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Checklist and updated distribution of Protoneuridae from Brazil

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Checklist and updated distribution of Protoneuridae from Brazil

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Protoneuridae are represented in the neotropics by 16 genera and 117 species, of which 64 species in 12 genera are known to occur in Brazil. Most of them are known only from the original descriptions or isolated records. During 2009 the Protoneuridae collection of MNRJ was revised; 2800 specimens were studied, belonging to 40 species in nine genera. As a result, the distribution of 25 species is extended, including 50 new records for several states and three new records for the country: *Epipleoneura lamina* Williamson, *Protoneura woytkowskii* Gloyd, and *Psaironeura remissa* (Calvert). The widest distributions are shown by *Neoneura sylvatica* Hagen in Selys, *Epipleoneura venezuelensis* Rácenis, and *Epipleoneura metallica* Rácenis, which are also recorded from the highest number of states: 11 and eight respectively. Additionally, the distribution of most species within previously recorded states is extended.

Keywords: Odonata; dragonfly; Zygoptera; Protoneuridae; fauna; Brazil; distribution

Introduction

Neotropical Protoneuridae currently includes 117 species in 16 genera (Garrison, 2010), and at present, 64 species in 12 genera are known from Brazil (Lencioni, 2005, 2006, 2009; Machado, 2007, 2008; Pessacq & Costa, 2007, 2010; von Ellenrieder & Garrison, 2008).

Many of the species are known only from type localities and/or isolated records, and the real distributions of most species are unknown. Additionally, the number of species within the family is likely to increase, as several new species have been described in recent years (Lencioni, 2009; Machado, 2007; Pessacq & Costa, 2007; von Ellenrieder & Garrison, 2008), and many others are waiting to be described or are being described (Garrison et al., 2010; A.B.M. Machado, pers. comm.).

During 2009, the Protoneuridae collection of the “Museu Nacional do Rio de Janeiro” of the “Universidade Federal do Rio de Janeiro” was revised and 2800 specimens were recorded, belonging to 40 species in nine genera. This revision and literature records provided the information for this contribution.

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Material and methods

The distribution of each species was established from information provided in labels of specimens deposited in the collection of the Museu Nacional – UFRJ (MNRJ) and from the literature. For most localities we provide GPS data, with the purpose of increasing precision.

Abbreviations for the states are as follows: AC, Acre; AM, Amazonas; AP, Amapá; BA, Bahia; BR, Brasília, Distrito Federal; ES, Espírito santo; GO, Goiás; MA, Maranhão; MG, Minas Gerais; MT, Mato Grosso; MS, Mato Grosso do Sul; PA, Pará; PE, Pernambuco; PR, Paraná; RJ, Rio de Janeiro; RO, Rondônia; RR, Roraima; RS, Rio Grande do Sul; SC, Santa Catarina; SP, São Paulo; TO, Tocantins.

Maps of Brazil (Figures 1–4) are provided to locate the states and sampling sites. The following symbols indicate the kind of record and locality information as follows:

- ✖ – new record for Brazil;
- * – new record for a Brazilian State;

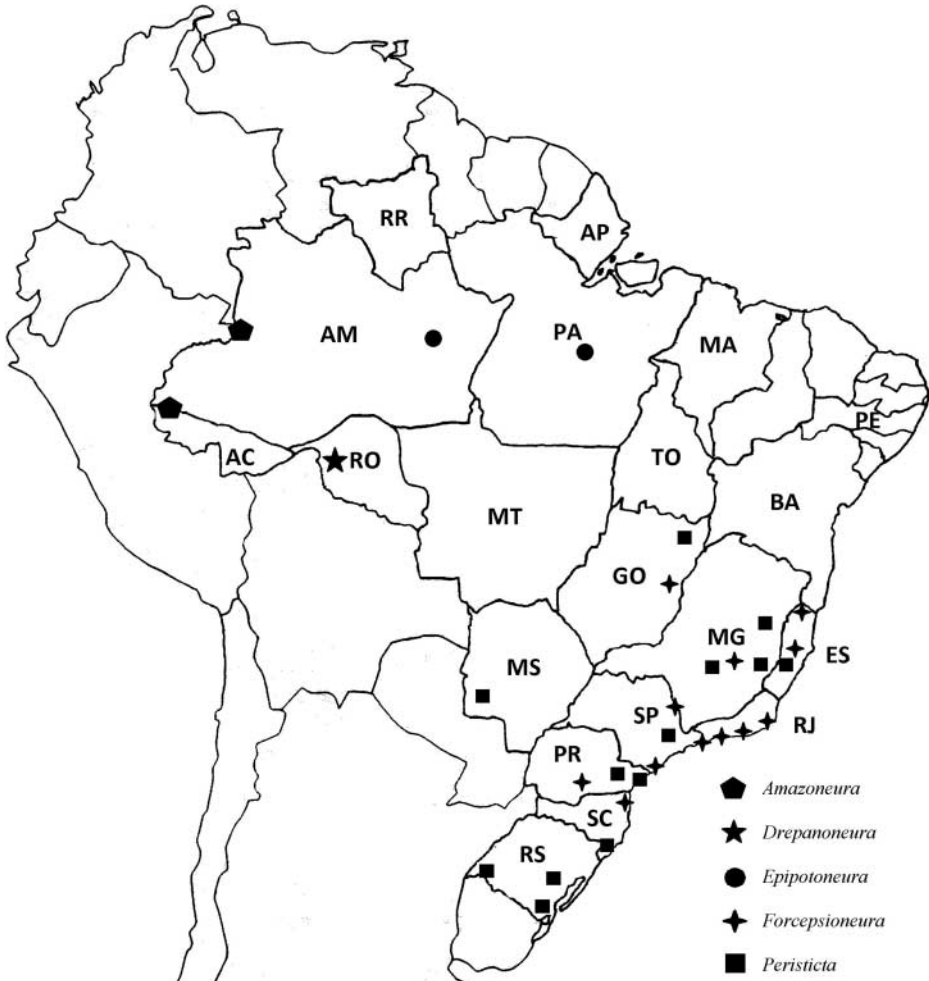


Figure 1. Brazilian states and approximate localities where *Amazoneura*, *Drepanoneura*, *Epipotoneura*, *Forcepsioneura* and *Peristicta* are recorded. See Materials and methods for full names of states, which are abbreviated on the map. In cases in which only the state where a specimen was collected is known, the locality symbol is placed near the center of the state.

- # – species deposited in MNRJ;
- – type locality; and
- + – distributional data taken from the literature.

Results

Amazona Machado, 2004

1. *Amazona ephippigera* (Selys, 1886)
AM [+]: Tefé, ca. 03°30'45" S, 64°41'21" W (Machado, 1985a).
2. *Amazona juruaensis* Machado, 2004
AC: Mâncio Lima [o], in a stream within forest (07°37'05" S, 72°54' W).

Drepanoneura von Ellenrieder & Garrison, 2008

1. *Drepanoneura janirae* von Ellenrieder and Garrison (2008).
RO [+]: Vila Murtinho [o] (10°21' S, 65°19' W).



Figure 2. Brazilian states and approximate localities where *Epipleoneura* spp. are recorded. See Materials and methods for full names of states, which are abbreviated on the map. In cases in which only the state where a specimen was collected is known, the locality symbol is placed near the center of the state.

Epipleoneura Williamson, 1915

1. *Epipleoneura albuquerquei* Machado, 1964
PA: Munhene River, tributary of river Paru do Oeste, 10 km from Aldeia dos Índios Tiriyó-Aramágotó, Óbidos [o] (05°48'23" S, 63°32'13" W).
2. *E. angeloi* Pessacq & Costa, 2010 [#]
MT: Chapada dos Guimarães, Represinha stream [o], ca. 15°27'11" S, 55°44'19" W. Buriti, Coxipozinho River, Chapada dos Guimarães, ca. 15°24'54" S 55°48'27" W.
GO: stream on Jataí (17°52'51" S, 51°42'50" W).
3. *Epipleoneura capilliformis* (Selys, 1886) [#]
AM [*]: Manaus, Colônia Santo Antônio, Igarapé do Archeuto, Reserva Ducke (03°06'07" S, 60°01'30" W).
AP [*]: Laranjal do Jari, Reserva Extativista, Sítio Igarapé do Meio (00°51'20" S, 52°32'21" W).
MT [+]: Chapada (Calvert, 1909).
PA: Iruasa Forest, Santarém [o] Óbidos, River Curucambá (02°54'48" S, 54°43'12" W).
4. *E. haroldoi* Santos, 1964 [#]
AM: Manaus, Igarapé do Mariano [o] (03°06' S, 60°01' W).
5. *E. humeralis* (Selys, 1886)
AM[+]: Coari [o], (ca. 04°05'06" S, 63°08'27" W). Autaz river (Sjöstedt, 1918).
6. *E. janirae* Machado, 2005a
PA: Santarém, Belterra [o] (02°38'14" S, 54°09'96" W).
7. *E. kaxuriana* Machado, 1985b [#]
AM: Igarapé, km 35 from Road Itacoatiara-Manaus, Igarapé do Passarinho (03°06'20" S, 60°01'21" W).
PA: Oriximiná, Porto Trombetas, Igarapé Saracazininho [o] (01°45'55" S, 55°51'60" W).
RO [+]: Lencioni (2005).
8. *E. lamina* Williamson, 1915 [#α]
AM: Borba (04°23'16" S, 59°35'38" W). Jutáí, BR-319 Road, km 378 (02°44'49" S, 66°46'01" W).
9. *E. machadoi* Rácenis, 1960 [#]
MG: Buenópolis [o] (17°52'22" S, 44°10'48" W). Cataguazes, Sítio do Bonsucesso, Meia Pataca stream (21°23'20" S, 42°41'49" W).
ES: Baixo Guandu (19°31'08" S, 41°00'57" W).
MT [*]: Reserva do Cabaçal, Epaminondas's Farm, Peixe river (15°04'48" S, 58°27'57" W).
Indiavaí (15°29'38" S, 58°34'22" W). Buriti, Museu Cuiabá (15°27'08" S, 55°44'21" W).
Chapada dos Guimarães, Coxipó River (15°27' S, 55°45' W).
BA: F.A.A. Lencioni, pers. comm.
SP: F.A.A. Lencioni, pers. comm.
10. *E. manauensis* Santos, 1964 [#]
PA [*]: Óbidos, Curucambá River (01°55'04" S, 55°31'04" W).
AM: Manaus, Igarapé, between km 30 and 40 of Manaus-Itacoatiara Road [o] (03°08'34" S, 58°26'38" W). Reserva Ducke (03°06' S, 60°01' W).
11. *E. metallica* Rácenis, 1960 [#]
MA [*]: São Luiz-Teresina Road, km 340 (05°32'60" S, 43°01'60" W).
PA [*]: Belém, Utinga (04°02'29" S, 69°31'40" W). Benfica. Itaituba (05°40'60" S, 63°24'38" W). Fordlândia (03°47'60" S, 55°28'60" W).
BR [*]: Brasília, Mestre d'Armas River (15°33'12" S, 47°47'15" W). Guará, Guará River (15°49'60" S, 47°53'60" W). Planaltina, São Bartolomeu River (15°37' S, 47°40' W).

- GO [*]: Jataí, São Bartolomeu River from 40 km of Alto Paraíso (17°07' S, 47°31' W). Formosa, Preto River (15°31'60" S, 47°19'60" W). Olho d'Água Farm, near Parque Nacional das Emas (18°4'59" S, 47°40'00" W).
- MG: Lagoa Santa, Januária Farm. Cataguazes, Sítio do Bonsucesso, Meia Pataca stream (21°23'20" S, 42°41'49" W). São João del Rey, Rio de Janeiro–Belo Horizonte Road (21°08'09" S, 44°15'43" W). Tiradentes, Serra de Tiradentes (21°06'36" S, 44°10'40" W).
- MT: Cuiabá, 12 km W from Buriti (15°41'60" S, 56°42' W). Buriti, Chapada dos Guimarães, Coxipozinho River (15°25'60" S, 55°45' W). Sinop (11°50'53" S, 55°38'57" W).
- PE [*]: Igarassu, Granja São Luís, Reserva Ecológica Darwin (07°50'02" S, 34°54'21" W).
- RO [*]: Ji–Paraná, Vila de Rondônia (10°53'07" S, 61°57'06" W).
- AM: Manaus (03°06'48" S, 60°01'31" W), F.A.A. Lencioni, pers. comm.
12. *E. pereirai* Machado, 1964
 AP: Macapá [o] (00°01'60" N, 51°02'60" W). Serra do Navio, Igarapé Água Fria (00°52'N, 52°02' W).
 PA [*]: Óbidos, Aramágote, Munhene River, 10 km from Aldeia dos Índios Tiriyó (ca. 01°59' S, 55°29' W).
13. *E. tariana* Machado, 1985b
 AM: Taracua [o] (03°27'15" S, 62°51'05" W).
14. *E. venezuelensis* Rácenis, 1955 [#]
 BR [*]: Mestre d'Armas River (15°33'12" S, 47°47'15" W).
 GO [*]: Goiânia, Parque Nacional das Emas (ca. 18°23'34" S, 52°39'07" W). Itumbiara (18°25'12" S, 49°13'04" W). Uruana, Almas River (18°25'12" S, 49°13'04" W).
 MG [*]: Córrego do Rico (tributary of Paranaíba River), Estrada Belo Horizonte–Brasília, km 499. Sapucaí–Mirim (22°43'60" S, 45°45'0" W). Ouro Preto (20°23'07" S, 43°30'13" W). Nova União, Anta River (19°41'24" S, 43°34'48" W).
 MT [*]: Chapada dos Guimarães, Buriti, Baús River (ca. 15°27'39" S, 55°45'00" W). Indivaí, km 3 of Rondônia–Indivaí Road (15°29'38" S, 58°34'22" W).
 PA [*]: Paraná River, Parque Nacional do Iguaçu, Foz do Iguaçu (ca. 25°33'00" S, 54°34'60" W).
 RJ [*]: Barra do Pirai, Pirai River (22°28'12" S, 43°49'33" W). Sítio Duflio, Claro River (22°43'23" S, 44°08'08" W). River Capivary, Silva Jardim (22°39'03" S, 42°23'31" W). Engenheiro Paulo de Frontin, Represa do Rio Abaixo (22°32'59" S, 43°40'42" W). Vassouras. River São João–Cedae, São Vicente, Silva Jardim (22°39'03" S, 42°23'31" W).
 RO [+]: Lencioni (2005).
 SP [*]: Teodoro Sampaio, Morro do Diabo (22°31'57" S, 52°10'03" W). Brotas, Fazenda Santa Lúcia da Boa Vista (22°17'02" S, 48°07'37" W).
 ES [*]: Baixo Guandu, stream on Marechal Rondon Road 15 km from Lins (19°31' S, 41°01' W); Baixo Guandu–Mutum Preto Road, km 22 N Doce River, (19°30' S, 41°00' W).
15. *E. waiwaiana* Machado, 1985b
 PA: Nhamundá, Aldeia Mapuera [o] (02°13'60" S, 56°43'00" W).
16. *E. westfalli* Machado, 1986 [#]
 MA [*]: São Luiz–Teresina Road, km 340, ca. 05°05'13" S, 42°47'13" W.
 RO: Ji–Paraná [o], ca. 10°53' S, 61°57' W.
17. *E. williamsoni* Santos, 1957 [#]
 BA [+]: Lencioni (2005).
 MT [*]: spring of the Paraguai River, Fazenda Sete lagoas, Diamantina ca. 14°24'10" S, 56°25'37" W.
 SP: Pirassununga, São Vicente River [o], ca. 21°59'45" S, 47°25'37" W.
 TO*: Araguatins (05°39'03" S, 48°07'26" W).

***Epipotoneura* Williamson, 1915**

1. *E. machadoi* von Ellenrieder & Garrison, 2008
PA: Xingu River, camping 60 km S of Altamira [o] (52°22' S, 03°39' W), von Ellenrieder and Garrison (2008).
2. *E. nehalennia* Williamson, 1915
AM [+]: Manaus, 03°06'48" S, 60°01'31" W (von Ellenrieder & Garrison, 2008).

***Forcepsioneura* Lencioni, 1999**

1. *F. garrisoni* Lencioni, 1999
SP: Iguapé [o], ca. 24°41'51" S, 47°34'16" W.
2. *F. grossiorum* Machado, 2005b
RJ: Nova Friburgo [o], ca. 22°16'55" S, 42°31'51" W.
3. *F. haerteli* Machado, 2001 [#]
SC: Blumenau, place of Atlantic forest between the Monte Verde and Pastor Oswaldo Hess Streets [o], ca. 26°55'44" S, 49°03'00" W.
RJ [*]: Cachoeiras de Macacu, Japuiba, Santana River, 22°33'36" S, 42°41'31" W.
4. *F. itatiaiae* (Santos, 1970) [#]
RJ: Itatiaia, Parque Nacional do Itatiaia, Véu da Noiva waterfall [o] (22° 20'00" S, 44°35'00" W).
5. *F. lucia* Machado, 2000
MG: Ibirité, Parque Estadual da Serra do Rola Moça [o], ca. (20°01'19" S, 44°03'32" W).
ES [+]: Lencioni (2005).
6. *F. sancta* (Hagen in Selys, 1860) [#]
ES [*]: Fazenda Klabin (18°1'48" S, 40°9'3" W). Santa Teresa, ca. 19°55'54" S, 40°35'43" W.
BR [*]: Parque Nacional de Brasília, ca. 15°47' S, 47°55' W.
MG: Lagoa Santa [o], ca. 19°37'44" S, 43°53'23" W. Poços de Caldas, Morro do Ferro, ca. 20°45'59" S, 44°35'00" W.
RJ: Rio de Janeiro, Jacarepaguá, Represa dos Ciganos, ca. 22°56'58" S, 43°24'58" W. Tinguá, ca. 22°35'59" S, 43°26'00" W. Cachoeiras de Macacu, Japuiba, Santana River. Petrópolis, waterfall on Petrópolis–Teresópolis Road (22°30'18" S, 43°10'44" W). Ilha da Marambaia, ca. 23°03'43" S, 43°58'44" W.
SP [+]: National Park Serra da Bocaina (22°39'52" S 44°51'17" W). São José dos Campos County (23°11'25" S 45°53'03" W). Ubatuba County (23°26'09" S 45°04'10" W). Jacareí County (23°17'49" S 45°58'09" W). (Costa et al., 2000).
PR: Guarapuava (25°25'27" S, 51°27'26" W).

***Idioneura* Selys, 1860**

1. *Idioneura ancilla*, Selys, 1860 [#]
RJ: Rio de Janeiro, Recreio dos Bandeirantes, Lagoa das Taxas (23°01'04" S, 43°28'08" W). Silva Jardim, Rio São João, Braço do Reservatório de Juturnaiba (ca. 22°37' S, 42°17' W).
ES: Conceição da Barra, Estrada Conceição da Barra–Itaúnas, km 17 (18°25' S, 39°42' W); Estrada Conceição da Barra–São Mateus, km 17 (18°34'60" S, 39°45' W). São Mateus (18°43' S, 39°51' W). Jacaraípe (20°8' S, 40°10' W). Itaguassu (19°48' S, 40°51' W). Linhares (19°25' S, 40°04' W). Santa Cruz, Estação de Biologia Marinha, ca. 19°15' S, 40°37'60" W. Baixo Guandú, Ribeirão do Engano, waterfall ca. 19°31' S, 41°01' W.
MG [*]: Itueta, ca. 19°23'38" S, 41°10'12" W.
PR [*]: Curitiba, ca. 25°25' S, 49°15' W. Paranaguá, ca. 22°56' 60" S, 53°25'00" W.
BA [o]: Olivença, wetlands, ca. 14°56'60" S, 39°1'0" W. Itamarajú, ca. 17°4'00" S, 39°31'60" W. Mucurí, ca. 12°34'00" S, 38°34'60" W.

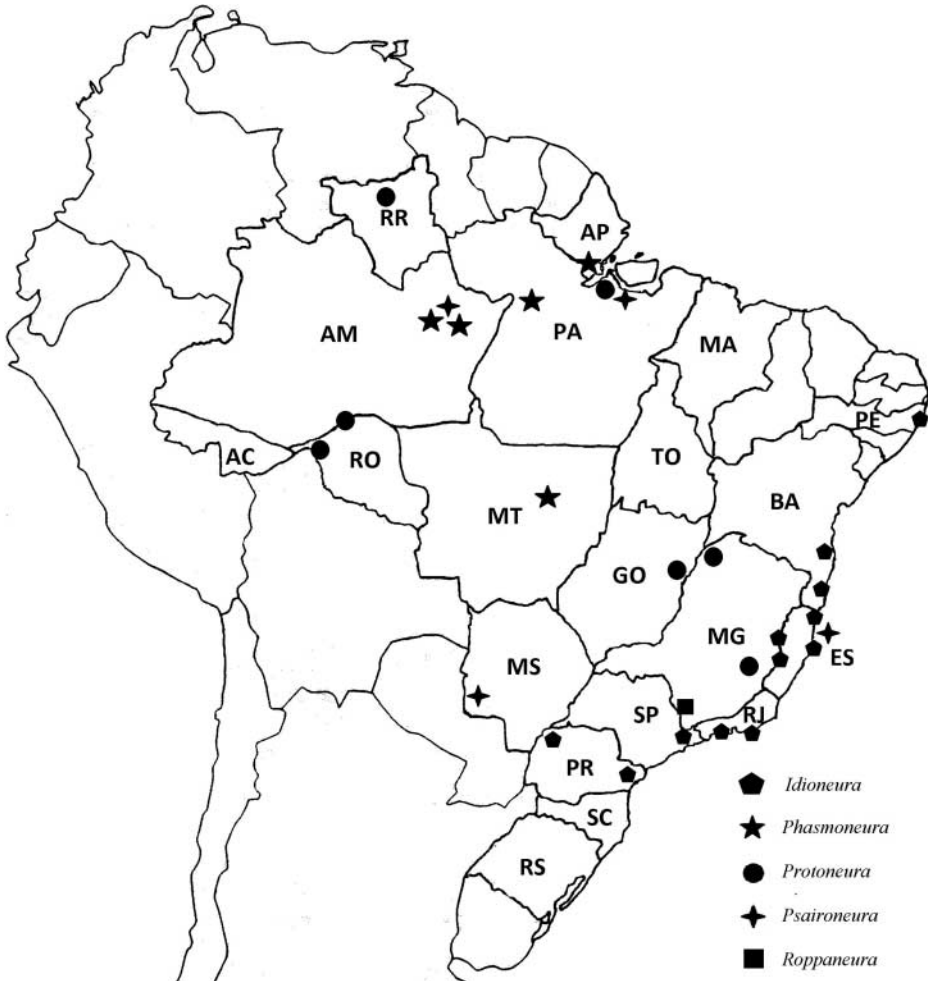


Figure 3. Brazilian states and approximate localities where *Idioneura*, *Phasmoneura*, *Protonaura*, *Psaironeura* and *Roppaneura* are recorded. See Materials and methods for full names of states, which are abbreviated on the map. In cases in which only the state where a specimen was collected is known, the locality symbol is placed near the center of the state.

PE [*]: Recife, Parque Dois Irmãos, Açude do Prata, ca. 08°3'14" S, 34°52'51" W.

SP [+]: Iguapé County (24°42'28" S, 47°33'20" W). Jacareí County (23°17'49" S, 45°58'09" W). Ubatuba County (23°26'09" S, 45°04'10" W) (Costa et al. 2000).

Note: two species of *Idioneura* are deposited in the MNRJ; both collected at the same sites. The new species is formally being described by F.A.A. Lencioni (Lencioni, pers. comm.).

2. *I. celioi* Lencioni, 2009

SP [+]: Jacareí, Santana do Rio Abaixo Farm [o] (24°14'55" S, 46°00'27" W).

Neoneura Selys, 1860

1. *Neoneura anaclara* Machado, 2005c

PR: Cândido de Abreu, Conde's Farm [o], ca. 24°34' S, 51°19' W.

2. *N. bilinearis* Selys, 1860 [#]

PA: Pará [o], without further data, Selys (1860).

3. *N. denticulata* Williamson, 1917 [#]

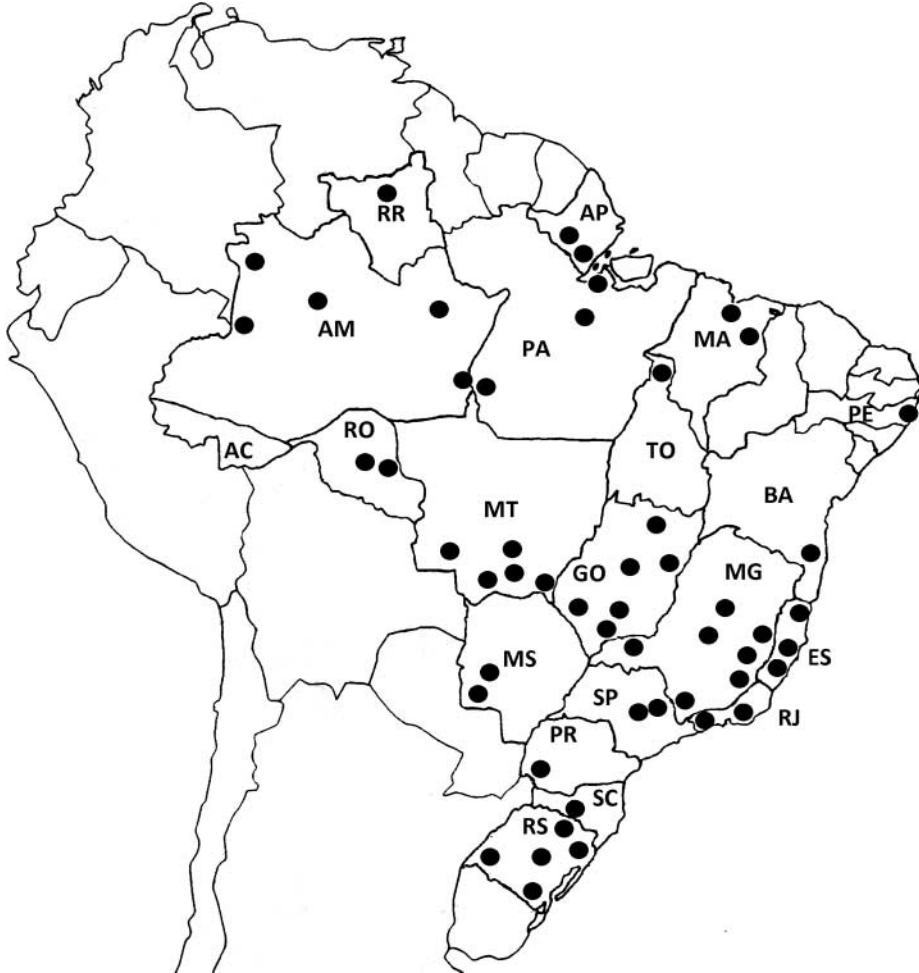


Figure 4. Brazilian states and approximate localities where *Neoneura* spp. are recorded. See Materials and methods for full names of states, which are abbreviated on the map. In cases in which only the state where a specimen was collected is known, the locality symbol is placed near the center of the state.

AM [+]: Manaus, Tefé ($3^{\circ}21'17''$ S, $64^{\circ}43'08''$ W) (Sjöstedt, 1918).

BR [*]: Belém–Brasília Road, km 36, ca. $15^{\circ}48'00''$ S, $47^{\circ}51'50''$ W.

PA [+]: Xingu River, 60 km S of Altamira, $3^{\circ}43'34''$ S, $52^{\circ}27'22''$ W (Garrison, 1999).

RO [+]: Pardo river, 13 km NW Rancho Grande Farm, $10^{\circ}50'$ S, $63^{\circ}07'$ W (Garrison, 1999).

RR [+]: Estação Ecológica Maracá, ca. $3^{\circ}21'04''$ S, $61^{\circ}25'0''$ W (Machado et al., 1991).

4. *N. desana* Machado, 1989

AM: Igarapé japú, between the Desan Village and the Uaupés River, near the village Jaguaratê at the Colombian border [o], ca. $00^{\circ}34'48''$ S, $69^{\circ}11'42''$ W.

5. *N. ethela* Williamson, 1917 [#]

MS [*]: Serra da Bodoquena, Azul Stream, ca. $21^{\circ}00'14''$ S, $56^{\circ}50'27''$ W.

PR [*]: Stream between Medianeira and Matelândia, ca. $25^{\circ}15'09''$ S, $54^{\circ}01'34''$ W. Stream on km 50, Curitiba–Ponta Grossa Road, ca. $25^{\circ}15'09''$ S, $54^{\circ}01'34''$ W. Foz do Iguaçu, Parque Nacional do Iguaçu, Iguaçu River, ca. $25^{\circ}39'49''$ S, $54^{\circ}26'09''$ W.

RS: Rio Grande do Sul [o], Williamson (1917). Santa Maria ca. $29^{\circ}45'56''$ S, $53^{\circ}08'11''$ W; Lageado Grande River, ca. $29^{\circ}05'36''$ S, $50^{\circ}37'32''$ W. Jaguarão, Arroio Grande, ca.

- 32°33'35" S 53°22'57" W. Arroio Itapevi, entre Alegrete e Rosário River, ca. 29°46'00" S, 55°46'00" W.
6. *N. fulvicollis* Selys, 1886 [#]
 MS [+]: Salobra, ca. 21°13'56" S, 57°08'04" W (Lencioni, 2005).
 SP: Pirassununga, Cachoeira de Emas, Pesqueiro, ca. 21°55'54" S, 47°22'22" W.
 PR [*]: Paraná River, Parque Nacional das Sete Quedas, ca. 25°24'45" S, 54°35'39" W.
 PA [+]: Pará [o] (Selys, 1886).
 MT [+]: Uacarizal and Cuyabá river (Calvert, 1909).
7. *N. gaida* Rácenis, 1953
 PA [+]: Lencioni (2005).
 RO [+]: Pardo River, 13 km NW of Fazenda Rancho Grande, 10°50' S, 63°7' W (Garrison, 1999).
 RR [+]: Estação Ecológica Maracá, ca. 3°21'04" S, 61°25'0" W (Machado et al., 1991).
8. *N. joana* Williamson, 1917 [#]
 AP: Laranjal do Jari, Santo Antônio waterfall, 00°49'51" S, 52°24'39" W.
 GO [*]: Araguantins, ca. 05°39'03" S, 48°07'26" W.
 PA [+]: Xingu River, 60 km S of Altamira, 52°22' S, 03°39' W (Garrison, 1999).
 RR [+]: Estação Ecológica Maracá, ca. 3°21'04" S, 61°25'0" W (Machado et al., 1991).
9. *N. jurzitzai* Garrison, 1999
 SC: Nova Teutônia [o], ca. 27°11' S, 52°13' W.
10. *N. kiautai* Machado, 2007 [#]
 ES: Baixo Guandu, Guandu River, ca. 19°31'08" S, 41°00'57" W. Santa Teresa–Vitória Road, 23 km W of Santa Teresa, ca. 19°55'12" S, 40°48'15" W. Santa Teresa, Estação Biológica de Santa Lúcia, Timbuí River, 19°57'10" S, 40°32'25" W. Colatina, Pancas River, tributary of the Doce River, ca. 19°32'16" S, 40°37'57" W. São João de Petrópolis, 19°49'48" S, 40°40'40" W. Conceição da Barra, Ribeirão do Engano, Vale do Rio Itaúnas, ca. 18°35'31" S, 39°44'04" W.
 MG: [+] Cataguazes, Meia Pataca River [o], ca. 21°19'37" S, 42°40'20" W (Machado, 2007). Açucena, ca. 19°03'25" S, 42°32'37" W.
 RJ [*]: Piraí River, entre Piraí e Rio Claro, ca. 22°37'44" S, 43°53'52" W.
11. *N. leonardo* Machado, 2005c [#]
 RS: Erechim [o], ca. 27°37'51" S, 52°14'09" W. Caxias do Sul, aí River, ca. 29°17'02" S, 50°53'49" W.
 SC: Nova Teutônia, ca. 27°11' S, 52°13' W.
12. *N. lucas* Machado, 2002
 MT: Poconé, Pantanal, Cuiabá River where it is reached by the Transpantaneira Highway [o], ca. 16°15'27" S, 56°37'38" W.
13. *N. luzmarina* De Marmels, 1989 [#]
 AM: Manaus, ca. 03°06' S, 60°01' W. [+] Reserva Campinas, 60 km N Manaus, ca. 02°29'17" S, 60°00'58" W (Garrison, 1999). Jabuti, Igarapé, ca. 06°12'27" S, 57°49'34" W.
 PA [+]: Jacareacanga, ca. 06°12'27" S, 57°49'34" W (Garrison, 1999).
 MT: F.A.A. Lencioni, pers. comm.
14. *N. moorei* Machado, 2003
 RO: Ji - Paraná [o], ca. 10°53'30" S, 61°54'16" W.
15. *N. myrthea* Williamson, 1917 [#]
 AP [*]: Amapari, Médio Amapari, Clube dos Sete, ca. 00°37'00" N, 51°38'60" W. Serra do Navio, Puxacá River, ca. 00°52'06" S, 52°01'32" W. Porto Grande, Recinto Ecológico Porto Grande, 00°42'06" S, 51°28'20" W.
 RR [+]: Estação Ecológica Maracá, ca. 3°21'04" S, 61°25'0" W (Machado et al., 1991).
16. *N. rubriventris* Selys, 1860 [#]
 PA: Belém, Utinga [o], ca. 01°27'18" S, 48°30'07" W.

- AM [*]: Tabatinga, Médio Javari, ca. 04°15'09" S, 69°56'17" W.
RS [+]: Lencioni (2005).
RO [+]: Lencioni (2005).
RR [+]: Estação Ecológica Maracá, ca. 3°21'04" S, 61°25'0" W (Machado et al., 1991).
17. *N. rufithorax* Selys, 1886 [#]
AC [+]: Lencioni (2005).
AM: Tabatinga, Médio Javari, ca. 4°15'09" S, 69°56'17" W. Poraqueuará, Manaus, ca. 03°03'14" S, 59°51'09" W. [+] Purus River, Garrison (1999).
PA [+]: Lencioni (2005).
18. *N. schreiberi* Machado, 1975 [#]
AP: Amapari River, Médio Amapari, Clube dos Sete [o], ca. 00°37'N, 51°38' W.
19. *N. sylvatica* Hagen in Selys, 1886 [#]
BA: Itabuna, Cachoeira River, ca. 14°51'37" S, 39°16'21" W. Itapicurú River.
BR [*]: Mestre d'Armas River, Planaltina ca. 15°37' S, 47°40' W, Reserva Ecológica do Roncador (IBGE), 35 km S from Brasília. São Bartolomeu River, Parque Nacional dos Veadeiros, ca. 14°00'19" S, 47°41'04" W. Riacho Fundo, Belo Horizonte–Brasília Road ca. 15°47' S, 47°55' W.
GO [*]: Indiara, Capivari River, between Rio Verde e Goiânia (17°08'31" S, 49°59'13" W). Uruana, Almas's River, ca. 15°23'12" S, 49°36'10" W.
MA [*]: Boa Vista, Timon (05°05'33" S, 42°49'21" W).
MG: Governador Valadares, Lagoa Dourada, Urupuca Farm, ca. 18°51'01" S, 41°56'54" W; Lagoa do Palmital, ca. 18°51'01" S, 41°56'54" W. Lagoa Santa, Lagoa Central, Parque Estadual ACESITA, ca. 19°37'37" S, 43°53'24" W. Santana do Riacho, stream 8 km before road to Lapinha, ca. 19°07'20" S, 43°40'30" W. Poços de Caldas, Campo do Saco, ca. 21°47'17" S, 46°33'45" W. Tupaciguara, eixo da Barragem, ca. 18°36'10" S, 48°41'25" W. Corinto (stream), ca. 18°22'51" S, 44°27'21" W. Cipó River, Belo Horizonte–Serra do Cipó Road, ca. 18°59'56" S, 43°39'05" W.
MS: Bodoquena, Salobra River, 20°32'20" S, 56°42'54" W.
MT: Cuiabá, Chapada dos Guimarães, Coxipozinho River (15°30' S, 55°45' W); Peixe River (17°46'60" S, 53°34'60" W). Buriti, ca. 15°27'08" S 55°44'21" W. Jataí, tributary of Claro River, ca. 17°52'51" S, 51°42'50" W. Between Cuiabá and Guia (Várzea Grande), ca. 15°30' S 56°09' W. Reserva do Cabaçal, Cabaçal River, ca. 15°04'48" S, 58°27'57" W. Jauru, ca. 15°20'31" S, 58°51'57" W. Acorizal River, tributary of Cuiabá, Baús–Acorizal Road (15°11' S, 56°22' W).
PR [*]: Foz do Iguaçu, Salto das Sete Quedas (currently Usina Hidrelétrica de Itaipu), 25°24'45" S, 54°35'39" W.
PE [*]: Igarassu, Barragem do Gurjaú., ca. 07°50'01" S, 34°54'01" W.
RJ: Três Rios [o], ca. 22°07'00" S, 43°12'33" W.
RO [+]: Lencioni (2005).
SP [+]: Lencioni (2005).
20. *N. waltheri* Selys, 1886
PR [+]: Lencioni (2005).
RJ [+]: Lencioni (2005).
21. *Neoneura* sp. [#]
BA: Itabuna, Rio Cachoeira (14°48'0" S/39°16'0" W).
AP: Serra do Navio, ca. 00°53'45" N, 52°00'07" W.
MG: Curvelo, Fernando Stream, km 208 of Belo Horizonte–Brasília Road, ca. 18°45'21" S, 44°25'51" W. Ituiutaba (18°08'08" S, 49°27'54" W).
ES: Colatina (19°31'60" S, 40°37'0" W). Pancas River, tributary of Doce River.

SP: Brotas, Santa Lúcia da Boa Vista Farm, ca. 22°17'04" S, 48°07'38" W. Pirassununga, ca. 21°59'44" S, 47°25'36" W; Cachoeira de Emas, ca. 21°55'55" S, 47°22'22" W.

MA [*]: Timon, Boa Vista (stream), ca. 05°05'38" S, 42°50'13" W. Rosário River, Igarapé Paraqueú, ca. 02°56'23" S, 44°14'26" W.

RJ: Reginópolis, Silva Jardim, stream (22°38'60" S, 42°22'60" W). São Vicente, Rio São João (CEDAE).

Note: Marcel Wasscher and Hilair Balsters (pers. comm.) found evidence that *Neoneura bilinearis* Selys, 1860 *sensu* Williamson, 1917 represents a new species and that *N. gaida* is a junior synonym of the former. We include all the specimens determined as *N. bilinearis sensu* Williamson as *Neoneura sp.* but keep the name *N. gaida* until the synonymy is published.

***Peristicta* Hagen in Selys, 1860**

1. *Peristicta aeneoviridis* Calvert, 1909 [#]

RS [*]: Jaguarão, Arroio Sarandi, BR 116, km 319, ca. 32°33'35" S, 53°22'57" W. Cambará do Sul, Parque Nacional Aparados da Serra, Perdizes River, ca. 28°41'58" S, 50°24'05" W.

PR [*]: Castro, Riacho do Ribeirão, ca. 24°47'26" S, 50°00'44" W. Curitiba, Brejo Mário, Timbú River, BR419, km 390, ca. 25°25'00" S, 49°15'00" W. Wetland between Foz do Iguazu and Santa Terezinha, ca. 25°33'00" S, 54°34'60" W.

SP: Claro River, ca. 22°23' S, 47°32' W.

SC [*]: Turvo, Arroio Amola Faca (28°55'34" S, 49°40'45" W). Lages, ca. 27°49'04" S, 50°19'40" W. Blumenau, Ponte Alta do Sul River, ca. 26°55'09" S, 49°03'59" W. Lageado Grande, stream, ca. 29°05'51" S, 50°37'24" W.

ES [*]: Santa Teresa, ca. 19°55'54" S, 40°35'43" W.

Note: Santos (1972) described the larva of *P. aeneoviridis*, but the specimen mentioned in the description was examined at the MNRJ and belongs not to *P. aeneoviridis* but to a probable new species of *Peristicta* (Pessacq, pers. obs.).

2. *P. forceps* Hagen in Selys, 1860

Brazil: Brazil [o], with no further data, Hagen in Selys (1860).

MG [+]: Lencioni (2005).

3. *P. gauchae* Santos, 1968 [#]

RS: Pinto River [o], km 93 of Road from São Francisco de Paula to Tainhas, ca. 29°16'00" S, 50°17'60" W.

4. *P. jalmosi* Pessacq & Costa, 2007 [#]

GO: Reserva da Universidade de Brasília, Chapada dos Veadeiros [o], ca. 14°00'19" S, 47°41'04" W.

MG: Ubaporanga, Rio-Bahia road, Caratinga River, 19°38'06" S, 42°06'21" W. Lagoa Santa, Fazenda Januária, ca. 19°37'45" S, 43°53'23" W. Ponte Nova, ca. 20°23'18" S, 42°53'57" W. Tiradentes, Serra de São João del Rey, 21°06'36" S, 44°10'40" W.

ES [*]: Santa Teresa, ca. 19°55'54" S, 40°35'43" W. River Pancas, tributary of River Doce, Colatina, ca. 19°32'20" S, 40°37'51" W. São João de Petrópolis, ca. 19°49'48" S, 40°40'40" W. Santa Teresa, Estação Biológica de Santa Lúcia, Cachoeira no River Timbuí, 19°55' S, 40°36' W. Baixo Guandu, Estrada Baixo Guandu a Alto Mutum, km 18, ca. 19°19'46" S, 40°54'16" W.

5. *P. janiceae* Pessacq & Costa, 2007 [#]

MG: Serra do Cipó [o], ca. 18°59'56" S, 43°39'05" W. Diamantina, ca. 18°14'15" S, 43°36'53" W. Serra do Caraça, ca. 20°07'59" S, 43°30'01" W. Córrego do Rico, Belo Horizonte-Brasília

Road, ca. 19°11'38" S, 46°14'49" W. Serra do Cipó, Pousada Chapéu do Sol, Belo Horizonte–Serra do Cipó Road (18°59'56" S, 43°39'05" W). Gouvêa, ca. 18°26'51" S, 43°44'22" W. Ubaporanga, Estrada Rio–Bahia, Caratinga River, 19°38'06" S, 42°06'21" W.

GO [*]: Divisa do Parque Nacional da Chapada dos Veadeiros, São Bartolomeu River, 14°10' S, 47°42' W.

RS [*]: Santa Maria, Vacacaí–Mirim River, Vila Schirmer, ca. 29°41'02" S, 53°48'25" W.

6. *P. muzoni* Pessacq & Costa, 2007 [#]

MS: Bodoquena, Serra da Bodoquena [o], ca. 21°00'14" S, 56°50'27" W.

***Phasmoneura* Williamson, 1916**

1. *Phasmoneura exigua* (Selys, 1886) [#]

AM: Igarapé, km 27 from Manaus–Rio Branco Road, ca. 03°06'07" S, 60°01'30" W. Manaus, Santo Antônio, ca. 03°06'57" S, 60°02'42" W; Igarapé do Pasarinho, ca. 03°00'05" S, 60°00'20" W; Igarapé do Mariano, ca. 02°57'21" S, 60°05'56" W. Itacoatiara, ca. 03°08'30" S, 58°26'34" W.

AP [*]: Serra do Navio, ca. 00°52'02" S, 52°01'32" W.

PA: Óbidos, Pebas [o], ca. 01°54'06" S, 55°31'10" W.

2. *P. janirae* Lencioni, 1999 [#]

MT: Sinop [o], ca. 11°52'22" S, 55°29'54" W.

***Protoneura* Selys in Sagra, 1857**

1. *P. amatoria* Calvert, 1907

RR [+]: Estação Ecológica Maracá, ca. 3°21'04" S, 61°25'0" W (Machado et al., 1991).

2. *P. paucinervis* Selys, 1886

AC [+]: Lencioni (2005).

3. *P. scintilla* Gloyd, 1939

RO: Abuná [o], ca. 09°41'43" S, 65°21'34" W.

4. *P. tenuis* Selys, 1860 [#]

BR [*]: Belém–Brasília Road, km 36, ca. 15°33'12" S, 47°47'15" W.

PA: Belém [o], ca. 01°27'16" S, 48°30'12" W.

RO: Porto Velho, ca. 08°34'18" S, 64°06'58" W.

MG: Ouro Preto, ca. 20°23'08" S, 43°30'29" W. Nova União, ca. 19°41'24" S, 43°34'48" W.

Buritis, São Domingos River, 15°37'04" S, 46°25'02" W.

5. *P. woytkowskii* Gloyd, 1939 [#]

PA: Igarapé Jaboti Maior, Belém–Brasília Road, km 75, ca. 01°27'21" S, 48°30'14" W.

***Psaironeura* Williamson, 1915**

1. *Psaironeura bifurcata* Sjöstedt, 1918

AM: Manaus [o], ca. 03°06'36" S, 60°01'34" W.

PA [+]: Lencioni (2005).

2. *Psaironeura remissa* (Calvert, 1903) [#]

ES: Conceição da Barra, ca. 18°35'58" S, 39°44'07" W.

3. *P. tenuissima* (Selys, 1886) [#]

MS [*]: Porto Murtinho, 21°41'56" S, 57°52'58" W.

PA: Belém, 01°27' S, 48°29' W.

AM [+]: Peba, Tefé [o], (Lencioni, 2005).

RO [+]: Lencioni (2005).

Roppaneura Santos, 19661. *Roppaneura beckeri* Santos, 1966 [#]

MG: Poços de Caldas, Morro do Ferro [o], ca. 21°47' S, 46°33' W. Florestal (19°53'49" S, 44°25'56" W) F.A.A. Lencioni, pers. comm.

Discussion

As expected, *Neoneura*, the most diverse genus of the family, is the best represented in Brazil; 20 of the 29 known species occur in the country. Machado (2005c) mentions that the genus is represented in the SE of the country (PR, RS, SC, SP) by four species (*N. anaclara*, *N. leonardo*, *N. ethela*, and *N. juritzai*), while 13 are represented in the Amazonian states. Here we include three additional records (*N. fulvicollis*, *N. sylvatica*, and *N. waltheri*) for the SE, forming a group of six species (excluding *N. sylvatica*) distributed in this region. Another group of species (*N. denticulata*, *N. desana*, *N. gaida*, *N. luzmarina*, *N. moorei*, *N. myrthea*, *N. rufithorax*, and *N. schreiberi*) seems to be distributed only in the Amazonian states (AC, AM, AP, RR, PA), while a third group includes three species (*N. bilinearis*, *N. joana*, and *N. rubriventris*) found in the Amazonian region and central or SE Brazil. *Neoneura sylvatica*, the most widely distributed species in the country, is known from 11 states from the NW (RO) and NE (MA) to the S (PR), and is also present in Argentina and Paraguay.

Epipleoneura is the second most diverse genus in the family, and 17 of the 26 known species are recorded from Brazil. Most of its species (12) are distributed only in the Amazonian region, including also records from Venezuela. Aside from this large group, three species (*E. angeloi*, *E. machadoi*, and *E. williamsoni*) are distributed only in the central states (BA, ES, GO, MG, MT, SP, TO), while *E. venezuelensis* and *E. metallica*, the species that have the second widest distributions in the family, are present in eight states, and are distributed from the Amazonian states to São Paulo and Minas Gerais in the south, and are also recorded in Venezuela.

Of the remaining genera, *Forcepsioneura*, *Idioneura*, and *Roppaneura* are distributed in the Mata Atlantica rainforest, in the east-central states. The new records of *Idioneura* for the states of Paraná, Pernambuco and Minas Gerais imply an extension of distribution to the north, south, and west.

Peristicta is restricted to the south and southern center of the country, including also records in Argentina, Paraguay, and Uruguay.

The remaining six genera are distributed in different parts of the Amazonian region, including records in most of northern South America, with *Protoneura* and *Psaironeura* also represented in Central America.

The new record for the country of *Psaironeura remissa* in ES in central-east Brazil is somewhat surprising; its known distribution was previously restricted to Central America, Colombia and Venezuela. This unusual finding could represent incorrect specimen data, or a cryptic undescribed species.

Probable new species were observed in the revision of the MNRJ collection (i.e., *Peristicta* sp.), but were left out of the present list until their specific identity is established. Some morphological differences from their original descriptions were observed in *Epipleoneura metallica* and *E. machadoi*; establishing the specific identity of these specimens was not the aim of this contribution, however, and they are listed under the mentioned names.

Although this contribution implies a great extension in the distribution of many (40%) of the Brazilian Protoneuridae species and more than 50 new records for several states, we believe that there is still much more to know, given the diversity of the family and the size of the country. The lack or paucity of Protoneuridae records from several states (e.g., Acre, Ceará, Piauí, Tocantins) reveals the insufficient sampling effort.

The true diversity and distribution of the family in Brazil and the neotropics is still unknown. As it is stated by De Marco and Vianna (2005), the sampling effort in Brazil is concentrated in the areas with large number of researchers, with most of the records distributed in only 29% of the territory and with species richness concentrated mainly in the states of Rio de Janeiro, Minas Gerais, and São Paulo, in the Amazon River basin (scarcely sampled) and at some isolated points.

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