Melin 1929), Espírito

Table 1. Collecting localities of Ochteroidea in aquatic environments of the western region of Pará, Brazil, from November 2019 to February 2025.

Municipality	Water body	Geographic coordinates	Water type/ Flood pulse	Riverbed/bank substrate	Abiotic variables the of water body					Family	
					pH	Cond. (µS/s)	Sal. (ppt)	OD (mg/l)	Turb. (mtv)	Temp. (°C)	Species
Alenquer	Cachoeira Vale do Paraíso	-1.4917, -54.5227	black/no	rocky/sandy	-	-	-	-	-	-	Gelastocoridae <i>Gelastocoris flavus</i>
	Rio Amazonas (José)	-2.0031, -54.8834	white/yes	muddy, little leaf litter; few aquatic plants; no algae/muddy with sparse riparian vegetation; grasses	6.45	39.7	0.02	1.3	53	29.2	<i>Gelastocoris vandamepompanoni</i> <i>Nerthra raptorita</i>
Belterra	Igarapé Aramanai	-2.7155, -54.9997	clear/yes	sandy; abundant leaf litter; many aquatic plants; abundant algae/sandy with sparse riparian vegetation; grasses	4.61	18.5	0.01	2.4	0.58	26.4	<i>Gelastocoris amazonensis</i>
Monte Alegre	Serra do Itauajuri (igarapé na estrada)	-1.8453, -54.0492	clear/no	rocky; abundant leaf litter; many aquatic plants; abundant algae/sandy with sparse riparian vegetation; grasses	7.6	48.02	0.02	2.8	4.14	26.8	<i>Gelastocoris flavus</i>
Monte Alegre	Lagoa Azul	-1.8509, -54.0455	clear/no	rocky; abundant leaf litter; many aquatic plants; abundant algae/sandy with riparian vegetation; grasses	7.80	76	0.04	2.5	1.45	26.4	<i>Gelastocoris flavus</i>
Óbidos	Igarapé Curuçambá	-1.8307, -55.4946	clear/no	sandy; little leaf litter; many aquatic plants; abundant algae/sandy with riparian vegetation; grasses	6.47	9.9	-	-	2.71	26.0	<i>Gelastocoris flavus</i>
Óbidos	Igarapé Alegria	-1.8853, -55.5119	clear/no	sandy; abundant leaf litter; many aquatic plants; abundant algae/sandy with riparian vegetation; grasses	4.90	14.6	-	-	2.21	27.6	<i>Gelastocoris flavus</i>
Oriximiná	Cachoeira Jatuarana	-1.6530, -55.7083	clear/no	sandy and rocky; little leaf litter; few aquatic plants; no algae/sandy with sparse riparian vegetation; no grasses	4.45	18.7	-	7.1	-	27.6	<i>Gelastocoris flavus</i>
Santarém	lago da Escola da Floresta	-2.5105, -54.9358	clear/yes	sandy; little leaf litter; few aquatic plants; no algae/sandy with riparian vegetation; no grasses	-	-	-	-	-	-	<i>Gelastocoris amazonensis</i> <i>Gelastocoris flavus</i> <i>Gelastocoris vandamepompanoni</i>

Continue...

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Municipality	Water body	Geographic coordinates	Water type/ Flood pulse	Riverbed/bank substrate	Abiotic variables the of water body					Family	
					pH	Cond. (µS/s)	Sal. (ppt)	OD (mg/l)	Turb. (mtv)	Temp. (°C)	Species
Santarém	Universidade Federal do Oeste do Pará, Rio Tapajós	-2.4164, -54.7428	clear/yes	sandy and rocky; little leaf litter; few aquatic plants; few algae/sandy without riparian vegetation; few grasses	-	-	-	-	-	-	<i>Gelastocoris flavus</i>
Santarém	Ponte do Juá	-2.4444, -54.7892	white/no	muddy; abundant leaf litter; few aquatic plants; few algae/sandy with riparian vegetation; grasses	6.17	11.0	0.00	5.5	-	26.0	<i>Gelastocoris vandamepompanoni</i>
Santarém	Lago do Juá	-2.4325, -54.7819	clear-white/yes	sandy and muddy; abundant leaf litter; many aquatic plants; abundant algae/sandy and muddy with sparse riparian vegetation; grasses	6.0	9.2	-	4.9	14.13	28.6	<i>Gelastocoris flavus</i>
Alenquer	Igarapé Campo Grande	-1.8058, -54.7787	white/no	muddy; abundant leaf litter; few aquatic plants; no algae/muddy without riparian vegetation; grasses	6.61	73.2	-	12.1	-	25.7	Ochteridae <i>Ochterus aeneifrons surinamensis</i>
Itaituba	Igarapé Ponte Fonte Azul	-4.2860, -56.0686	white/yes	muddy; abundant leaf litter; many aquatic plants; abundant algae/sandy with riparian vegetation; no grasses	-	-	-	-	-	-	<i>Ochterus perbosci</i>
Óbidos	Igarapé do Talo	-1.8705, -55.5323	clear/no	sandy; abundant leaf litter; many aquatic plants; abundant algae/sandy with riparian vegetation; with grasses	4.1	2.1	-	11.3	-	0.39	<i>Ochterus aeneifrons surinamensis</i>
Santarém	Cachoeira da Cavada	-2.5969, -54.5298	clear/no	muddy; abundant leaf litter; many aquatic plants; abundant algae/sandy with riparian vegetation; no grasses	4.77	13.8	0.00	3.3	-	27.2	<i>Ochterus aeneifrons surinamensis</i>
Santarém	igarapé do Laranjal	-2.5464, -54.9244	clear/no	sandy; abundant leaf litter; many aquatic plants; few algae/sandy with riparian vegetation; grasses	7.07	27.1	7.2	11	0.00	1.57	<i>Ochterus aeneifrons surinamensis</i>

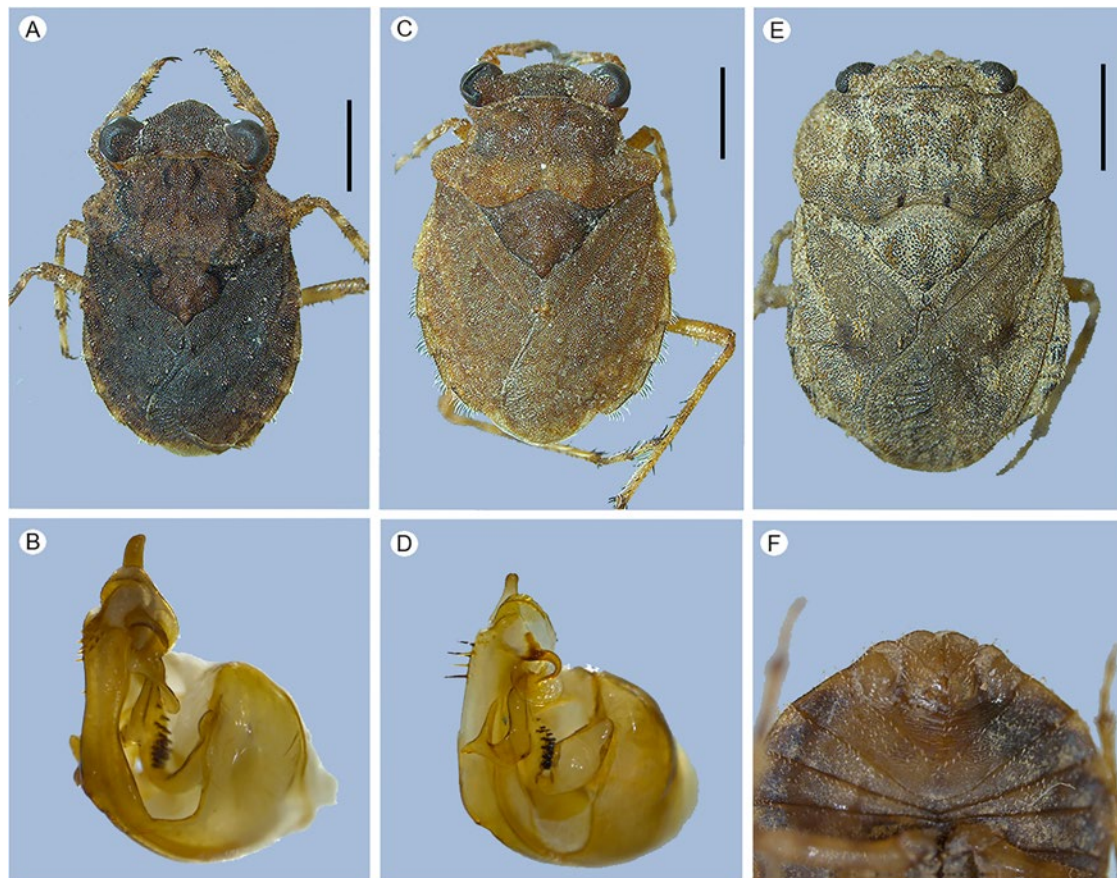


Figure 2. Gelastocoridae collected in western state of Pará, Brazil. A, B. *Gelastocoris amazonensis*, male. A. Habitus, dorsal view. B. Genital capsule, right lateral view. C, D. *Gelastocoris flavus flavus*, male. C. Habitus, dorsal view. D. Genital capsule, right lateral view. E, F. *Nerthra raptoria*, female. E. Habitus, dorsal view. F. Apex of abdomen, ventral view. Scale bars: 1 mm.

Santo (Todd 1955), Goiás (Todd 1957b), Mato Grosso (Melin 1929, Heckman 1998, Schnack and Estévez 1979), Mato Grosso do Sul (Floriano, Oliveira and Melo 2013), Minas Gerais (Melin 1929, De Carlo 1954, Todd 1955, Nieser and Melo 1997, Melo and Nieser 2004, Pelli, Nieser and Melo 2006, Souza, Melo and Vianna 2006), Pará (Melin 1929, Todd 1955, Nieser 1972, 1975, Boulard and Jauffret 1984, present study), Paraná (Melin 1929), Rio de Janeiro (Stål 1860, Todd 1955, De Carlo 1959, Nieser 1972, Rodrigues et al. 2023), Rio Grande do Sul (Melin 1929), Santa Catarina (Todd 1955, 1972, Nieser 1977), São Paulo (Todd 1955, Nieser 1972, Castanhole et al. 2013, Pereira et al. 2015), Tocantins (Todd 1957b). Colombia (Nieser 1977). Guyana (Todd 1955). Paraguay (Martin 1929). Suriname (Todd 1955). Trinidad & Tobago (Nieser and Alkins-Koo 1991). Uruguay (Todd 1957a). Venezuela (Melin 1929).

Distribution in Pará. Alenquer (present study), Almeirim (Nieser 1972, 1975), Aveiro, Belterra (Nieser 1972), Faro (Melin 1929), Monte Alegre, Óbidos, Oriximiná (present study), Santarém (Melin 1929, Nieser 1972, 1975, present study), São Félix do Xingu (Boulard and Jauffret 1984). Todd (1955) reported specimens from Pará, without further details.

Comments. There has been confusion regarding the correct name, publication date, identity, and taxonomic limits of *Gelastocoris flavus* (Guérin-Méneville, 1835) and its two subspecies, *G. f. flavus*

and *G. f. quadrimaculatus* (Guérin-Méneville, 1844). For a summary, see Todd (1955), De Carlo (1959), Todd (1961) and Nieser (1972, 1975).

***Gelastocoris vandamepompanoni* Boulard & Jauffret, 1984**

Figures 3, 4; Table 1

Material examined. Brazil, Pará, Alenquer: Rio Amazonas (José) (−2.0031, −54.8834), 06.VII.2023, S.E. dos Santos col.: 1 ♂. Santarém: Rio Tapajós, Universidade Federal do Oeste do Pará (−2.4164, −54.7428), 03.I.2023, S.E. dos Santos leg.: 1 ♂. Same, except lago da Escola da Floresta (−2.5105, −54.9358), 26.VII.2024, 6 ♂, 7 ♀.

Distribution. Brazil: Pará (Boulard and Jauffret 1984; present study).

Distribution in Pará. Alenquer, Santarém (present study), São Félix do Xingu (Boulard and Jauffret 1984).

Diagnosis. Male: length ~6.3 mm, maximum width ~3.7 mm, general color yellow to brown, sometimes black (Figure 3A, D). Head with vertex slightly depressed; width ~2.7 mm; eye large (Figure 3A); labium short, robust, triarticulate (Figures 3B, E); antenna yellow with black apex. Pronotum with disc elevated, lateral angles projecting, weakly denticulate, concave laterally; scutellum prominent; hemelytron with bluish granulation (Figure 3A, D). Terminalia asymmetrical (Figure 3B), left paramere simple, short, right paramere long, robust, with spines and a lateral hook (Figure 3C). Female: length ~6.5 mm, maximum width ~3.9 mm, color like in the male, with greenish nuances (Figure 3D); head width ~2.8 mm.

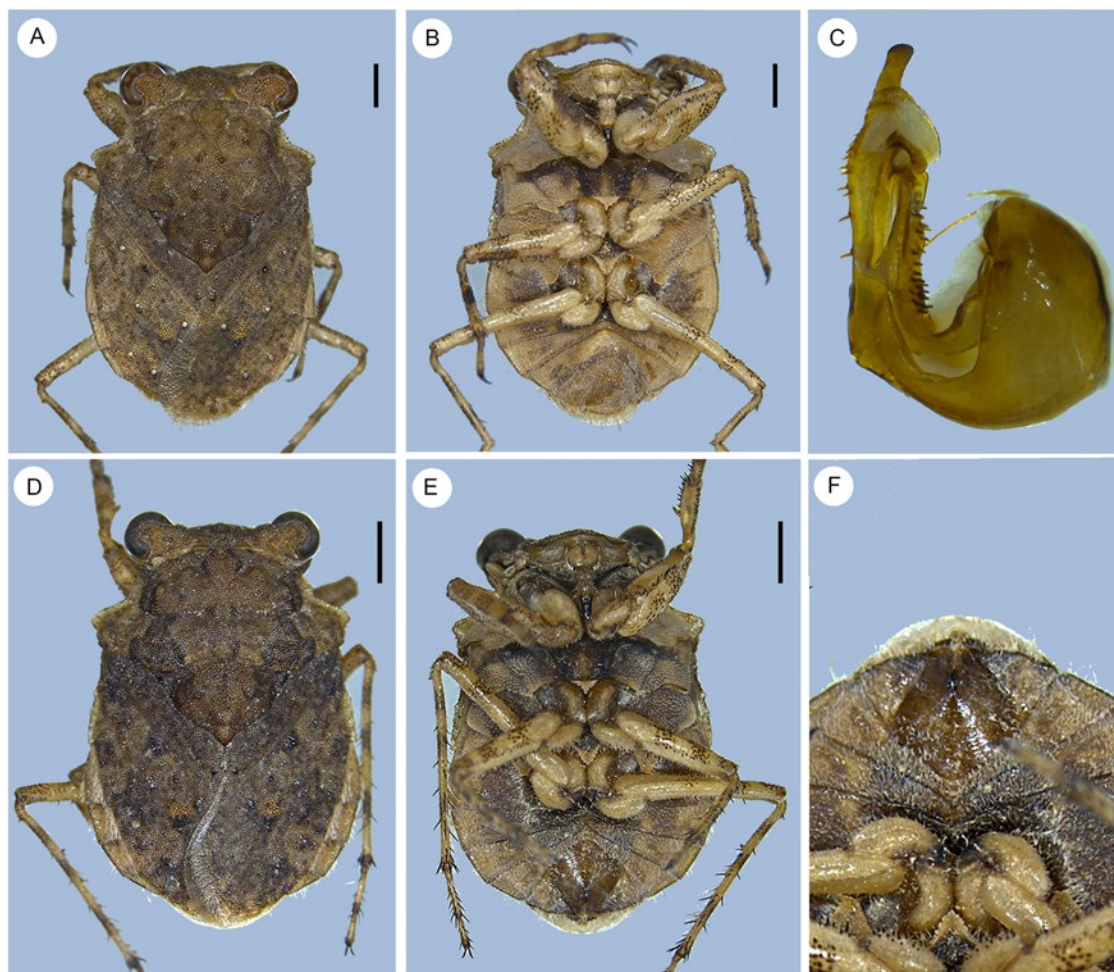


Figure 3. *Gelastocoris vandamepompanoni* collected in western state of Pará, Brazil. A–C. Male. A. Habitus, dorsal view. B. Habitus, ventral view. C. Genital capsule, right lateral view. D–F. Female. D. Habitus, dorsal view. E. Habitus, ventral view. F. Apex of abdomen, ventral view. Scale bars: 1 mm.

Comments. First records since the species description. The coloration of the holotype was characterized as monochromatic, from yellow to dark brown, but one of our males is black. This type of variation is common in the genus.

Nerthrinae

Nerthra buenoi Todd, 1955

Distribution. Brazil: Goiás (Todd 1957b), Pará (Nieser, Chen and Caspers 2024), Pernambuco (Todd 1955).

Distribution in Pará. Capanema (Nieser, Chen and Caspers 2024).

Comments. Schack and Estévez (1979) recorded *N. buenoi* from Paraguay. However, the measurements that they provided are not compatible with this species. This record is probably erroneous and was repeated by Moreira et al. (2011), but not by Nieser et al. (2024).

Nerthra nepaeformis (Fabricius, 1775)

Distribution. Antigua & Barbuda (Fabricius 1775). Argentina (Berg 1879). Brazil (Burmeister 1835, Herrich-Schäffer 1849, Stål 1854): Amazonas, Bahia (Todd 1955), Minas Gerais (Nieser and Melo 1997), Pará (Todd 1972), Rio de Janeiro (Stål 1860, Melin 1929, Todd 1955, Rodrigues et al. 2023), Santa Catarina (Melin 1929, Todd 1955, 1972),

São Paulo (Melin 1929, Schnack and Estévez 1979). Chile (Melin 1929). Colombia (Stål 1876). Costa Rica (Pittier and Biolley 1895). French Guiana (Stål 1876). Guatemala (Champion 1901). Mexico (Torre-Bueno 1905). Paraguay (Todd 1955). Suriname (Bünzli 1935). Trinidad & Tobago (Kevan 1942). Uruguay (Ruffinelli and Pirán 1959).

Distribution in Pará. Jacareacanga (Todd 1972).

Nerthra ranina (Herrich-Schäffer, 1853)

Distribution. Argentina (Montandon 1899). Bolivia (Todd 1955). Brazil (Montandon 1899, Melin 1929, Nieser 1977): Goiás (Todd 1957b). Mato Grosso (Nieser 1977), Mato Grosso do Sul (Floriano, Oliveira and Melo 2013), Minas Gerais (Melin 1929, Nieser and Melo 1997, Melo and Nieser 2004), Pará (Todd 1955), Rio Grande do Sul (Melin 1929), Rio de Janeiro (Melin 1929), Santa Catarina (Montandon 1899, Todd 1955, Nieser 1977, Schnack and Estévez 1979), São Paulo (Todd 1955, Schnack and Estévez 1979). Chile (Todd 1955). Colombia (Nieser 1977). Paraguay (Montandon 1899). Peru (Poisson 1954). Uruguay (Ruffinelli and Pirán 1959). Venezuela (Montandon 1899).

Distribution in Pará. Unknown locality (Todd 1955).

Comment. The specimen recorded from “Nord de Goyaz” by Montandon (1899) might have been collected in what is now the state

of Tocantins or in the northern portion of the state of Goiás (Moreira et al. 2011).

Nerthra raptoria (Fabricius, 1803)

Figures 2E-F, 4; Table 1

Material examined. Brazil, Pará, Alenquer: Rio Amazonas (José) (−2.0031, −54.8834), 06.VII.2023, S.E. dos Santos col.: 8 ♀.

Distribution. Argentina (Berg 1879). Brazil (Costa 1864, Walker 1873, Montandon 1899, Melin 1929, Todd 1957a, Casale 1981): Amazonas (Walker 1873, Melin 1929, Todd 1955), Bahia (Melin 1929), Mato Grosso (Todd 1955, Nieser 1975), Minas Gerais (Stål 1876, Melin, 192, Nieser and Melo 1997, Souza, Melo and Vianna 2006), Pará (Melin 1929, Todd 1955, 1957a, present study), Paraná (Schnack and Estévez 1979), Rio Grande do Sul (Todd 1957a), Rio de Janeiro (Stål 1860, Mayr 1866, Walker 1873, Melin 1929). Colombia (Herrich-Schäffer 1849). Ecuador (Walker 1873). French Guiana (Melin 1929). Grenada (Uhler 1894). Guatemala (Todd 1957a). Mexico (Walker 1873). Panama (Champion 1901). Paraguay (Montandon 1895). Peru (Nieser and Chen 1992). Suriname (Stål 1876). Venezuela (Melin 1929).

Distribution in Pará. Alenquer (present study), Monte Alegre (Todd 1957a), Santarém (Melin 1929, Todd 1955).

Comment. As mentioned above for *G. amazonensis*, the “Rio Branco” cited by Todd (1957a) for *N. raptoria* is a river that runs through the Brazilian states of Roraima and Amazonas (Moreira et al. 2011).

Nerthra unicornis (Melin, 1929)

Distribution. Argentina (Schnack and Estévez 1979). Brazil: Bahia (Nieser 1977), Minas Gerais (Melin 1929), Pará (Todd 1955), Rio Grande do Sul (Melin 1929, Todd 1955, 1959). French Guiana (Melin 1929). Paraguay (Todd 1972). Suriname (Todd 1959).

Distribution in Pará. Unknown locality (Todd 1955).

Comment. Melin (1929) assigned one nymph from Guyana to this species, with a question mark.

Ochteridae

Ochterus aeneifrons surinamensis Nieser, 1975

Figures 5A-5B, 6; Table 1

Material examined. Brazil, Pará, Alenquer: Igarapé Campo Grande (−1.8058, −54.7787), 05.XI.2022, S.E. dos Santos col.: 1 ♂, 1 ♀. Óbidos: Igarapé do Talo (−1.8705, −55.5323), 31.V.2023, S.E. dos Santos col.: 1 ♂. Santarém: Cachoeira da Cavada (−2.5969, −54.5298), waterfall wall, 13.XI.2019, S.E. dos Santos col.: 1 ♂, 2 ♀. Same, except Igarapé do Laranjal (−2.5464, −54.9244), illuminated sheet, 27.II.2025, 2 ♂.

Distribution. Brazil: Amazonas (Pereira and Melo 2007), Minas Gerais (Pelli, Nieser and Melo 2006); Pará (present study). Colombia (Kment, Carapezza and Jindra 2020). Suriname (Nieser 1975). Venezuela (Drake 1952).

Distribution in Pará. Alenquer, Óbidos, Santarém (present study).

Comment. First records from Pará.

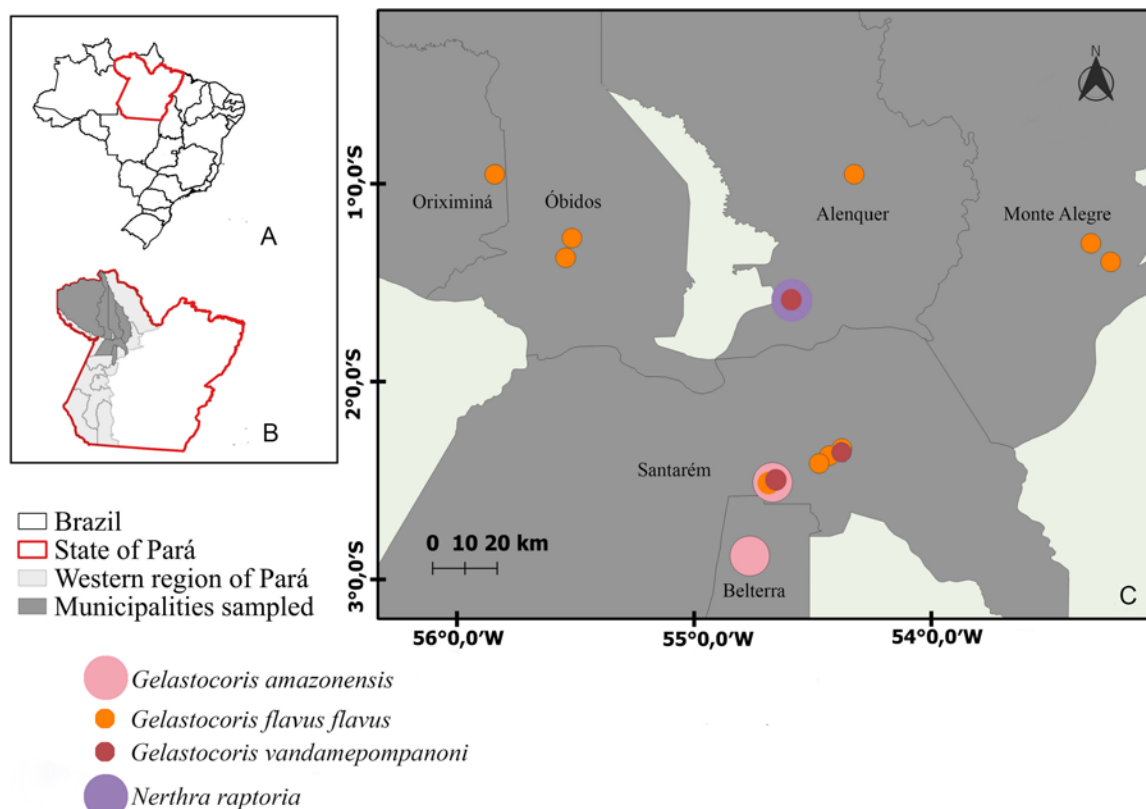


Figure 4. Maps showing the distribution of the new records of Gelastocoridae from western state of Pará, Brazil. A. Brazil, with Pará highlighted. B. Pará, with the western portion of the state highlighted. C. Distribution of sampling stations in western Pará.



Figure 5. *Ochterus* collected in western state of Pará. A, B. *Ochterus aeneifrons surinamensis*, male. A. Habitus, dorsal view. B. Right paramere. C, D. *Ochterus perbosci*, male. C. Habitus, dorsal view. D. Right paramere.

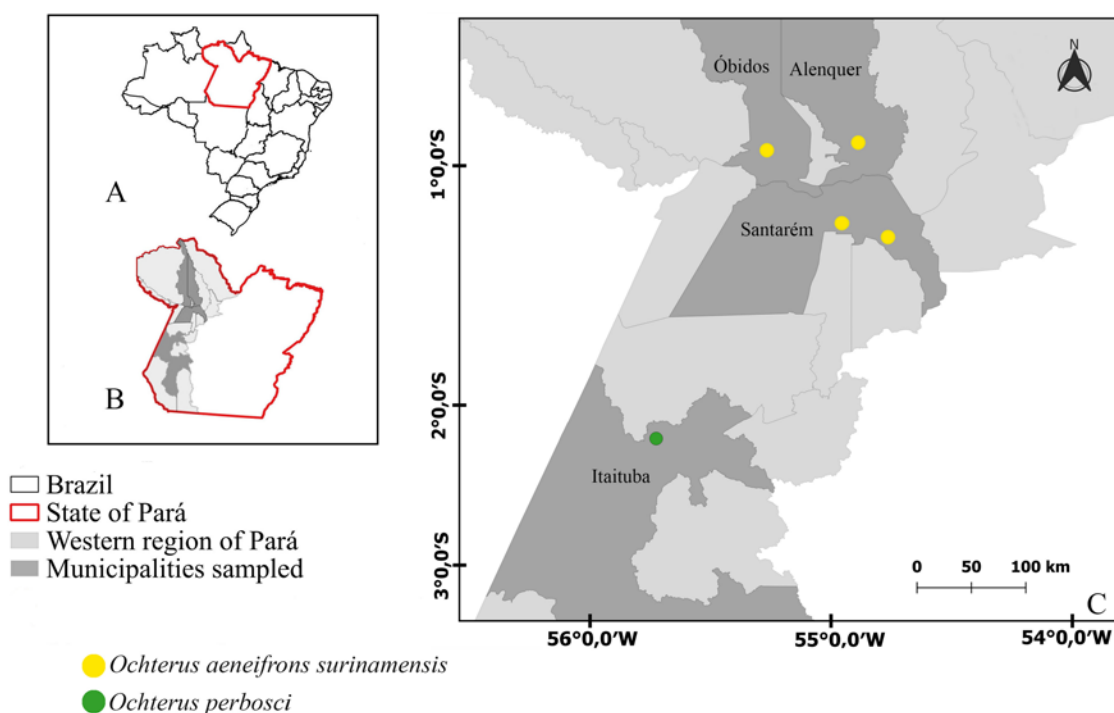


Figure 6. Maps showing the distribution of the new records of Ochteridae from western state of Pará, Brazil. A. Brazil, with Pará highlighted. B. Pará, with the western portion of the state highlighted. C. Distribution of sampling stations in western Pará.

Ochterus perbosci (Guérin-Méneville, 1843)

Figures 5C-D, 6; Table 1

Material examined. Brazil, Pará, Itaituba: Igarapé Ponte Fonte Azul (−4.2860, −56.0686), 27.VII.2022, S.E. dos Santos col.; 1 ♂.

Distribution. Aruba (Cobben 1960). Belize (Polhemus and Polhemus 2016). Brazil (Drake 1952): Amazonas (Pereira and Melo 2007), Minas Gerais (Nieser and Melo 1997, Vianna and Melo 2003, Melo and Nieser 2004, Souza, Melo and Vianna 2006), Pará (present study).

Colombia (Drake 1952). Costa Rica (Schell 1943). Curaçao (Cobben 1960). Ecuador (Schell 1943). Grenada (Uhler 1894). Guatemala (Osborn and Drake 1915). Honduras (Passoa 1983). Mexico (Guérin-Méneville 1843). Nicaragua (Maes 1989). Panama (Drake 1952). Paraguay. Peru (Schell 1943). St. Vincent & the Grenadines (Uhler 1893). Suriname (Nieser 1975). Trinidad & Tobago (Nieser and Alkins-Koo 1991). United States (Schell 1943). Venezuela (Polhemus and Polhemus 2016).

Distribution in Pará. Itaituba (present study).

Comments. First record from Pará. Incorrectly listed from Cuba by Champion (1901) (repeated by Kirkaldy and Torre-Bueno 1909) (see Naranjo et al. 2010, Polhemus and Polhemus 2016).

Discussion

Our results increase to three genera and 11 species the fauna of Ochteroidea known from Pará. Gelastocoridae is represented in the state by two genera and nine species, and Ochteridae by one genus and two species. We report the first records from the state for Ochteridae, represented by *Ochterus aeneifrons surinamensis* and *O. perbosci*, and for *Gelastocoris amazonensis*. Notably, our records of *G. amazonensis* are the first since Nieser (1975) studied material from the state of Amazonas over 50 years ago.

We also expand the known distributions of *G. flavus flavus*, *G. vandamepompanoni*, and *Nerthra raptoria* in the western portion of the state. Remarkably, *G. vandamepompanoni* is herein recorded for the first time since its original description more than 40 years ago (Boulard and Jauffret 1984). Although *G. angulatus*, *N. buenoi*, *N. nepaeformis*, *N. ranina*, and *N. unicornis* have also been recorded from the state, we did not collect any specimens in our study.

We also verified that some species of Gelastocoridae such as *G. amazonensis*, *G. f. flavus*, *G. vandamepompanoni* and *Nerthra raptoria* occur sympatrically in the western portion of Pará (see Table 1). Boulard and Jauffret (1984) had previously found *G. f. flavus* and *G. vandamepompanoni* in the same collecting site. Among these species, *Gelastocoris f. flavus* has been collected both in the Tapajós and Amazonas basins (see Table 1; Melin 1929, Todd 1955, Nieser 1972, 1975), while *N. raptoria* is restricted to the Amazon basin (see Table 1; Melin 1929; Todd 1955, 1957). In Ochteridae, we did not find sympatric species. *Ochterus a. surinamensis* is distributed both in the Tapajós and Amazon basins, while *O. perbosci* is restricted to the Tapajós basin (see Table 1).

With our results, the known diversity of Ochteroidea in Pará now represents approximately 50% of all species recorded from Brazil (Moreira et al. 2011, Cordeiro, Moreira and Silva 2014). Given the vast, underexplored nature of western Pará, particularly in relation to aquatic insects, this study significantly contributes to reduce the Wallacean shortfall for Nepomorpha in the region. We encourage fellow researchers to survey the margins of water bodies during their field work, as these insects are often underrepresented in entomological collections.

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Author Contributions

Suzane Evaristo dos Santos: contributed to data collection, species identification and writing of the article.

Fabiano Stefanello: contributed to data collection, species identification and writing of the article.

Felipe Ferraz Figueiredo Moreira: contributed to the writing and review of the article.

Sheyla Regina Marques Couceiro: contributed to data collection, writing and review of the article.

Conflicts of Interest

The authors declare that there is no conflict of interest related to the publication of this manuscript.

Ethics

This study did not involve human beings and/or clinical trials that should be approved by one Institutional Committee.

Data Availability

The data used in our analysis is available at Biota Neotropica: <https://doi.org/10.48331/scielodata.OBROHU>.

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