

# New distributional data on aquatic and semiaquatic bugs (Hemiptera: Heteroptera: Gerromorpha & Nepomorpha) from South America

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## Abstract

## Background

Water bugs in general play an important role in freshwater ecosystems, and knowledge about them is essential for the study of water biology and the proper management of aquatic habitats. The Neotropical fauna is relatively well known, but the existence of large under-collected areas makes taxonomic and faunistic studies concerning the aquatic and semiaquatic bugs from tropical America urgent.

## New information

Distributional information is presented for thirty-eight species of Gerromorpha and five Nepomorpha, including first records from the Brazilian states of Bahia (*Mesovelvia amoena*), Ceará (*Limnogonus profugus* and *Rhagovelia whitei*), Espírito Santo (*R. lucida*), Goiás (*Halobatopsis platensis* and *R. zela*), Mato Grosso (*Rheumatobates bonariensis*), Pará (*Nerthra terrestris*), Paraná (*H. spiniventris*, *Hydrometra fruhstorferi* and *R. janeira*), Piauí (*Microvelia ayacuchana*, *M. pulchella*, *Neogerris lubricus* and *Platyvelia brachialis*), Rio de Janeiro (*Martarega bentoi*) and São Paulo (*Rheumatobates minutus flavidus*); and the Peruvian region of Madre de Dios (*Rhagovelia fontanalís*).

## Keywords

Aquatic insects, new records, Neotropical Region, Brazil, Peru.

## Introduction

Heteroptera (Insecta: Hemiptera), or true bugs, is the most diverse group of insects with incomplete metamorphosis, with about 38,000 described species (Ribeiro et al. 2014). This suborder comprises seven infraorders, of which Gerromorpha, Nepomorpha and Leptopodomorpha are associated with aquatic habitats (Rafael et al. 2012).

Aquatic Heteroptera can be found in all continents, except Antarctica, and are more diverse in tropical climates. The Neotropical region is the richest in terms of described species, with more than 1,200 distributed in 18 families (Polhemus and Polhemus 2008). Six families, 43 genera and 380 species of Gerromorpha, and ten families, 39 genera and 510 species of Nepomorpha are known from South America, according to the latest published information (Mazzucconi et al. 2009).

The current study presents new data concerning the geographical distribution of Gerromorpha and Nepomorpha from South America, including first species records from several Brazilian states and a Peruvian region.

## Materials and methods

The new information provided is based on material deposited in the Coleção Entomológica Professor José Alfredo Pinheiro Dutra, Departamento de Zoologia, Instituto de Biologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil (DZRJ) and the Laboratório de Estudos Subterrâneos, Universidade Federal de São Carlos, São Carlos, Brazil (LES). The known geographical distribution of each species is provided according to Moreira (2015). New records are followed by an exclamation mark. Abbreviations of Brazilian states follow the official standard (IBGE 2015).

## Taxon treatments

### *Brachymetra albinervis albinervis*

#### Materials

- a. genus: *Brachymetra*; specificEpithet: *albinervis*; infraspecificEpithet: *albinervis*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Manuel Justino; decimalLatitude: -22.9365; decimalLongitude: -43.4447; year: 2013; month: 5; day: 26; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 3; sex: 1 apterous male, 2 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 066DCD11-055A-5424-81CA-3A75076EB779

- b. genus: *Brachymetra*; specificEpithet: *albinervis*; infraspecificEpithet: *albinervis*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Figueira; decimalLatitude: -22.9327; decimalLongitude: -43.438; year: 2013; month: 6; day: 8; eventRemarks: Cordeiro, F.A.C. Silva, F.F. Silva & L. Chaves col.; individualCount: 2; sex: 1 apterous male, 1 apterous female; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 2C173814-64A4-5F83-A530-9A1BB063DAB4
- c. genus: *Brachymetra*; specificEpithet: *albinervis*; infraspecificEpithet: *albinervis*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio do Quilombo; decimalLatitude: -22.9323; decimalLongitude: -43.4358; year: 2013; month: 6; day: 16; eventRemarks: I.R.S. Cordeiro & F.A.C. Silva col.; individualCount: 12; sex: 2 apterous males, 10 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 7FB50C26-1AE7-5000-BED2-60465A66C821

### Distribution

Guatemala, Honduras, Dominica, Martinique, St. Lucia, St. Vincent & Grenadines, Colombia, Grenada, Venezuela, Trinidad & Tobago, Panama, Suriname, Brazil, Ecuador, Peru, Paraguay.

**Distribution in Brazil:** PA, AM, CE, MT, BA, MG, SP, RJ.

## *Brachymetra furva*

### Materials

- a. genus: *Brachymetra*; specificEpithet: *furva*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Manuel Justino; decimalLatitude: -22.9365; decimalLongitude: -43.4447; year: 2012; month: 11; day: 19; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva & L.Chaves col.; individualCount: 2; sex: 1 apterous male, 1 apterous female; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 3ED3FC89-7C00-536E-9BD8-15EDE4BB5D97
- b. genus: *Brachymetra*; specificEpithet: *furva*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Manuel Justino; decimalLatitude: -22.9365; decimalLongitude: -43.4447; year: 2013; month: 9; day: 7; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F.Silva, L.Chaves & A. Ferreira col.; individualCount: 14; sex: 7 apterous males, 7 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: ACBA0B02-891E-5A83-AAF6-F27F80E00F76
- c. genus: *Brachymetra*; specificEpithet: *furva*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Figueira; decimalLatitude: -22.9327; decimalLongitude: -43.4380; year: 2013; month: 8; day: 19; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F.Silva, L.Chaves & A. Ferreira col.;

- individualCount: 6; sex: 4 apterous males, 2 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: A728FF8B-9D88-5A27-9E99-105421C9CECA
- d. genus: *Brachymetra*; specificEpithet: *furva*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio do Quilombo; decimalLatitude: -22.9323; decimalLongitude: -43.4358; year: 2013; month: 8; day: 24; eventRemarks: I.R.S. Cordeiro & F.A.C. Silva col.; individualCount: 27; sex: 10 apterous males, 17 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: A7447BDB-438A-5B5C-B519-FCA5775886FC
- e. genus: *Brachymetra*; specificEpithet: *furva*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2014; month: 4; day: 19; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F.Silva, L.Chaves, A. Ferreira, L.S. Barbosa, D.M.C. Santos & L.B. Pena Forte col.; individualCount: 9; sex: 5 apterous males, 2 macropterous males, 2 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 30E04442-2AAD-59EC-A195-FC40FB581030

## Distribution

Brazil, Argentina.

**Distribution in Brazil:** MA, PI, RN, MT, BA, MG, MS, RJ, PR.

## *Halobatopsis platensis*

### Materials

- a. genus: *Halobatopsis*; specificEpithet: *platensis*; continent: South America; country: Brazil; stateProvince: Goiás; municipality: Cristalina; decimalLatitude: -16.730222; decimalLongitude: -47.569056; year: 2013; month: 3; day: 19; eventRemarks: D.M. Takiya & A.P.M. Santos col.; individualCount: 1; sex: 1 apterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: F4880C71-F19C-535B-A9A0-BA65CE5EAE53
- b. genus: *Halobatopsis*; specificEpithet: *platensis*; continent: South America; country: Brazil; stateProvince: Goiás; municipality: Alto Paraíso de Goiás; decimalLatitude: -14.160972; decimalLongitude: -47.594167; year: 2013; month: 3; day: 21; eventRemarks: D.M. Takiya & A.P.M. Santos col.; individualCount: 5; sex: 5 apterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 3725C0E0-BAE6-5771-8C65-F8B797C3F124
- c. genus: *Halobatopsis*; specificEpithet: *platensis*; continent: South America; country: Brazil; stateProvince: Goiás; municipality: Alto Paraíso de Goiás / São João da Aliança; decimalLatitude: -14.144194; decimalLongitude: -47.342667; year: 2013; month: 3; day: 22; eventRemarks: D.M. Takiya & A.P.M. Santos col.; individualCount: 2; sex: 1 apterous male, 1 apterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 606548E8-3229-537A-9303-08CEB667928B

## Distribution

Brazil, Paraguay, Argentina, Uruguay.

**Distribution in Brazil:** PI, MT, BA, GO!, MG, DF, MS, SP, RJ, PR, RS.

## *Halobatopsis spiniventris*

### Materials

- a. genus: *Halobatopsis*; specificEpithet: *spiniventris*; continent: South America; country: Brazil; stateProvince: Paraná; municipality: Céu Azul; locality: Parque Nacional do Iguaçu, Rio Azul (3ª ordem); decimalLatitude: -25.1558; decimalLongitude: -53.7923; year: 2012; month: 9; day: 6; eventRemarks: F. Capistrano col.; individualCount: 10; sex: 7 apterous males, 3 apterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 808D85CC-4E57-5E28-8F5B-C611ADB5EFC6
- b. genus: *Halobatopsis*; specificEpithet: *spiniventris*; continent: South America; country: Brazil; stateProvince: Paraná; municipality: Céu Azul; locality: Parque Nacional do Iguaçu, Rio Azul (3ª ordem); decimalLatitude: -25.1558; decimalLongitude: -53.7923; year: 2012; month: 9; day: 6; eventRemarks: J. F. Barbosa col.; individualCount: 10; sex: 3 apterous males, 7 apterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: B2EDF5B6-96AD-5110-AE7B-97BE462E5903
- c. genus: *Halobatopsis*; specificEpithet: *spiniventris*; continent: South America; country: Brazil; stateProvince: Paraná; municipality: Céu Azul; locality: Parque Nacional do Iguaçu, Rio Manuel Gomes; decimalLatitude: -25.1586; decimalLongitude: -53.8331; year: 2012; month: 9; day: 7; eventRemarks: J. F. Barbosa col.; individualCount: 2; sex: 2 apterous males; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 0562F2E3-46DF-5924-A60C-1E861A35E2F3

## Distribution

Brazil, Argentina.

**Distribution in Brazil:** SP, PR!, SC, RS.

## *Limnogonus profugus*

### Material

- a. genus: *Limnogonus*; specificEpithet: *profugus*; continent: South America; country: Brazil; stateProvince: Ceará; locality: Parque Nacional Ubajara, Rio das Minas, Trilha Araticum; year: 2013; month: 2; day: 14; eventRemarks: A.P.M. Santos col.; individualCount: 1; sex: 1 macropterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: AB5FF914-62BE-58AE-83F3-6C4951D4520C

## Distribution

Brazil, Peru, Paraguay, Argentina.

**Distribution in Brazil:** CEI, PB, PE, MT, GO, MG, MS, SP, RJ.

## *Neogerris lubricus*

### Material

- a. genus: *Neogerris*; specificEpithet: *lubricus*; continent: South America; country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; verbatimElevation: 171 m; decimalLatitude: -4.1078; decimalLongitude: -41.6736; year: 2013; month: 2; day: 12; eventRemarks: A.P.M. Santos & D.M. Takiya col.; individualCount: 1; sex: 1 macropterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 62475E27-E0A7-5898-B6D8-EB263E51EDBA

## Distribution

Colombia, Trinidad & Tobago, Panama, Guyana, Suriname, Brazil, Ecuador, Peru, Bolivia, Paraguay, Argentina.

**Distribution in Brazil:** AP, PA, AM, PI!, MT, RO, BA, MG, MS, SP, RJ.

## *Potamobates spiculus* Polhemus & Polhemus, 1983

### Material

- a. genus: *Potamobates*; specificEpithet: *spiculus*; continent: South America; country: Peru; stateProvince: Cusco; locality: 3 rd km E Quincemil; decimalLatitude: -13.2208; decimalLongitude: -70.7311; year: 2012; month: 8; day: 20; eventRemarks: D. Takiya & A.P.M. Santos col.; individualCount: 1; sex: 1 apterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 2079A368-DD58-5D14-925E-BAF738F2CB4D

## Distribution

Peru.

**Distribution in Peru:** Cusco.

## *Rheumatobates bonariensis* (Berg, 1898)

### Material

- a. genus: *Rheumatobates*; specificEpithet: *bonariensis*; continent: South America; country: Brazil; stateProvince: Mato Grosso; municipality: Barra do Garças; locality: Papagaio, 4<sup>a</sup>

ordem, superficie 20; year: 2007; month: 11; day: 6; eventRemarks: K. Dias-Silva col.; individualCount: 1; sex: 1 macropterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 13EE0683-ED45-5BD1-8C93-E8BA28639E0F

### Distribution

Brazil, Peru, Bolivia, Paraguay, Argentina, Uruguay.

**Distribution in Brazil:** MT!, SP, SC, RS.

## *Rheumatobates minutus flavidus* Drake & Harris, 1942

### Material

- a. genus: *Rheumatobates*; specificEpithet: *minutus*; infraspecificEpithet: *flavidus*; continent: South America; country: Brazil; stateProvince: São Paulo; municipality: Ubatuba; locality: Parque Estadual da Serra do Mar, Núcleo Picinguaba, Riacho Paciência (caminho ao lado do camping); year: 2007; month: 10; day: 26; eventRemarks: V.P. Alecrim col.; individualCount: 4; sex: 4 apterous males; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 0F924058-6FA3-524A-933A-891D2F1E423E

### Distribution

Costa Rica, Panama, Brazil, Peru, Bolivia, Argentina.

**Distribution in Brazil:** PA, AM, RO, MG, SPI.

## *Hydrometra fruhstorferi* Hungerford & Evans, 1934

### Material

- a. genus: *Hydrometra*; specificEpithet: *fruhstorferi*; continent: South America; country: Brazil; stateProvince: Paraná; municipality: Céu Azul; locality: Parque Nacional do Iguaçu, Rio Manoel Gomes; decimalLatitude: -25.1586; decimalLongitude: -53.8331; year: 2012; month: 9; day: 7; eventRemarks: B.H.L. Sampaio col.; individualCount: 1; sex: 1 apterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 797BCA6C-39C4-5D9C-B67F-7E46C5C40985

### Distribution

Brazil, Bolivia, Paraguay, Argentina.

**Distribution in Brazil:** ES, RJ, PR!, SC.

## *Mesovelia amoena* Uhler, 1894

### Materials

- a. genus: *Mesovelia*; specificEpithet: *amoena*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Rio Preto da Eva; locality: Bacia do Rio Urubu, Igarapé de primeira ordem; decimalLatitude: -2.43056; decimalLongitude: -59.62250; eventRemarks: J.L. Nessimian col.; individualCount: 1; sex: 1 apterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 9E0B2ACF-386A-5F72-B3A8-1D87B48F4022
- b. genus: *Mesovelia*; specificEpithet: *amoena*; continent: South America; country: Brazil; stateProvince: Bahia; municipality: São Desidério; locality: Gruta do Juraci; decimalLatitude: -12.4102; decimalLongitude: -44.8505; year: 2011; month: 11; day: 3; eventRemarks: M.E. Bichuette, D.R. Pedroso, F.F. Pellegatti & T.L.C. Scatolini: col.; individualCount: 1; sex: 1 apterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: LES; basisOfRecord: PreservedSpecimen; occurrenceID: 610222B0-1C35-533B-B180-55223F9026FE

### Distribution

Canada, United States, Mexico, Cuba, Dominican Republic, Puerto Rico, Jamaica, Belize, St. Eustatius, Martinique, St. Vincent & Grenadines, Colombia, Curaçao, Bonaire, Grenada, Costa Rica, Trinidad & Tobago, Panama, Brazil, Ecuador, Hawaiian Islands.

**Distribution in Brazil:** PA, AM, CE, MT, RO, BA!, MG, ES, SP, RJ.

## *Mesovelia mulsanti* White, 1879

### Materials

- a. genus: *Mesovelia*; specificEpithet: *mulsanti*; continent: South America; country: Brazil; stateProvince: Pará; municipality: Canaã dos Carajás; locality: Floresta Nacional de Carajás, Serra Sul, S11B-A; year: 2006; month: 10; day: 15; eventRemarks: L.L. Dumas col.; individualCount: 1; sex: 1 apterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 8739AED8-01B9-5409-B62C-4F52271BC03A
- b. genus: *Mesovelia*; specificEpithet: *mulsanti*; continent: South America; country: Brazil; stateProvince: Pará; municipality: Canaã dos Carajás; locality: Floresta Nacional de Carajás, Serra Sul, S11D-B; year: 2011; month: 4; individualCount: 1; sex: 1 apterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 25DC6ADF-16FB-5D4F-916C-C6482B12B460

### Distribution

Canada, United States, Mexico, Cuba, Dominican Republic, Puerto Rico, U.S. Virgin Islands, Jamaica, Belize, Guatemala, Honduras, St. Martin, St. Kitts & Nevis, Antigua &



Barbuda, Guadeloupe, Nicaragua, Dominica, St. Lucia, St. Vincent & Grenadines, Barbados, Aruba, Colombia, Curaçao, Klein Curaçao, Bonaire, Grenada, Venezuela, Costa Rica, Trinidad & Tobago, Panama, Guyana, Brazil, Peru, Bolivia, Paraguay, Argentina, Hawaiian Islands.

**Distribution in Brazil:** AP, PA, AM, CE, PE, MT, RO, BA, GO, MG, MS, SP, RJ, PR, SC, RS.

### ***Euvelia lata* Polhemus & Polhemus, 1984**

#### **Material**

- a. genus: *Euvelia*; specificEpithet: *lata*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Rio Preto da Eva; locality: Bacia do Rio Preto da Eva, Igarapé de segunda ordem; decimalLatitude: -2.64444; decimalLongitude: -59.83528; year: 2004; month: 4; day: 22; eventRemarks: J.L. Nessimian col.; individualCount: 2; sex: 2 apterous males; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 8C7D2232-F090-5097-8073-D2A1FCCDB1CC

#### **Distribution**

Brazil.

**Distribution in Brazil:** PA, AM, MT.

### ***Microvelia ayacuchana* Drake & Maldonado-Capriles, 1952**

#### **Material**

- a. genus: *Microvelia*; specificEpithet: *ayacuchana*; continent: South America; country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; verbatimElevation: 171 m; decimalLatitude: -4.1078; decimalLongitude: -41.6736; year: 2013; month: 2; day: 9; eventRemarks: A.P.M. Santos & D.M. Takiya col.; individualCount: 2; sex: 1 apterous male, 1 apterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 3A98CF40-3B7E-5261-82BF-0C20EE79993C

#### **Distribution**

Venezuela, Guyana, Suriname, Brazil.

**Distribution in Brazil:** PA, PII, ES.

## ***Microvelia longipes* Uhler, 1893**

### **Materials**

- a. genus: *Microvelia*; specificEpithet: *longipes*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Rio Preto da Eva; locality: Bacia do Rio Preto da Eva, Igarapé de primeira ordem, armadilha U.V.; decimalLatitude: -2.76306; decimalLongitude: -59.70361; year: 2004; month: 4; day: 24; eventRemarks: J.L. Nessimian col.; individualCount: 1; sex: 1 macropterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 97CBAC3B-1251-5D75-BCCF-71351B1DE431
- b. genus: *Microvelia*; specificEpithet: *longipes*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Urubu, Igarapé de primeira ordem, armadilha U.V.; decimalLatitude: -2.39889; decimalLongitude: -60.06250; year: 2004; month: 5; day: 24; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount: 9; sex: 4 macropterous males, 5 macropterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: DB0C2C92-8931-5FD3-A9A1-DE4B5B8F457C

### **Distribution**

Cuba, Dominican Republic, Puerto Rico, U.S. Virgin Islands, Jamaica, St. Martin, St. Barthélemy, St. Eustatius, St. Kitts & Nevis, Aruba, Colombia, Barbados, Curaçao, Bonaire, Grenada, Venezuela, Trinidad & Tobago, Guyana, Brazil, Ecuador, Peru, Bolivia, Paraguay, Argentina.

**Distribution in Brazil:** RR, AM, BA, MG, MS, ES, SP, RJ, SC.

## ***Microvelia mimula* White, 1879**

### **Material**

- a. genus: *Microvelia*; specificEpithet: *mimula*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Rio Preto da Eva; locality: Bacia do Rio Urubu, Igarapé Jangada, armadilha U.V.; decimalLatitude: -2.52361; decimalLongitude: -59.66167; year: 2004; month: 5; day: 28; eventRemarks: J.L. Nessimian col.; individualCount: 1; sex: 1 macropterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 015D2CDC-FF24-5AED-8FD8-4D4B8C3B7DAA

### **Distribution**

Cuba, Puerto Rico, St. Vincent & Grenadines, Barbados, Grenada, Venezuela, Costa Rica, Trinidad & Tobago, Panama, Brazil, Ecuador, Peru, Paraguay, Argentina, Uruguay.

**Distribution in Brazil:** PA, AM, CE, MT, MG, MS, ES, SP, RJ, SC.

# *Microvelia pulchella* Westwood, 1834

## Materials

- a. genus: *Microvelia*; specificEpithet: *pulchella*; continent: South America; country: Brazil; stateProvince: Pará; municipality: Canaã dos Carajás; locality: Floresta Nacional dos Carajás, Serra Sul; year: 2012; month: 11; eventRemarks: Lab. de Limnologia col.; individualCount: 11; sex: 4 apterous males, 6 apterous females, 1 macropterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 98CDE03D-5F64-50C3-B443-17E2BBA9CFAE
- b. genus: *Microvelia*; specificEpithet: *pulchella*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Rio Preto da Eva; locality: Bacia do Rio Preto da Eva, Igarapé de primeira ordem, armadilha U.V.; decimalLatitude: -2.76306; decimalLongitude: -59.70361; year: 2004; month: 4; day: 24; eventRemarks: J.L. Nessimian col.; individualCount: 6; sex: 1 macropterous male, 5 macropterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 2C06C2DB-360F-507C-A17E-3A37FE05FB12
- c. genus: *Microvelia*; specificEpithet: *pulchella*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Rio Preto da Eva; locality: Bacia do Rio Preto da Eva, Igarapé de terceira ordem, armadilha U.V.; decimalLatitude: -2.72639; decimalLongitude: -59.88083; year: 2004; month: 4; day: 23; eventRemarks: J.L. Nessimian col.; individualCount: 1; sex: 1 macropterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 2A732116-F650-56AC-B30F-A0CBF2FC94EF
- d. genus: *Microvelia*; specificEpithet: *pulchella*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Rio Preto da Eva; locality: Bacia do Rio Urubu, Igarapé Buriti, armadilha U.V.; decimalLatitude: -2.31028; decimalLongitude: -59.86639; year: 2004; month: 5; day: 25; eventRemarks: J.L. Nessimian col.; individualCount: 2; sex: 2 macropterous males; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 4DAD00DB-556B-564B-9028-5C73A0A358DC
- e. genus: *Microvelia*; specificEpithet: *pulchella*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Rio Preto da Eva; locality: Bacia do Rio Urubu, Igarapé Jangada, armadilha U.V.; decimalLatitude: -2.52361; decimalLongitude: -59.66167; year: 2004; month: 5; day: 28; eventRemarks: J.L. Nessimian col.; individualCount: 2; sex: 2 macropterous males; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 6C4443DF-53B7-5FA2-A76A-EABC7A3F123A
- f. genus: *Microvelia*; specificEpithet: *pulchella*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Urubu, Igarapé de primeira ordem, armadilha U.V.; decimalLatitude: -2.39889; decimalLongitude: -60.06250; year: 2004; month: 5; day: 24; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount: 4; sex: 2 macropterous males, 2 macropterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 519D18F6-6975-590D-A4D9-E8C5A255D5E8
- g. genus: *Microvelia*; specificEpithet: *pulchella*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, Igarapé Piranga, armadilha U.V.; decimalLatitude: -2.63907; decimalLongitude: -60.28022; year: 2004; month: 8; day: 21; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount:

- 2; sex: 1 macropterous male, 1 macropterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 83B4715A-92FD-575C-A6F2-2330BE7AEE8F
- h. genus: *Microvelia*; specificEpithet: *pulchella*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, igarapé tributário do Igarapé Lobisomem, armadilha U.V.; decimalLatitude: -2.56288; decimalLongitude: -60.31760; year: 2004; month: 8; day: 22; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount: 2; sex: 2 macropterous males; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 91FBAD28-C07E-5BA2-B3B5-A94B28C2D420
- i. genus: *Microvelia*; specificEpithet: *pulchella*; continent: South America; country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Rio da Bandeira; verbatimElevation: 189 m; decimalLatitude: -4.0964; decimalLongitude: -41.6833; year: 2013; month: 2; day: 8; eventRemarks: A.P.M. Santos & D.M. Takiya col.; individualCount: 7; sex: 2 apterous males, 3 macropterous males, 2 macropterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: FF21C85C-297B-5E75-B638-3BFDB5352752

## Distribution

Canada, United States, Mexico, Bahamas, Cuba, Dominican Republic, Puerto Rico, U.S. Virgin Islands, Guatemala, Cayman Islands, Jamaica, Anguilla, St. Martin, Saba, St. Kitts & Nevis, Guadeloupe, Martinique, Aruba, Colombia, St. Vincent & Grenadines, Barbados, Curaçao, Klein Curaçao, Bonaire, Klein Bonaire, Grenada, Venezuela, Costa Rica, Trinidad & Tobago, Panama, Brazil, Ecuador, Peru, Argentina.

**Distribution in Brazil:** PA, AM, MA, PI, PE, BA, AL, MG, MS, ES, SP, RJ, SC.

## *Microvelia summersi* Drake & Harris, 1928

### Materials

- a. genus: *Microvelia*; specificEpithet: *summersi*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Preto da Eva, igarapé de terceira ordem, armadilha U.V.; decimalLatitude: -2.72639; decimalLongitude: -59.88083; year: 2004; month: 4; day: 23; eventRemarks: J.L. Nessimian col.; individualCount: 1; sex: 1 macropterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 1B4BE31F-18D2-5E16-B132-2E605C09E1E1
- b. genus: *Microvelia*; specificEpithet: *summersi*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, armadilha U.V.; decimalLatitude: -2.70696; decimalLongitude: -60.3745; year: 2004; month: 8; day: 19; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount: 1; sex: 1 macropterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: D3A40186-8AA1-5D22-943A-B4AF7D1653D5
- c. genus: *Microvelia*; specificEpithet: *summersi*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, igarapé de segunda ordem, armadilha U.V.; decimalLatitude: -2.53612; decimalLongitude:

-60.31720; year: 2004; month: 8; day: 23; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount: 2; sex: 2 macropterous males; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 5215C4EA-6E68-5F20-8605-174508BCE5DC

- d. genus: *Microvelia*; specificEpithet: *summersi*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, Igarapé Arumã, armadilha U.V.; decimalLatitude: -2.51532; decimalLongitude: -60.26233; year: 2004; month: 8; day: 23; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount: 60; sex: 12 macropterous males, 48 macropterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 65430E88-5A09-5AEF-ABF8-F8AB960842F2

### Distribution

Grenada, Trinidad & Tobago, Panama, Guyana, Brazil.

**Distribution in Brazil:** PA, AM.

## *Microvelia ubatuba* Moreira & Barbosa, 2011

### Materials

- a. genus: *Microvelia*; specificEpithet: *ubatuba*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, Igarapé Arumã, armadilha U.V.; decimalLatitude: -2.51532; decimalLongitude: -60.26233; year: 2004; month: 8; day: 23; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount: 12; sex: 3 macropterous males, 9 macropterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 9598AA51-36F3-56FD-80EB-2F154B6F6526
- b. genus: *Microvelia*; specificEpithet: *ubatuba*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, tributário do Rio Branquinho, armadilha U.V.; decimalLatitude: -2.52350; decimalLongitude: -60.33480; year: 2004; month: 8; day: 23; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount: 12; sex: 3 macropterous males, 9 macropterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: FCAADB4C-5CFD-5383-AE42-4E11EBCC26FB

### Distribution

Brazil.

**Distribution in Brazil:** AM, MT, SP.

## *Microvelia urucara*

### Materials

- a. genus: *Microvelia*; specificEpithet: *urucara*; continent: South America; country: Brazil; stateProvince: Pará; municipality: Parauapebas; locality: Flona de Carajás, Serra Norte, N4-B; year: 2012; month: 11; eventRemarks: Laboratório de Limnologia col.;

individualCount: 4; sex: 2 apterous males, 1 apterous female, 1 macropterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 263709D1-203D-58E8-B660-A0CB9695FAC7

- b. genus: *Microvelia*; specificEpithet: *urucara*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, Igarapé Arumã, armadilha U.V.; decimalLatitude: -2.51532; decimalLongitude: -60.26233; year: 2004; month: 8; day: 23; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount: 2; sex: 1 macropterous male, 1 macropterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: A53E2A0E-81D0-5439-9E9D-1160A895CEA3

## Distribution

Brazil.

**Distribution in Brazil:** PA, AM.

## *Microvelia venustatis* Drake & Harris, 1933

### Materials

- a. genus: *Microvelia*; specificEpithet: *venustatis*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Rio Preto da Eva; locality: Bacia do Rio Preto da Eva, Igarapé de primeira ordem, armadilha U.V.; decimalLatitude: -2.76306; decimalLongitude: -59.70361; year: 2004; month: 4; day: 24; eventRemarks: J.L. Nessimian col.; individualCount: 2; sex: 2 macropterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 9574F0D7-4948-55E5-9158-6ED7372284AD
- b. genus: *Microvelia*; specificEpithet: *venustatis*; continent: South America; country: Brazil; stateProvince: São Paulo; municipality: Ubatuba; locality: Parque Estadual da Serra do Mar, Núcleo Picinguaba, Riacho Paciência (caminho ao lado do camping); year: 2007; month: 10; day: 26; eventRemarks: V.P. Alecrim col.; individualCount: 11; sex: 5 macropterous males, 6 macropterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 387544F6-D499-51D0-841A-273069033089

## Distribution

Brazil, Peru, Paraguay, Argentina.

**Distribution in Brazil:** PA, AM, MA, MT, MG, ES, SP, RJ, SC.

## *Platyvelia brachialis*

### Material

- a. genus: *Platyvelia*; specificEpithet: *brachialis*; continent: South America; country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olho d'água dos milagres; verbatimElevation: 180 m; decimalLatitude: -4.0919; decimalLongitude: -41.6833; year: 2013; month: 2; day: 11; eventRemarks: A.P.M. Santos

& D.M. Takiya col.; individualCount: 1; sex: 1 macropterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 8401B0AF-836C-52F5-84B0-E77565930D4F

### Distribution

United States, Mexico, Cuba, Dominican Republic, Jamaica, Guatemala, Nicaragua, Grenada, Costa Rica, Trinidad & Tobago, Panama, Suriname, Brazil, Peru, Argentina.

**Distribution in Brazil:** PI!, PE, MT, GO, MG, MS, ES, RJ, SC.

## *Rhagovelia accedens*

### Material

- a. genus: *Rhagovelia*; specificEpithet: *accedens*; continent: South America; country: Brazil; stateProvince: Espírito Santo; municipality: Dores do Rio Preto; locality: Parque Nacional do Caparaó, Pedra Menina, Rio Preto (ponte); year: 2013; month: 1; day: 7; eventRemarks: A.L.H. Oliveira col.; individualCount: 3; sex: 2 apterous males, 1 apterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 2C7713BB-EE3C-5A70-A469-3DEC9C4431FF

### Distribution

Brazil.

**Distribution in Brazil:** MG, ES, SP, RJ.

## *Rhagovelia aiuruoca* Moreira & Ribeiro, 2009

### Material

- a. genus: *Rhagovelia*; specificEpithet: *aiuruoca*; continent: South America; country: Brazil; stateProvince: Minas Gerais; municipality: Alto Caparaó; locality: Parque Nacional do Caparaó, Rio José Pedro, Cachoeira Bonita; year: 2010; month: 10; day: 5; eventRemarks: J.L. Nessimian & L.L. Dumas col.; individualCount: 15; sex: 8 apterous males, 7 apterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 7830C83F-06F5-53EE-A36B-F82A951AC782

### Distribution

Brazil

**Distribution in Brazil:** MG, SP, RJ.

## *Rhagovelia elegans* Uhler, 1894

### Materials

- a. genus: *Rhagovelia*; specificEpithet: *elegans*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Rio Preto da Eva; locality: Bacia do Rio Preto da Eva!, igarapé de primeira ordem; decimalLatitude: -2.76306; decimalLongitude: -59.70361; year: 2004; month: 4; day: 24; eventRemarks: J.L. Nessimian col.; individualCount: 1; sex: 1 apterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 649F3596-2CF8-510C-8D3D-0EF1762D8FD4
- b. genus: *Rhagovelia*; specificEpithet: *elegans*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, Polícia Federal, igarapé de primeira ou segunda ordem; decimalLatitude: -2.70534; decimalLongitude: -60.38372; year: 2004; month: 8; day: 19; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount: 2; sex: 2 apterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 8B1B08CB-C70D-567E-91F9-8A7AFC8AC222
- c. genus: *Rhagovelia*; specificEpithet: *elegans*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, Igarapé de primeira ordem; decimalLatitude: -2.70696; decimalLongitude: -60.37450; year: 2004; month: 8; day: 19; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount: 2; sex: 2 apterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: BFD4CEF9-7619-56FF-8D65-5F23B8C3BFDE
- d. genus: *Rhagovelia*; specificEpithet: *elegans*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, Tributário do Igarapé da Cachoeira; decimalLatitude: -2.69593; decimalLongitude: -60.29520; year: 2004; month: 8; day: 20; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount: 1; sex: 1 apterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: D57FE60A-289B-552A-9C9A-06B6B0F6FB45
- e. genus: *Rhagovelia*; specificEpithet: *elegans*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, Igarapé do Paliteiro, Tributário do Rio Branquinho; decimalLatitude: -2.45865; decimalLongitude: -60.34600; year: 2004; month: 8; day: 26; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount: 1; sex: 1 macropterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 9C57DF15-8547-51AC-976B-3A56C981A600
- f. genus: *Rhagovelia*; specificEpithet: *elegans*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, Igarapé da Onça, tributário do Rio Branquinho; decimalLatitude: -2.49308; decimalLongitude: -60.33419; year: 2004; month: 8; day: 26; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount: 2; sex: 1 macropterous male, 1 macropterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: D925CF6E-9655-5F24-8913-F4136E9462AE



## Distribution

Hispaniola, St. Kitts & Nevis, Dominica, Martinique, St. Lucia, St. Vincent & Grenadines, Colombia, Grenada, Venezuela, Costa Rica, Trinidad & Tobago, Panama, Brazil, Ecuador.

**Distribution in Brazil:** AP, PA, AM, MT, SE, ES, RJ.

## *Rhagovelia fontanalís*

### Material

- a. genus: *Rhagovelia*; specificEpithet: *fontanalís*; continent: South America; country: Peru; stateProvince: Madre de Dios; locality: 12 rd km E Mazuko, pte. Amanapu; decimalLatitude: -13.0442; decimalLongitude: -70.3128; year: 2012; month: 8; day: 18; eventRemarks: D. Takiya & A.P.M. Santos col.; individualCount: 21; sex: 9 apterous males, 12 apterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 3CABA6CB-B395-5874-9CC7-072CFE6FDA65

### Distribution

Peru.

**Distribution in Peru:** Ucayali, Huánuco, *Madre de Dios!*, Junin, Ayacucho.

## *Rhagovelia itatiaiana* Drake, 1953

### Materials

- a. genus: *Rhagovelia*; specificEpithet: *itatiaiana*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Manuel Justino; decimalLatitude: -22.9365; decimalLongitude: -43.4447; year: 2012; month: 11; day: 19; eventRemarks: I.R.S. Cordeiro & F.A.C. Silva col.; individualCount: 12; sex: 6 apterous males, 6 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 44D4ED16-A79F-5241-91AB-AB974ECBC35E
- b. genus: *Rhagovelia*; specificEpithet: *itatiaiana*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Manuel Justino; decimalLatitude: -22.9365; decimalLongitude: -43.4447; year: 2013; month: 5; day: 26; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 14; sex: 8 apterous males, 6 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 027EEAFA-D44B-5493-AC65-98617AAA2B91
- c. genus: *Rhagovelia*; specificEpithet: *itatiaiana*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Manuel Justino;

- decimalLatitude: -22.9365; decimalLongitude: -43.4447; year: 2013; month: 9; day: 7; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 5; sex: 5 apterous males; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 66AF9C06-ABDC-5F0D-A144-B5096BDCC92F
- d. genus: *Rhagovelia*; specificEpithet: *itatiaiana*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Figueira; decimalLatitude: -22.9327; decimalLongitude: -43.4380; year: 2012; month: 10; day: 15; eventRemarks: I.R.S. Cordeiro & F.A.C. Silva col.; individualCount: 19; sex: 7 apterous males, 12 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 7E745702-ABBE-58F4-9CE2-267909B8050E
- e. genus: *Rhagovelia*; specificEpithet: *itatiaiana*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Figueira; decimalLatitude: -22.9327; decimalLongitude: -43.4380; year: 2013; month: 6; day: 8; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 18; sex: 7 apterous males, 11 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: E51BB99E-1DD2-52A6-9242-2452B3846866
- f. genus: *Rhagovelia*; specificEpithet: *itatiaiana*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Figueira; decimalLatitude: -22.9327; decimalLongitude: -43.4380; year: 2013; month: 8; day: 19; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 35; sex: 26 apterous males, 9 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 6A3FF7F5-5DC6-5D0B-8FC4-3436D9359A31
- g. genus: *Rhagovelia*; specificEpithet: *itatiaiana*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio do Quilombo; decimalLatitude: -22.9323; decimalLongitude: -43.4358; year: 2013; month: 6; day: 16; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 37; sex: 22 apterous males, 15 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 486A7A4E-452F-5592-B156-02C5FCD88F78
- h. genus: *Rhagovelia*; specificEpithet: *itatiaiana*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio do Quilombo; decimalLatitude: -22.9323; decimalLongitude: -43.4358; year: 2013; month: 8; day: 24; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 5; sex: 5 apterous males; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: DF13C3FB-9D7B-5A84-9978-4934F3043F81
- i. genus: *Rhagovelia*; specificEpithet: *itatiaiana*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2012; month: 11; day: 19; eventRemarks: I.R.S. Cordeiro & F.A.C. Silva col.; individualCount: 9; sex: 3 apterous

- males, 6 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 47C2B627-3C9F-59DF-A329-A8C351A05071
- j. genus: *Rhagovelia*; specificEpithet: *itatiaiana*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2013; month: 2; day: 23; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 2; sex: 1 apterous male, 1 apterous female; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 29F16A3B-DC10-56A5-B72A-2E8AFF0E56C5
- k. genus: *Rhagovelia*; specificEpithet: *itatiaiana*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2013; month: 5; day: 26; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 9; sex: 7 apterous males, 2 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 145B85B5-0BB7-5CDD-A038-8A9DBB443E57
- l. genus: *Rhagovelia*; specificEpithet: *itatiaiana*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2013; month: 9; day: 7; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 2; sex: 1 apterous male, 1 apterous female; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: E7FB290B-F066-5522-8AFA-96B6A2C6E3B8
- m. genus: *Rhagovelia*; specificEpithet: *itatiaiana*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2014; month: 4; day: 19; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves, A. Ferreira, L.S. Barbosa, D.M.C. Santos & L.B. Pena Forte col.; individualCount: 12; sex: 10 apterous males, 2 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: DAAC0959-D480-5C09-9AD4-3652449E9E92

## Distribution

Brazil.

**Distribution in Brazil:** ES, RJ.

## *Rhagovelia janeira* Drake, 1953

### Material

- a. genus: *Rhagovelia*; specificEpithet: *janeira*; continent: South America; country: Brazil; stateProvince: Paraná; municipality: Céu Azul; locality: Parque Nacional do Iguazu, Rio Manoel Gomes; decimalLatitude: -25.15860; decimalLongitude: -53.83308; year: 2012;

month: 9; day: 7; eventRemarks: J.F. Barbosa col.; individualCount: 17; sex: 14 apterous males, 3 apterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: B1C1D53B-EEE3-5854-B620-8DE9163F4FAC

## Distribution

Brazil, Argentina.

**Distribution in Brazil:** MG, SP, RJ, PR!, SC, RS.

## *Rhagovelia lucida* Gould, 1931

### Materials

- a. genus: *Rhagovelia*; specificEpithet: *lucida*; continent: South America; country: Brazil; stateProvince: Espírito Santo; municipality: Dores do Rio Preto; locality: Parque Nacional Caparaó, Pedra Menina, Rio Preto (ponte); year: 2013; month: 1; day: 7; eventRemarks: A.L.H. Oliveira col.; individualCount: 1; sex: 1 apterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 4019F6DF-E646-5694-94AD-FD145C6C4371
- b. genus: *Rhagovelia*; specificEpithet: *lucida*; continent: South America; country: Brazil; stateProvince: Paraná; municipality: Céu Azul; locality: Parque Nacional do Iguazu, Rio Azul (3ª ordem); decimalLatitude: -25.15581; decimalLongitude: -53.79230; year: 2012; month: 9; day: 6; eventRemarks: J.F. Barbosa col.; individualCount: 1; sex: 1 apterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: CF90F9F0-37E4-58D6-A0A5-0EDC31328B11
- c. genus: *Rhagovelia*; specificEpithet: *lucida*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Figueira; decimalLatitude: -22.9327; decimalLongitude: -43.4380; year: 2013; month: 6; day: 8; eventRemarks: I.R.S. Cordeiro & F.A.C. Silva col.; individualCount: 3; sex: 1 apterous male, 2 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 345FBB8E-B1AE-5FA3-93A1-068AB6C55ADA
- d. genus: *Rhagovelia*; specificEpithet: *lucida*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Figueira; decimalLatitude: -22.9327; decimalLongitude: -43.4380; year: 2013; month: 8; day: 19; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 21; sex: 9 apterous males, 12 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: D36D9146-F076-51E9-8A3A-15C5DF6DC81B
- e. genus: *Rhagovelia*; specificEpithet: *lucida*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2012; month: 11; day: 19; eventRemarks: I.R.S. Cordeiro & F.A.C. Silva col.; individualCount: 8; sex: 3 apterous males, 1 macropterous male, 2 apterous females, 2 macropterous females; identifiedBy:

- I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 36D39C4A-CB09-581A-AC0D-2DF0C31C3526
- f. genus: *Rhagovelia*; specificEpithet: *lucida*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2013; month: 2; day: 23; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 6; sex: 6 apterous males; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 73FBE071-236F-562C-8AF8-7AB53B3E0ED6
- g. genus: *Rhagovelia*; specificEpithet: *lucida*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2013; month: 5; day: 26; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 7; sex: 3 macropterous males, 4 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: E63AA85F-4514-5875-933A-8785DBE938F5
- h. genus: *Rhagovelia*; specificEpithet: *lucida*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2013; month: 9; day: 7; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 78; sex: 36 apterous males, 5 macropterous males, 32 apterous females, 5 macropterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: D0B863A8-F5E1-5324-BA09-6E5E0CA4EA0F
- i. genus: *Rhagovelia*; specificEpithet: *lucida*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2014; month: 4; day: 19; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves, A. Ferreira, L.S. Barbosa, D.M.S. Corrêa & L.B. Pena Forte col.; individualCount: 56; sex: 35 apterous males, 21 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 6CB173CA-5960-51FE-AB5B-CD806F204EDB

## Distribution

Brazil, Argentina.

**Distribution in Brazil:** ES!, SP, RJ, PR, SC, RS.

## *Rhagovelia macta* Drake & Carvalho, 1955

### Materials

- a. genus: *Rhagovelia*; specificEpithet: *macta*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Manuel Justino;

- decimalLatitude: -22.9365; decimalLongitude: -43.4447; year: 2013; month: 9; day: 7; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 4; sex: 4 apterous males; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: EC414B6F-D8F1-539C-A9C8-30C91C625AC5
- b. genus: *Rhagovelia*; specificEpithet: *macta*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Figueira; decimalLatitude: -22.9327; decimalLongitude: -43.4380; year: 2013; month: 8; day: 19; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 85; sex: 20 apterous males, 65 apterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 293A36C7-B737-5A74-B027-6AFFAAF41B18
- c. genus: *Rhagovelia*; specificEpithet: *macta*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio do Quilombo; decimalLatitude: -22.9323; decimalLongitude: -43.4358; year: 2013; month: 8; day: 24; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 12; sex: 12 apterous males; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 5B5933A2-7CAF-5842-B5A9-9C5FC125B2F7
- d. genus: *Rhagovelia*; specificEpithet: *macta*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2014; month: 4; day: 19; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves, A. Ferreira, L.S. Barbosa, D.M.S. Corrêa & L.B. Pena Forte col.; individualCount: 2; sex: 2 apterous males; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 465B594C-6BB4-5E65-8C2F-CC508BC15532

## Distribution

Brazil.

**Distribution in Brazil:** MG, RJ.

## *Rhagovelia traili*

### Material

- a. genus: *Rhagovelia*; specificEpithet: *traili*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, Igarapé Piranga; decimalLatitude: -2.63907; decimalLongitude: -60.28022; year: 2004; month: 8; day: 21; eventRemarks: J.L. Nessimian & L. Fidelis col.; individualCount: 1; sex: 1 apterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 53818CCA-3B80-52A4-94EA-050DA2225253

## Distribution

Venezuela, Suriname, French Guiana, Brazil, Peru.

**Distribution in Brazil:** RR, PA, AM.

## *Rhagovelia triangula* Drake, 1953

### Materials

- a. genus: *Rhagovelia*; specificEpithet: *triangula*; continent: South America; country: Brazil; stateProvince: Minas Gerais; municipality: Araponga; locality: Pico do Boné, cachoeira; year: 2011; month: 9; day: 24; eventRemarks: V. Sandoval; individualCount: 5; sex: 4 apterous males, 1 apterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 8432A9A0-F0D6-565A-AE52-E99B36CB6DFB
- b. genus: *Rhagovelia*; specificEpithet: *triangula*; continent: South America; country: Brazil; stateProvince: Minas Gerais; municipality: Alto Caparaó; locality: Parque Nacional Caparaó, Rio José Pedro, Cachoeira Bonita; year: 2010; month: 10; day: 5; eventRemarks: J.L. Nessimian & L.L. Dumas col.; individualCount: 1; sex: 1 apterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 43D4811D-1870-5424-BB9C-93BF62824950

## Distribution

Brazil.

**Distribution in Brazil:** MG, ES, SP, RJ.

## *Rhagovelia trianguloides* Nieser & Melo, 1997

### Material

- a. genus: *Rhagovelia*; specificEpithet: *trianguloides*; continent: South America; country: Brazil; stateProvince: Minas Gerais; municipality: Araponga; locality: Pico do Boné, cachoeira; year: 2011; month: 9; day: 24; eventRemarks: V. Sandoval; individualCount: 1; sex: 1 apterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: F3FB1742-D572-5425-9E66-9662DDC914C5

## Distribution

Brazil.

**Distribution in Brazil:** MG, ES, RJ.

## ***Rhagovelia versuta* Drake & Harris, 1935**

### **Material**

- a. genus: *Rhagovelia*; specificEpithet: *versuta*; continent: South America; country: Peru; stateProvince: Cusco; locality: 20 rd Km W Quincemil, Río Araza tributary; decimalLatitude: -13.33694; decimalLongitude: -70.85417; year: 2012; month: 8; day: 26; eventRemarks: D.M. Takiya & A.P.M. Santos col.; individualCount: 2; sex: 1 macropterous male, 1 macropterous male with broken wings; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 70A3BB33-FFEA-5276-A22C-317A5C9E3BE7

### **Distribution**

Peru, Bolivia, Argentina.

**Distribution in Peru:** Junin, Cusco.

## ***Rhagovelia whitei* (Breddin, 1898)**

### **Materials**

- a. genus: *Rhagovelia*; specificEpithet: *whitei*; continent: South America; country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; decimalLatitude: -3.83083; decimalLongitude: -40.90500; year: 2014; month: 4; day: 23; eventRemarks: D. Takiya col.; individualCount: 2; sex: 1 macropterous male, 1 apterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: AE7610CB-3B59-528C-99E5-88D92B500136
- b. genus: *Rhagovelia*; specificEpithet: *whitei*; continent: South America; country: Brazil; stateProvince: Goiás; municipality: Cristalina; decimalLatitude: -16.730222; decimalLongitude: -47.569056; year: 2013; month: 3; day: 19; eventRemarks: D.M. Takiya & A.P.M. Santos col.; individualCount: 12; sex: 5 apterous males, 1 macropterous male, 4 apterous females, 2 macropterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 18110D99-DEFA-5632-A3FE-A04E6C081BAA
- c. genus: *Rhagovelia*; specificEpithet: *whitei*; continent: South America; country: Brazil; stateProvince: Goiás; municipality: Alto Paraíso de Goiás; decimalLatitude: -14.144500; decimalLongitude: -47.482833; year: 2013; month: 3; day: 23; eventRemarks: D.M. Takiya & A.P.M. Santos col.; individualCount: 7; sex: 1 apterous male, 6 apterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 9947B907-CB6D-541B-B436-A1C12E0E1016
- d. genus: *Rhagovelia*; specificEpithet: *whitei*; continent: South America; country: Brazil; stateProvince: Minas Gerais; municipality: Presidente Olegário; locality: Lapa da Fazenda São Bernardo; decimalLatitude: -18.28023; decimalLongitude: -46.11264; year: 2013; month: 9; day: 30; eventRemarks: T. Zepon & L. Resende col.; individualCount: 5; sex: 1 apterous male, 4 apterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject;



institutionCode: LES; basisOfRecord: PreservedSpecimen; occurrenceID: FC75CC18-8BAA-552F-B156-1DC571AAD408

- e. genus: *Rhagovelia*; specificEpithet: *whitei*; continent: South America; country: Brazil; stateProvince: Minas Gerais; municipality: Presidente Olegário; locality: Lapa da Fazenda São Bernardo; decimalLatitude: -18.28023; decimalLongitude: -46.11264; year: 2014; month: 4; day: 13; eventRemarks: T. Zepon & L. Resende col.; individualCount: 2; sex: 1 apterous male, 1 apterous female; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: LES; basisOfRecord: PreservedSpecimen; occurrenceID: A8853E16-1641-5608-9B04-1B05F7D2E688

### Distribution

Brazil, Paraguay.

**Distribution in Brazil:** PA, MA, CEI, MT, GO, MG, MS, SP.

## *Rhagovelia zela* Drake, 1959

### Material

- a. genus: *Rhagovelia*; specificEpithet: *zela*; continent: South America; country: Brazil; stateProvince: Goiás; municipality: Alto Paraíso de Goiás; decimalLatitude: -14.160972; decimalLongitude: -47.594167; year: 2013; month: 3; day: 21; eventRemarks: D.M. Takiya & A.P.M. Santos col.; individualCount: 6; sex: 3 apterous males, 3 apterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: BD3DD2A7-8613-5CB8-8E48-728BBB5B0810

### Distribution

Brazil.

**Distribution in Brazil:** MT, GOI, MG, MS, ES, SP, RJ, SC.

## *Stridulivelia strigosa* (Hungerford, 1929)

### Material

- a. genus: *Stridulivelia*; specificEpithet: *strigosa*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, Polícia Federal, igarapé de primeira ou segunda ordem; decimalLatitude: -2.70534; decimalLongitude: -60.38372; year: 2004; month: 8; day: 19; eventRemarks: J. L. Nessimian & L. Fidelis col.; individualCount: 1; sex: 1 brachypterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: E8326182-0162-55FD-81BA-DB5C055710EA

### Distribution

Venezuela, Guyana, Suriname, Brazil, Peru.

**Distribution in Brazil:** AP, PA, AM, MT.

### ***Stridulivelia transversa* (Hungerford, 1929)**

#### **Material**

- a. genus: *Stridulivelia*; specificEpithet: *transversa*; continent: South America; country: Brazil; stateProvince: Amazonas; municipality: Manaus; locality: Bacia do Rio Cuieiras, tributário do Igarapé da Cachoeira; decimalLatitude: -2.69593; decimalLongitude: -60.29520; year: 2004; month: 8; day: 20; eventRemarks: J. L. Nessimian & L. Fidelis col.; individualCount: 9; sex: 1 apterous male, 8 apterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: C7BF8BD7-4DD0-5A6F-AE82-5858B719D3EC

#### **Distribution**

Suriname, Brazil.

**Distribution in Brazil:** AP, PA, AM.

### ***Nerthra terrestris* (Kevan, 1948)**

#### **Material**

- a. genus: *Nerthra*; specificEpithet: *terrestris*; continent: South America; country: Brazil; stateProvince: Pará; municipality: Altamira; locality: Abrigo da Gravura; decimalLatitude: -3.26614; decimalLongitude: -52.22215; year: 2009; month: 7; day: 8; eventRemarks: M.E. Bichuette col.; individualCount: 1; sex: 1 macropterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: LES; basisOfRecord: PreservedSpecimen; occurrenceID: 0C722209-30C5-57D0-BB9A-F7AA41B37FED

#### **Distribution**

Colombia, Venezuela, Trinidad & Tobago, Guyana, Suriname, French Guiana, Brazil, Ecuador, Peru, Bolivia.

**Distribution in Brazil:** RR, PA!, AM, GO, MS, SP, RJ.

### ***Ambrysus stali* La Rivers, 1962**

#### **Materials**

- a. genus: *Ambrysus*; specificEpithet: *stali*; continent: South America; country: Brazil; stateProvince: Pará; municipality: Altamira; locality: Carvena Kararaô; decimalLatitude: -3.13757; decimalLongitude: -51.82172; year: 2009; month: 4; day: 10; eventRemarks: M. E. Bichuette, D. R. Pedroso, F. F. Pellegatti & T. L. C. Scatolini col.; individualCount: 1; sex: 1 macropterous male; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: LES; basisOfRecord: PreservedSpecimen; occurrenceID: F7FBAB89-CF03-5B5C-B16C-A4F453BA1ABC

- b. genus: *Ambrysus*; specificEpithet: *stali*; continent: South America; country: Brazil; stateProvince: Pará; municipality: Altamira; locality: Caverna do Jacaré; decimalLatitude: -3.23346; decimalLongitude: -52.05397; year: 2011; month: 4; day: 5; eventRemarks: M. E. Bichuette, J. E. Gallão, D. R. Pedroso & D. Monteiro-Neto col.; individualCount: 3; sex: 1 macropterous male, 2 macropterous females; identifiedBy: F.F.F. Moreira; type: PhysicalObject; institutionCode: LES; basisOfRecord: PreservedSpecimen; occurrenceID: 65C2C76A-A3E2-5D33-94EA-E59FCEF943DC

## Distribution

Venezuela, Trinidad & Tobago, Suriname, French Guiana, Brazil, Argentina.

**Distribution in Brazil:** PA, AM.

## *Limnocois insignis* Stål, 1860

### Materials

- a. genus: *Limnocois*; specificEpithet: *insignis*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Figueira; decimalLatitude: -22.9327; decimalLongitude: -43.4380; year: 2012; month: 10; day: 15; eventRemarks: I.R.S. Cordeiro & F.A.C. Silva col.; individualCount: 3; sex: 2 macropterous males, 1 macropterous female; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 91D7786C-211A-5FDF-89A6-5DC620524D59
- b. genus: *Limnocois*; specificEpithet: *insignis*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Figueira; decimalLatitude: -22.9327; decimalLongitude: -43.4380; year: 2013; month: 6; day: 8; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 1; sex: 1 macropterous female; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: C10BD4AC-CC69-54C6-A5FC-61770E86E0B5
- c. genus: *Limnocois*; specificEpithet: *insignis*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Figueira; decimalLatitude: -22.9327; decimalLongitude: -43.4380; year: 2013; month: 8; day: 19; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 5; sex: 4 macropterous males, 1 macropterous female; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 73C6F8FD-A742-5D6E-B777-E6AD14AFA336
- d. genus: *Limnocois*; specificEpithet: *insignis*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2012; month: 11; day: 19; eventRemarks: I.R.S. Cordeiro & F.A.C. Silva col.; individualCount: 1; sex: 1 macropterous male; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 62E66190-0963-5F2B-9B51-D0CB67E71D09

- e. genus: *Limnocoelis*; specificEpithet: *insignis*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2013; month: 2; day: 23; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 1; sex: 1 macropterous female; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 959DADB9-261D-589F-9EBE-CBB2247BC7DB
- f. genus: *Limnocoelis*; specificEpithet: *insignis*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2013; month: 5; day: 23; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 5; sex: 3 macropterous males, 2 macropterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: A1BF83D2-6EC1-5030-9B79-37B8DB2E874F
- g. genus: *Limnocoelis*; specificEpithet: *insignis*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2014; month: 4; day: 19; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves, A. Ferreira, L.S. Barbosa, D.M.S. Corrêa & L.B. Pena Forte col.; individualCount: 28; sex: 8 macropterous males, 20 macropterous females; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 2313E7D8-64DE-529A-A5E7-54305D80A16B

## Distribution

Brazil.

**Distribution in Brazil:** MG, SP, RJ, PR, SC, RS.

## *Enitharoides brasiliensis* (Spinola, 1837)

### Materials

- a. genus: *Enitharoides*; specificEpithet: *brasiliensis*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2013; month: 2; day: 23; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 1; sex: 1 coleopteroid female; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: D79B31CD-931E-52C3-9C51-70F5C068F5AC
- b. genus: *Enitharoides*; specificEpithet: *brasiliensis*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2013; month: 9; day: 7; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves & A. Ferreira col.; individualCount: 1; sex: 1 coleopteroid male; identifiedBy: I.R.S. Cordeiro; type:

PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen;  
occurrenceID: 8826C125-8AB7-5F14-96E0-EA88058A7B27

### Distribution

Brazil.

**Distribution in Brazil:** MG, ES, RJ.

## *Martarega bento* Truxal, 1949

### Material

- a. genus: *Martarega*; specificEpithet: *bento*; continent: South America; country: Brazil; stateProvince: Rio de Janeiro; municipality: Rio de Janeiro; locality: Jacarepaguá, Taquara, Estrada Pau da Fome, Parque Estadual da Pedra Branca, Rio Grande; decimalLatitude: -22.9320; decimalLongitude: -43.4452; year: 2014; month: 4; day: 19; eventRemarks: I.R.S. Cordeiro, F.A.C. Silva, F.F. Silva, L. Chaves, A. Ferreira, L.S. Barbosa, D.M.S. Corrêa & L.B. Pena Forte; individualCount: 1; sex: 1 brachypterous male; identifiedBy: I.R.S. Cordeiro; type: PhysicalObject; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen; occurrenceID: 2C3B6B48-FD72-535C-A4ED-121F28D45383

### Distribution

Brazil, Argentina.

**Distribution in Brazil:** PI, PE, MT, MG, RJ!.

## Discussion

Some of the records above form the first inventory of aquatic Heteroptera from Pedra Branca State Park, Rio de Janeiro, Brazil (Cordeiro 2015). No water bugs had been previously recorded from the area, and the following species have been collected in four rivers inside the park: *Brachymetra albinervis albinervis*, *B. furva*, *Rhagovelia itatiaiana*, *R. lucida*, *R. macta*, *Limnocoris insignis*, *Enitharoides brasiliensis*, and *Martarega bento*. Among the records from this park, the occurrence of two species pairs is very interesting: *B. albinervis albinervis* / *B. furva* and *R. itatiaiana* / *R. macta*. Each pair of species are morphologically very similar, differing mainly in structures exclusive to males, which may lead to misidentifications (e.g. *R. macta* in Moreira and Ribeiro 2009), especially because they might co-occur in their geographical ranges.

Additional material collected in other Brazilian national or state parks was also examined and resulted in several first records of aquatic Heteroptera from each park. These include: *Halobatopsis platensis*, *Hydrometra fruhstorferi* and *Rhagovelia janeira* from Iguaçú National Park, *Limnogonus profugus* and *R. whitei* from Ubajara National Park, and *Neogerris lubricus*, *Microvelia ayacuchana*, *M. pulchella* and *Platyvelia brachialis*

from Sete Cidades National Park. The exceptions are *Rheumatobates minutus flavidus* and *Microvelia venustatis* from Serra do Mar State Park, and *Rhagovelia accedens*, *R. aiuruoca* and *R. triangula* from Caparaó National Park, areas where other species of Gerromorpha and Nepomorpha had already been recorded (e.g. Moreira et al. 2010, Moreira and Barbosa 2011). Such efforts are useful to expand the parks' lists of species, which is important to reinforce their value as conservation areas.

Some of the records also serve to fill gaps on the known geographical distributions of species that occur throughout wide geographical ranges, but had never been collected in some areas within it. That is the case of *Halobatopsis platensis* and *Martarega bentoi*, known from northeastern Brazil to Argentina, but new respectively to Goiás and Rio de Janeiro; *Halobatopsis spiniventris*, *Hydrometra fruhstorferi* and *Rhagovelia janeira*, from southeastern Brazil to Argentina, but new to Paraná; *Neogerris lubricus*, common throughout South America, new to Piauí; *Rheumatobates minutus flavidus*, from Costa Rica to Argentina, new to São Paulo; *Mesovelia amoena*, *Microvelia pulchella* and *Platyvelia brachialis*, from North America to Argentina, new to Bahia and Piauí; *Rhagovelia whitei*, from northern Brazil to Paraguay, new to Ceará; and *Nerthra terrestris*, from Colombia to southeastern Brazil, new to Pará. Finally, distribution expansions include northernmost records of *Limnogonus profugus*, *Rhagovelia lucida* and *R. zela* (Ceará/ Espírito Santo/ Goiás), the first record of *Rheumatobates bonariensis* from central-western Brazil (Mato Grosso), and the first record of *Microvelia ayacuchana* from northeastern Brazil (Piauí).

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## Author contributions

IRSC - identified specimens from Parque Estadual da Pedra Branca and wrote the manuscript.

FFFM - identified the remaining specimens and submitted the manuscript.

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