



# Aquatic Insects from the Caatinga: checklists and diversity assessments of Ubajara (Ceará State) and Sete Cidades (Piauí State) National Parks, Northeastern Brazil

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## Abstract

## Background

Diversity and distribution of Neotropical aquatic insects is still poorly known, with many species to be recorded and many others to be described, due to the small number of taxonomists and sparse faunistic studies. This knowledge is especially poor in the

Caatinga Domain in Northeastern Brazil, even though, this region may have played an important historical role in the spatial evolution of faunas of forested areas in northern South America.

## **New information**

Aquatic insect checklists of 96 species from Parque Nacional de Ubajara (Ceará State, Brazil) and 112 species from Parque Nacional de Sete Cidades (Piauí State, Brazil) are presented, representing the following taxa: Elmidae, Epimetopidae, Hydrophilidae, and Torridincolidae (Coleoptera), Hemerodromiinae (Diptera: Empididae), Ephemeroptera, Gerromorpha and Nepomorpha (Hemiptera), Odonata, Plecoptera, and Trichoptera. Because of the scarce number of biological inventories in Northeastern Brazil, several new distributional records (of species, genera, and families) for Brazil, Northeastern Brazil, and Ceará and Piauí states are provided. In addition, several undescribed species were detected, being 26 from Ubajara and 20 from Sete Cidades. Results represent a significant increase to the known fauna of these states, ranging from 13%-70% increase for Ceará and 41% to 91% increase for Piauí. Although both parks are relatively close to each other and within the Caatinga domain, their aquatic fauna display a very high complementarity (89% species), possibly due to structural differences of water bodies sampled in each park. Rarefaction curves based on quantitative light trap samples suggest a much higher expected species richness of aquatic insects at Sete Cidades than at Ubajara National Park. Discussion on biogeographical affinities of this sample of the Caatinga fauna is provided.

## **Keywords**

Species richness, Amazonia, Cerrado, Atlantic forest, Freshwater macroinvertebrates

## **Introduction**

### **Aquatic insects**

Insects constitute the most diverse animal group and represent one of the earliest lineages occupying the terrestrial habitat (Grimaldi and Engel 2005). Although they are mostly terrestrial, insects usually dominate inland waterbodies in terms of species number and biomass. Many terrestrial insects are resilient to eventual submersion in water (Chapman 1998), but true aquatic insects inhabit freshwater or marine environments at least for one life stage and have several morphological, physiological, and behavioural adaptations. Aquatic insects are usually abundant and important components of energy flow in freshwater habitats, and thus have been the focus of many ecological studies, as well as, the most frequent macroinvertebrate group used in biomonitoring (Rosenberg and Resh 1993, Merritt and Cummins 1996).

The diversity of aquatic insects is a result of several independent invasions of aquatic habitats by terrestrial lineages (more than 50 separate invasions, according to Dijkstra et al. (2014). Marine insects are relatively rare, most of them living in coastal areas and only very few species in the open sea (Cheng 1976). On the other hand, insects inhabiting freshwater are close to 100,000 described species, in twelve insect orders, five of them primarily aquatic: Ephemeroptera, Odonata, Plecoptera, Megaloptera, and Trichoptera (Dijkstra et al. 2014).

Regional knowledge of the aquatic insect fauna is essential to ecological surveys or biomonitoring. In the Neotropics, diversity and distribution of aquatic insects is still poorly known, with many species to be recorded and many others to be described, especially because of the small number of taxonomists and sparse faunistic studies, even near large urban areas. Currently, there are approximately 7,000 described species of aquatic insects in Brazil (Boeger et al. 2016), representing approximately 8% of known species in the world. Amongst these groups, only Odonata and Psychodomorpha reach numbers higher than 14% of the world's fauna (Table 1). The number of species of some aquatic taxa recorded from Brazil, e.g., Trichoptera, is far below the average of 8% of the world fauna, very likely due to the many undescribed species waiting to be formally named or recorded from the country. Undersampling is one of the major biases for richness evaluations studies and conservation actions such as recently demonstrated for Brazilian dragonflies (Vianna and De Marco Júnior 2012). Therefore, local inventories should remain a priority, particularly in those poorly sampled areas, such as Northeastern Brazil.

Table 1.

Number of described species in the major aquatic insect groups in the world and in Brazil, and percentage of Brazilian fauna in relation to the world's biota.

Taxon	World <sup>a</sup>	Brazil <sup>b</sup>	Brazilian fauna / World fauna
Ephemeroptera	3,046	339	11.1%
Odonata	5,952	856	14.4%
Hemiptera: Nepomorpha	2,404	301	12.5%
Hemiptera: Gerromorpha*	2,021	228	11.3%
Plecoptera	3,497	164	4.7%
Diptera: Culicomorpha	19,618	1,719	8.8%
Diptera: Ephydriidae	1,994	139	7.0%
Diptera: Psychodomorpha	3,412	519	15.2%
Diptera: Tipulomorpha	15,770	648	4.1%
Diptera: Tabanomorpha	5,373	498	9.3%
Trichoptera	14,291	687	4.8%
Megaloptera	328	20	6.1%

Coleoptera: Elmidae	1,300	148	11.4%
Coleoptera: Hydradeephaga	5,126	529	10.3%
Coleoptera: Hydraenidae	1,380	27	2.0%
Coleoptera: Hydrophiloidea	2,205	280	12.7%
Coleoptera: Scirtidae	1,330	45	3.4%
<b>Total</b>	<b>89,047</b>	<b>7,147</b>	<b>8.0%</b>

<sup>a</sup>Numbers obtained from Dijkstra et al. (2014) (except Elmidae, from Jäch and Balke 2008).

<sup>b</sup>Numbers obtained from Boeger et al. (2016).

\*Gerromorpha are semiaquatic.

## The Caatinga Domain in Northeastern Brazil

The Caatinga Domain (Coutinho 2006) extends for an area of approximately 800,000 km<sup>2</sup> in Northeastern Brazil (Fig. 1), including parts of the Brazilian states Piauí (PI), Ceará (CE), Rio Grande do Norte (RN), Paraíba (PB), Pernambuco (PE), Alagoas (AL), Sergipe (SE), Bahia (BA), and Minas Gerais (MG). It is a mosaic of different forest types, characterized by short trees and shrubs with xerophytic characteristics, influenced by climatic extremes when compared to other Brazilian formations: highest solar radiation, highest annual temperature mean, lowest rates of relative humidity, and lowest precipitation, which is limited to a very short period of the year (Prado 2003). It is estimated that over 28% of the original Caatinga vegetation has been altered by human activities, such as, slash-and-burn agriculture, harvesting of firewood, hunting, and herding (Castelletti et al. 2003). Currently, only less than 2% of its natural vegetation is enclosed under federal protected areas.

Low diversity and low numbers of endemic species is traditionally assigned to the Caatinga, although recent studies suggest otherwise, highlighting it as an important component of Brazilian biodiversity (Leal et al. 2005). The Caatinga lies in between two of the world's biodiversity hotspots (Myers et al. 2000, Mittermeier et al. 2011), the Atlantic Forest and the Cerrado, and shares many biotic components with these domains. Current assessments of the Caatinga's biodiversity is certainly underestimated because few biological inventories have focused this region, *e.g.*, for woody plants, 41% of its area has never been surveyed by scientists and 80% of what has been surveyed poorly (Tabarelli and Vicente 2004). This scenario is certainly worse when it comes to general insect inventories.

## Previous records of aquatic insects in Northeastern Brazil

Due to the lack of collecting efforts in the Caatinga and Northeastern Brazil, and consequent scarcity of available voucher material from Ceará and Piauí states in insect collections, any information on insect diversity from inventories in these regions will probably constitute new records from these Brazilian states. An up to date list of Coleoptera (Hydrophilidae), Ephemeroptera, Hemiptera (Gerromorpha and Nepomorpha),

Odonata, and Trichoptera recorded from Brazilian states of Ceará (CE) and Piauí (PI) are given in Table 2. This table includes species records previously published based on material collected during this project. Previous to this study, there were no records of Elmidae, Epimetopidae, and Torridincolidae (Coleoptera), Leptophlebiidae (Ephemeroptera), Gelastocoridae, Naucoridae, and Pleidae (Hemiptera), and Ecnomidae, Polycentropodidae, and Xyphocentronidae (Trichoptera) for these Brazilian states. Part of distributional data were initially compiled based on available information at Moreira et al. (2011), Moreira (2016), Salles et al. (2016), and Santos et al. (2016). Curiously, the first record of an aquatic insect from either state was of *Nephepeltia phryne* from Piauí described by Perty (1834) (Fig. 2) and, amazingly, a second dragonfly species was only recorded to this state after 160 years in 1994.

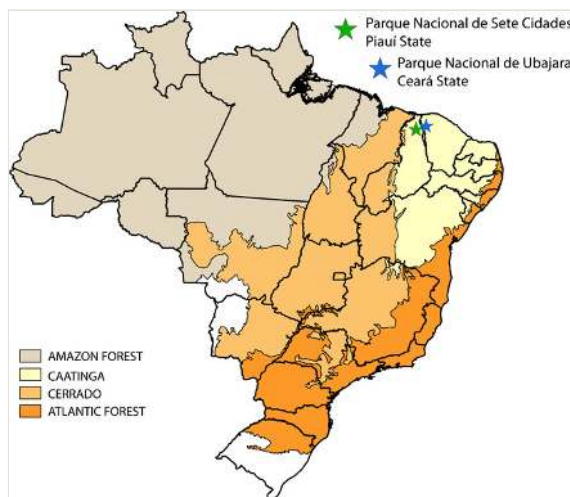


Figure 1.

Map of Brazilian states colored by four major phytogeographical domains: Amazon forest, Cerrado, Atlantic forest, and Caatinga; the last one including Ubajara (blue star) and Sete Cidades (green star) National Parks.

Table 2.

Species list of Coleoptera (Hydrophilidae), Ephemeroptera, Hemiptera (Gerromorpha and Nepomorpha), Odonata, and Trichoptera recorded from Ceará (CE) and Piauí (PI) states. Species marked with a “#” were described or firstly recorded to these states based on material sampled in this project.

Insect family	Species	Previous record	Reference
<b>COLEOPTERA</b>			
Hydrophilidae	<i>Berosus auriceps</i> Boheman, 1858	CE	Orchymont 1943
	<i>Berosus festivus</i> Berg, 1885	CE	Orchymont 1943

	<i>Berosus geayi</i> Orchymont, 1937	CE, PI	Orchymont 1943
	<i>Berosus novatus</i> Orchymont, 1940	PI	Orchymont 1943
	<i>Berosus patruelis</i> Berg, 1885	PI	Orchymont 1943
	<i>Berosus truncatipennis</i> Castelnau, 1840	CE, PI	Orchymont 1943
	<i>Crenitulus solstitialis</i> (Kirsch, 1873)	CE	Orchymont 1943
	<i>Crenitulus suturalis</i> (LeConte, 1866)	CE	Komarek 2005
	<i>Dactylosternum punctigerum</i> Knisch, 1924	CE	Knisch 1924
	<i>Derallus altus</i> (LeConte, 1855)	CE, PI	Orchymont 1943
	<i>Derallus ambitus</i> Orchymont, 1940	CE	Orchymont 1943
	<i>Derallus angustatus</i> Sharp, 1882	CE	Orchymont 1943
	<i>Derallus anicatus</i> Orchymont, 1940	PI	Orchymont 1943
	<i>Enochrus (Methydrus) atlantis</i> Orchymont, 1943	PI	Orchymont 1943
	<i>Hemiosus mornarius</i> Orchymont, 1940	CE	Orchymont 1943
	<i>Hemiosus mulvianus</i> Orchymont, 1940	CE, PI	Orchymont 1943
	<i>Hydrobiomorpha tricornis</i> Mouchamps, 1959	CE	Mouchamps 1959
	<i>Paracymus rufocinctus</i> Bruch, 1915	CE, PI	Orchymont 1943
	<i>Phaenonotum convexoides</i> Orchymont, 1943	CE	Orchymont 1943
	<i>Tropisternus (Pleurhomus) sahlbergi</i> (Sharp, 1883)	CE, PI	Orchymont 1943
	<i>Tropisternus (Pristoternus) apicalpalpis</i> (Chevrolat, 1834)	CE, PI	Orchymont 1943
	<i>Tropisternus (Pristoternus) laevis</i> (Sturm, 1826)	CE, PI	Orchymont 1943
	<i>Tropisternus (Pristoternus) mutatus</i> Orchymont, 1921	CE	Orchymont 1943
	<i>Tropisternus (Pristoternus) ovalis</i> (Castelnau, 1840)	CE, PI	Orchymont 1943
	<i>Tropisternus (Pristoternus) regimbarti</i> Orchymont, 1921	CE, PI	Orchymont 1943
	<i>Tropisternus (Strepitornus) collaris</i> (Fabricius, 1775)	CE, PI	Orchymont 1943

<b>DIPTERA</b>			
<b>Empididae</b>	# <i>Hemerodromia brevicercata</i> Câmara, Takiya, Plant & Rafael, 2015	CE	Câmara et al. 2015
	# <i>Hemerodromia membranosa</i> Câmara, Takiya, Plant & Rafael, 2015	CE	Câmara et al. 2015
	# <i>Hemerodromia mourai</i> Câmara, Takiya, Plant & Rafael, 2015	CE	Câmara et al. 2015
	# <i>Hemerodromia ubajaraensis</i> Câmara, Takiya, Plant & Rafael, 2015	CE	Câmara et al. 2015
<b>EPHEMEROPTERA</b>			
<b>Baetidae</b>	<i>Americabaetis alphus</i> Lugo-Ortiz & McCafferty, 1996	CE, PI	Boldrini et al. 2012
	<i>Callibaetis pollens</i> Needham and Murphy, 1924	CE, PI	Boldrini et al. 2012
	<i>Callibaetis guttatus</i> Navás, 1915	CE	Cruz et al. 2014
	<i>Camelobaetidius cayumba</i> (Traver & Edmunds, 1968)	CE, PI	Boldrini et al. 2012
	<i>Camelobaetidius janae</i> Dominique & Thomas, 2000	PI	Boldrini et al. 2012
	<i>Camelobaetidius tuberosus</i> Lugo-Ortiz & McCafferty, 1999	CE, PI	Boldrini et al. 2012
	<i>Cloeodes irvingi</i> Waltz & McCafferty, 1987	CE	Boldrini et al. 2012
	<i>Paracloeodes pacawara</i> Nieto & Salles, 2006	PI	Boldrini et al. 2012
	<i>Paracloeodes waimiri</i> Nieto & Salles, 2006	CE, PI	Boldrini et al. 2012
<b>Leptohyphidae</b>	<i>Traverhyphes (Mocoihyphes) yuati</i> Molineri, 2004	PI	Cruz et al. 2011
	<i>Tricorythodes mirca</i> Molineri, 2002	PI	Cruz et al. 2011
<b>Polymitarcyidae</b>	<i>Campsurus violaceus</i> Needham & Murphy, 1924	PI	Molineri et al. 2015
<b>HEMIPTERA</b>			
<b>Gerridae</b>	<i>Brachymetra albinervis albinervis</i> (Amyot & Serville, 1843)	CE	Dias da Rocha 1908
	<i>Brachymetra furva</i> Drake, 1957	PI	Rodrigues et al. 2012
	<i>Halobatopsis platensis</i> (Berg, 1879)	PI	Rodrigues et al. 2012

	# <i>Limnogonus profugus</i> Drake & Harris, 1930	CE	Cordeiro and Moreira 2015
	# <i>Neogerris lubricus</i> (White, 1879)	PI	Cordeiro and Moreira 2015
	<i>Rheumatobates crassifemur schroederi</i> Hungerford, 1954	CE	Hungerford 1954
	<i>Tachygerris adamsoni</i> (Drake, 1942)	PI	Rodrigues et al. 2012
<b>Mesoveliidae</b>	<i>Mesovelia amoena</i> Uhler, 1894	CE	Moreira and Campos 2012
	<i>Mesovelia mulsanti</i> White, 1879	CE	Moreira and Campos 2012
<b>Veliidae</b>	# <i>Microvelia ayacuchana</i> Drake & Maldonado Capriles, 1952	PI	Cordeiro and Moreira 2015
	<i>Microvelia mimula</i> White, 1879	CE	Moreira and Campos 2012
	# <i>Microvelia pulchella</i> Westwood, 1834	PI	Cordeiro and Moreira 2015
	# <i>Platyvelia brachialis</i> (Stål, 1860)	PI	Cordeiro and Moreira 2015
	# <i>Rhagovelia whitei</i> (Breddin, 1898)	CE	Cordeiro and Moreira 2015
<b>Belostomatidae</b>	<i>Belostoma anurum</i> (Herrich-Schäffer, 1848)	CE	Lauck 1962
	<i>Belostoma dallasi</i> De Carlo, 1930	CE	Ribeiro 2007
	<i>Belostoma dentatum</i> (Mayr, 1863)	PI	Ribeiro 2007
	<i>Belostoma elongatum</i> Montandon, 1908	PI	Ribeiro 2007
	<i>Belostoma foveolatum</i> (Mayr, 1863)	CE	Ribeiro 2000
	<i>Belostoma micantulum</i> (Stål, 1860)	CE	Dias da Rocha 1908
	<i>Lethocerus maximus</i> De Carlo, 1938	CE	Dias da Rocha 1936
<b>Corixidae</b>	<i>Heterocorixa wrighti wrighti</i> Hungerford, 1948	CE	Hungerford 1948
	<i>Tenagobia incerta</i> Lundblad, 1929	CE	Nieser 1977
<b>Nepidae</b>	<i>Curicta montei</i> De Carlo, 1960	CE	Keffer 1997
<b>Notonectidae</b>	<i>Buenaonia amnigenus</i> (White, 1879)	CE	Truxal 1953
	<i>Buenaonia salutis</i> Kirkaldy, 1904	CE	Truxal 1953
	<i>Buenaonia tarsalis</i> Truxal, 1953	CE	Truxal 1953



	<i>Buena unguis</i> Truxal, 1953	CE	Truxal 1953
	<i>Martarega brasiliensis</i> Truxal, 1949	CE	Truxal 1949
	<i>Martarega bentoi</i> Truxal, 1949	PI	Barbosa and Rodrigues 2013
	# <i>Notonecta disturbata</i> Hungerford, 1926	PI	Barbosa and Nessimian 2013
<b>Ochteridae</b>	# <i>Ochterus santosi</i> Cordeiro & Moreira, 2014	PI	Cordeiro et al. 2014
<b>ODONATA</b>			
<b>Aeshnidae</b>	<i>Anax amazili</i> (Burmeister, 1839)	CE	Navás 1924
	<i>Castoraeschna januarua</i> (Hagen, 1867)	CE	Navás 1924
	<i>Coryphaeschna viriditas</i> Calvert, 1952	CE	Navás 1924
	<i>Gynacantha nervosa</i> Rambur, 1842	CE	Navás 1924
<b>Gomphidae</b>	<i>Cacoides latro</i> (Erichson, 1848)	CE	Pinto 2010
	<i>Phyllocycla cf. gladiata</i> (Hagen in Selys, 1854)	CE	Nobre and Carvalho 2014
	<i>Progomphus dorsopallidus</i> Byers, 1934	CE	Nobre and Carvalho 2014
	# <i>Progomphus complicatus</i> Selys, 1854	CE	De Almeida et al. 2013
<b>Libellulidae</b>	<i>Brachymesia furcata</i> (Hagen, 1861)	CE	Navás 1924
	<i>Brachymesia herbida</i> (Gundlach, 1889)	CE	Pinto 2010
	<i>Brechmorhoga praecox praecox</i> (Hagen, 1861)	CE	Nobre and Carvalho 2014
	<i>Dasythemis esmeralda</i> Ris, 1910	CE	Nobre and Carvalho 2014
	<i>Diastatops obscura</i> (Fabricius, 1775)	CE	Navás 1924
	<i>Dythemis cf. nigra</i> Martin, 1897	CE	Nobre and Carvalho 2014
	<i>Dythemis velox</i> Hagen, 1861	CE	Navás 1924
	<i>Erythemis peruviana</i> (Rambur, 1842)	CE	Pinto 2010
	<i>Erythemis plebeja</i> (Burmeister, 1839)	CE	Navás 1924
	<i>Erythemis vesiculosa</i> (Fabricius, 1775)	CE	Pinto 2010
	<i>Erythrodiplax basalis</i> (Kirby, 1897)	CE	Navás 1924
	<i>Erythrodiplax fusca</i> (Rambur, 1842)	CE	Navás 1924

	<i>Erythrodiplax latimaculata</i> Ris, 1911	CE	Nobre and Carvalho 2014
	<i>Erythrodiplax leticia</i> Machado, 1996	CE, PI	Nobre and Carvalho 2014, Nobre 2016
	<i>Erythrodiplax ochracea</i> (Burmeister, 1839)	CE	Navás 1924
	<i>Erythrodiplax paraguayensis</i> (Förster, 1905)	CE	Pinto 2010
	<i>Erythrodiplax</i> sp.	CE	Nobre and Carvalho 2014
	<i>Erythrodiplax umbrata</i> (Linnaeus, 1758)	CE	Navás 1924
	<i>Idiataphe amazonica</i> (Kirby, 1889)	CE	Pinto 2010
	<i>Idiataphe cubensis</i> (Scudder, 1866)	CE	Navás 1924
	<i>Macrothemis griseofrons</i> (Calvert, 1909)	CE	Navás 1916
	<i>Macrothemis hemichlora</i> Burmeister, 1839	CE	Navás 1924
	<i>Macrothemis lutea</i> Calvert, 1909	CE	Nobre and Carvalho 2014
	<i>Miathyria marcella</i> (Selys in Sagra, 1857)	CE	Navás 1924
	<i>Micrathyria debilis</i> (Hagen, 1861)	CE	Navás 1924
	<i>Micrathyria hesperis</i> (Ris, 1911)	CE, PI	Navás 1924, Assis and Costa 1994
	<i>Micrathyria ocellata</i> Martin, 1897	CE	Navás 1924
	<i>Micrathyria tibialis</i> Kirby, 1897	CE	Navás 1924
	<i>Nephepeltia phryne</i> (Perty, 1834)	PI	Perty 1834
	<i>Oligoclada sylvia</i> (Kirby, 1899)	CE	Kirby 1889
	<i>Orthemis aequilibris</i> (Calvert, 1909)	CE	Nobre and Carvalho 2014
	<i>Orthemis aff. sulphurata</i> Hagen, 1868	CE	Pinto 2010
	<i>Orthemis ferruginea</i> -group	CE	Nobre and Carvalho 2014
	<i>Orthemis flavopicta</i> Kirby, 1889	CE	Nobre and Carvalho 2014
	<i>Pantala flavescens</i> (Fabricius, 1798)	CE	Nobre and Carvalho 2014
	<i>Perithemis bella</i> Kirby, 1889	CE	Navás 1924

	<i>Perithemis mooma</i> Kirby, 1889	CE, PI	Navás 1924, Costa et al. 2006
	<i>Tauriphila australis</i> Hagen, 1867	CE	Navás 1924
	<i>Tamea abdominalis</i> (Rambur, 1842)	CE	Pinto 2010
	<i>Tamea calverti</i> Muttkowski, 1910	CE	Nobre and Carvalho 2014
	<i>Tamea cophysa</i> Hagen, 1867	CE	Nobre and Carvalho 2014
	<i>Uracis imbuta</i> (Burmeister, 1839)	CE, PI	Costa and Santos 1997
<b>Calopterygidae</b>	<i>Hetaerina rosea</i> Selys, 1853	CE	Navás 1924
	<i>Mnesarete cupraea</i> (Selys, 1853)	CE	Carvalho and Bravo 2014
<b>Coenagrionidae</b>	<i>Acanthagrion gracile</i> (Rambur, 1842)	CE	Navás 1924
	<i>Argia cf. modesta</i> Selys, 1865	CE	Nobre and Carvalho 2014
	<i>Argia hasemani</i> Calvert, 1909	CE	Carvalho and Bravo 2014
	<i>Argia reclusa</i> Selys, 1865	CE	Navás 1924
	<i>Enallagma novaehispaniae</i> Calvert, 1907	CE	Nobre and Carvalho 2014
	<i>Ischnura capreolus</i> (Hagen, 1861)	CE	Navás 1924
	<i>Ischnura fluviatilis</i> Selys, 1876	CE	Pinto 2010
	<i>Leptagrion dardanoi</i> Santos, 1968	CE	Santos 1968
	<i>Neoneura sylvatica</i> Hagen in Selys, 1886	CE	Nobre and Carvalho 2014
	<i>Oxyagrion chapadense</i> Costa, 1978	CE	Carvalho and Bravo 2014
	<i>Telebasis corallina</i> (Selys, 1876)	CE	Nobre and Carvalho 2014
	<i>Telebasis filiola</i> (Perty, 1834)	CE	Nobre and Carvalho 2014
<b>Lestidae</b>	<i>Lestes forficula</i> Rambur, 1842	CE	Pinto 2010
<b>Perilestidae</b>	<i>Perilestes solutus</i> Williamson & Williamson, 1924	CE	Machado 2015

<b>PLECOPTERA</b>			
<b>Perlidae</b>	<i>Anacroneuria calori</i> Duarte & Lecci, 2016	CE	Duarte and Lecci 2016
<b>TRICHOPTERA</b>			
<b>Calamoceratidae</b>	<i>Phylloicus abdominalis</i> (Ulmer, 1905)	CE	Quinteiro et al. 2014
	<i>Phylloicus bidigitatus</i> Prather, 2003	CE	Quinteiro et al. 2014
	<i>Phylloicus obliquus</i> Navás, 1931	CE	Quinteiro et al. 2014
<b>Helicopsychidae</b>	<i>Helicopsyche</i> sp.	CE, PI	Quinteiro et al. 2014
<b>Hydropsychidae</b>	<i>Leptonema pallidum</i> Guérin, 1834	CE	Costa et al. 2014
	<i>Leptonema viridianum</i> Navás, 1916	CE	Costa et al. 2014
	<i>Macrostemum hyalinum</i> (Pictet, 1836)	CE	Franca et al. 2013
	<i>Smicridea</i> sp.	CE	Quinteiro et al. 2014
<b>Hydroptilidae</b>	<i>#Betrichia nhundiaquara</i> Souza, Santos & Takiya, 2016	PI	Souza et al. 2016b
	<i>#Flintiella harrisi</i> Souza, Santos & Takiya, 2016	PI	Souza et al. 2016a
	<i>#Hydroptila marighellai</i> Souza, Santos & Takiya, 2014	CE	Souza et al. 2014a
	<i>#Hydroptila florestani</i> Souza, Santos & Takiya, 2014	PI	Souza et al. 2014a
	<i>#Metrichia acuminata</i> Santos, Takiya & Nessimian, 2016	CE	Santos et al. 2016a
	<i>#Metrichia rafaeli</i> Santos, Takiya & Nessimian, 2016	CE	Santos et al. 2016a
	<i>#Metrichia ubajara</i> Santos, Takiya & Nessimian, 2016	CE	Santos et al. 2016a
	<i>#Metrichia vulgaris</i> Santos, Takiya & Nessimian, 2016	CE	Santos et al. 2016a
	<i>#Ochrotrichia caatinga</i> Souza, Santos & Takiya, 2014	CE	Souza et al. 2014b
	<i>#Ochrotrichia limeirai</i> Souza, Santos & Takiya, 2014	CE	Souza et al. 2014b
	<i>#Ochrotrichia patulosa</i> (Wasmund & Holzenthal, 2007)	CE	Souza et al. 2014b
<b>Leptoceridae</b>	<i>#Atanatolica nordestina</i> Henriques-Oliveira & Santos, 2014	CE	Henriques-Oliveira and Santos 2014

	<i>Nectopsyche splendida</i> (Navás, 1917)	PI	Quinteiro et al. 2014
	# <i>Oecetis connata</i> Flint, 1974	PI	Henriques-Oliveira et al. 2014
	<i>Oecetis excisa</i> Ulmer, 1907	CE	Quinteiro et al. 2014
	<i>Oecetis inconspicua</i> (Walker, 1852)	PI	Quinteiro et al. 2014
	<i>Oecetis punctipennis</i> (Ulmer, 1905)	CE	Quinteiro et al. 2014
<b>Odontoceridae</b>	<i>Marilia</i> sp.	CE	Quinteiro et al. 2014
<b>Philopotamidae</b>	<i>Chimarra (Curgia) conica</i> Flint, 1983	CE	Flint 1998



Figure 2.

Detail of plate 25 modified from Joseph Anton Maximilian Perty's work from 1834, with a water color illustration of the holotype of the small skimmer dragonfly *Libellula phryne* (Fig. 3, Odonata: Libellulidae; currently *Nephepeltia phryne*) described by him from "Provincia Piahiensi", Brazil.

In this paper, we provide a preliminary checklist of selected taxa of aquatic insects from Ubajara and Sete Cidades National Parks in Northeastern Brazil (Fig. 1), an undersampled region in terms of biological inventories. Additionally, species richness was compared between the two National parks. As far as we know, this is the first published aquatic insect inventory of the selected National Parks.

## Materials and methods

### Focal taxa of aquatic insects

Identification of aquatic insects depended on the availability of specialists, therefore we focused on Ephemeroptera; suborders Nepomorpha and Gerromorpha of Hemiptera; families Elmidae, Epimetopidae, Hydrophilidae, and Torridincolidae of Coleoptera; Hemerodromiinae (aquatic Empididae) of Diptera; Odonata; Plecoptera; and Trichoptera. These focal taxa were identified at least in genus level, given that in some cases species-level identification was not possible because collected individuals were not adult males (immatures, subimagos, or adult females), and, in other cases, because of the lack of comprehensive taxonomic revisions for particular genera. Higher-level classification followed the "Catálogo Taxonômico da Fauna do Brasil" (Lecci and Froehlich 2016, Monné

et al. 2016, Pinto 2016, Rafael and Câmara 2016, Salles and Boldrini 2016, Santos et al. 2016).

## Study areas

Material examined in this paper were obtained during two collecting expeditions to the study areas, from April 18<sup>th</sup> to 21<sup>st</sup> of 2012 and February 7<sup>th</sup> to 13<sup>th</sup> of 2013 at Parque Nacional de Sete Cidades (PNSC, Piracuruca municipality, PI) and from Abril 21<sup>st</sup> to 25<sup>th</sup> of 2012 and February 13<sup>th</sup> to 20<sup>th</sup> of 2013 at Parque Nacional de Ubajara (PNU, Ubajara municipality, CE). Although both parks are included in the Caatinga Domain (Fig. 1), areas sampled within these parks seem to represent islands dominated by Cerrado (PNSC) or montane humid forest (PNU). The two parks are distant by approximately 110 km.

Sampling localities within these parks were in or very close (less than 100 m) to bodies of water and are listed in Table 3. Bodies of water ranged from lentic and lotic systems and some streams sampled during the 2012 expedition to PNSC were completely dry in 2013 (see Figs 3, 4).

Table 3.

Sampling localities in Parque Nacional de Ubajara (PNU) and Parque Nacional de Sete Cidades (PNSC).

Code	Locality	Coordinates	Altitude (m)
PNU-01	PNU, Trilha Samambaia, Rio Gameleira (Fig. 5)	3°50'25"S, 40°54'19"W	874
PNU-02	PNU, Trilha Araticum, Rio das Minas (Fig. 6)	3°50'3"S, 40°54'18"W	524
PNU-03	PNU, Portão Neblina	3°50'18"S, 40°53'54"W	849
PNU-04	PNU, Trilha Araticum, Rio Cafundó (Fig. 7)	3°50'12"S, 40°54'31"W	753
PNU-05	PNU, Trilha Samambaia, Mirante da cachoeira do Gameleira	3°50'21"S, 40°54'23"W	880
PNU-06	PNU, Trilha Araticum, Rio das Minas na altura da trilha do teleférico	3°49'58"S, 40°53'53"W	420
PNU-07	PNU, Cachoeira do Cafundó (Fig. 8)	3°50'12"S, 40°54'35"W	783
PNU-08	PNU, Rio Cafundó, pouco acima da cachoeira	3°50'13"S, 40°54'35"W	795
PNU-09	PNU, Trilha Araticum, Rio da Minas abaixo do teleférico	3°49'43.3"S, 40°53'51.5"W	395
PNU-10	PNU, Ponte sobre Rio Miranda	3°50'7.4"S, 40°54'47.5"W	792
PNU-11	PNU, Rio das Minas, próximo ao Portão Araticum	3°49'32.6"S, 40°53'32.8"W	328
PNU-12	PNU, Trilha das Samambaias, brejo	3°50'25.8"S, 40°54'28.4"W	829
PNU-13	PNU, Mijo da Velha	3°50'16.7"S, 40°54'34.2"W	768

PNSC-01	PNSC, Riacho da Bananeira (Figs 9, 10)	4°5'59"S, 41°40'48"W	189
PNSC-02	PNSC, Cachoeira do Riachão (Figs 3, 11)	4°6'28"S, 41°40'13"W	171
PNSC-03	PNSC, Alojamento	4°5'57"S, 41°42'34"W	193
PNSC-04	PNSC, Riacho da Piedade (Fig. 4)	4°6'34"S, 41°43'39"W	169
PNSC-05	PNSC, Centro de visitantes	4°6'20"S, 41°41'52"W	202
PNSC-06	PNSC, Olho d'água Piscina do Bacuri	4°6'1.2"S, 41°42'38.8"W	171
PNSC-07	PNSC, Olho d'água dos Milagres (Fig. 12)	4°5'31.8"S, 41°40'48.2"W	180
PNSC-08	PNSC, Poço do Bananeira (Fig. 13)	4°5'55.8"S, 41°40'33.8"W	158
PNSC-09	PNSC, trilha para Poço do Bananeira	4°5'56.6"S, 41°40'32.3"W	162



Figure 3.

Cachoeira do Riachão (PNSC-02) at Parque Nacional de Sete Cidades, PI, Brazil. (A) April 2012. (B) February 2013.



Figure 4.

Riacho da Piedade (PNSC-04) at Parque Nacional de Sete Cidades, PI, Brazil. (A) April 2012. (B) February 2013.

## Sampling methods

The following insects traps were used: 6-meter intercept Malaise traps (Figs 5, 11, Gressitt and Gressitt 1962), suspended intercept traps (Fig. 14, Rafael and Gorayeb 1982), light traps using a white sheet (Fig. 15) and Pennsylvania traps (Fig. 12, Frost 1957), yellow pan traps (Fig. 16), in addition to manual collecting using forceps or entomological nets (Fig. 10). Besides individuals collected during both expeditions, material was also collected by Malaise traps that were left in both parks with samples removed every month between expeditions. Material collected was divided and deposited in the following institutions: Coleção Entomológica Prof. José Alfredo Pinheiro Dutra, Departamento de Zoologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro (DZRJ); Coleção Zoológica do Maranhão, Universidade Estadual do Maranhão, Caxias (CZMA); and Coleção de Invertebrados, Instituto Nacional de Pesquisas da Amazônia, Manaus (INPA).



Figure 5.

6-meter Malaise flight intercept trap over Rio Gameleira crossing Trilha Samambaia (PNU-01) at Parque Nacional de Ubajara, CE, Brazil.





Figure 6.

Rio das Minas crossing Trilha Araticum (PNU-02) at Parque Nacional de Ubajara, CE, Brazil.



Figure 7.

Rio Cafundó crossing Trilha Araticum (PNU-04) at Parque Nacional de Ubajara, CE, Brazil.



Figure 8.  
Cachoeira do Cafundó (PNU-07) at Parque Nacional de Ubajara, CE, Brazil.



Figure 9.  
Riacho da Bananeira (PNSC-01) at Parque Nacional de Sete Cidades, PI, Brazil. Photo by A. Somavilla.



Figure 10.

Manual collecting with entomological net near border of Riacho do Bananeira (PNSC-01), Parque Nacional de Sete Cidades, PI, Brazil.



Figure 11.

6-meter Malaise flight intercept trap over seasonally dried stream below Cachoeira do Riachão (PNSC-02) at Parque Nacional de Sete Cidades, PI, Brazil.



Figure 12.

Pennsylvania light trap near Olho d'água dos Milagres (PNSC-07) at Parque Nacional de Sete Cidades, PI, Brazil.



Figure 13.

Poço do Bananeira (PNSC-08) at Parque Nacional de Sete Cidades, PI, Brazil.



Figure 14.

Suspended intercept trap over stream at Parque Nacional de Ubajara, CE, Brazil.



Figure 15.

Manual collecting using white-sheet light trap at Parque Nacional de Ubajara, CE, Brazil.



Figure 16.

Yellow pan trap (YPT) near border of stream at Parque Nacional de Sete Cidades, PI, Brazil.

## Data analyses

Species complementarity index for the two National parks were calculated with  $C_{jk} = U_{jk} / S_{jk}$ , where  $U_{jk}$  is the number of unique species in both sites and  $S_{jk}$  total richness in both sites combined (Colwell and Coddington 1994).

During the expeditions 27 samples (14 at PNSC and 13 at PNU) of Pennsylvania light traps placed over streams were collected. Each sample was the result of an approximately 6-8 hour effort of 15W fluorescent or UV light turned on at dusk. All individuals of Ephemeroptera, Plecoptera, Trichoptera, and Hydrophilidae (Coleoptera) were identified or morphotyped and counted. Adult females or subimagos impossible to be identified into species level were treated as conspecific as males identified of the same genus on the sample (6 morphotypes from PNSC and 8 morphotypes from PNU of Ephemeroptera and Trichoptera). However, in cases where more than one species of the same genus was identified from the same sample (*Helicopsyche* and *Oxyethira* from PNU and *Chimarra*, *Neotrichia*, *Smicridea*, and *Oxyethira* from PNSC), the number of female individuals were equally divided among different species.

Quantitative samples of Pennsylvania light traps totalled 227 individuals of 23 species from PNU and 511 individuals of 54 species from PNSC of Ephemeroptera, Plecoptera, Trichoptera and Hydrophilidae (Coleoptera). Quantitative data served for comparisons of species richness between the two National Parks based on a rarefaction curve by individuals calculated in PAST 3.0 (Hammer et al. 2001).

## Data resources

### Data for species checklists of Parque Nacional de Ubajara (PNU) e Parque Nacional de Sete Cidades (PNSC)

Approximately 7,000 individuals of focal taxa were identified, being 5,472 from PNU and 1,539 from PNSC (Fig. 17).

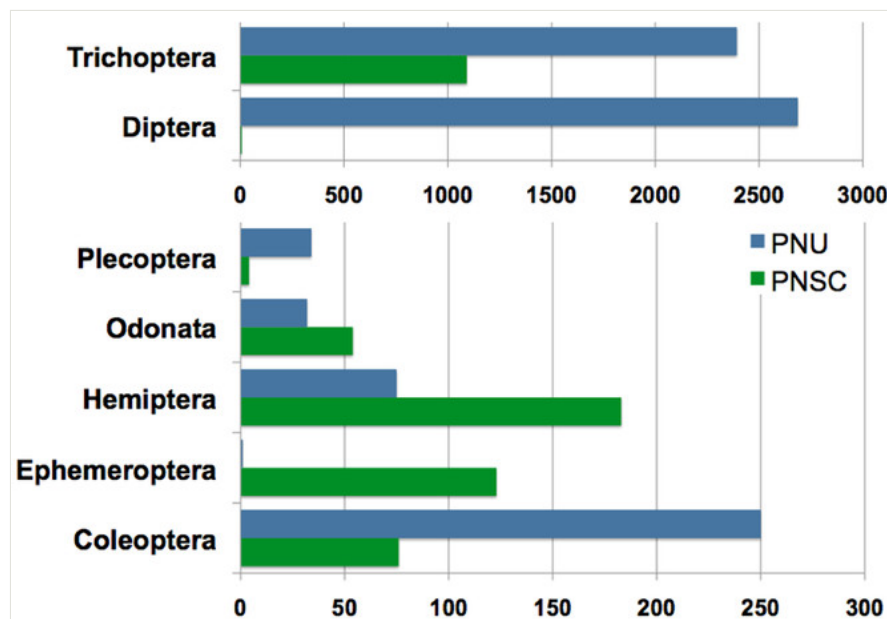


Figure 17.

Number of individuals of aquatic insects identified from Ubajara (PNU, blue) and Sete Cidades (PNSC, green) National Parks.

These individuals were identified into 96 species from PNU and 112 species from PNSC, while 20 of these species were found in both parks (Fig. 18). Species complementarity between both parks was of 89%.

The number of species per insect order in PNU and PNSC, respectively were: Coleoptera, 16 and 20; Diptera 10 and 1; Ephemeroptera, 1 and 9; Hemiptera, 9 and 20; Odonata, 21 and 21; Plecoptera, 1 and 1; and Trichoptera, 38 and 40. Species checklists for both National Parks are given below. Species marked with an asterisk (\*) were found in both National Parks and distributional records (country or state) marked with an exclamation mark (!) are new records published herein. Species described or first taxa records based on material collected during this project are cited under Notes.

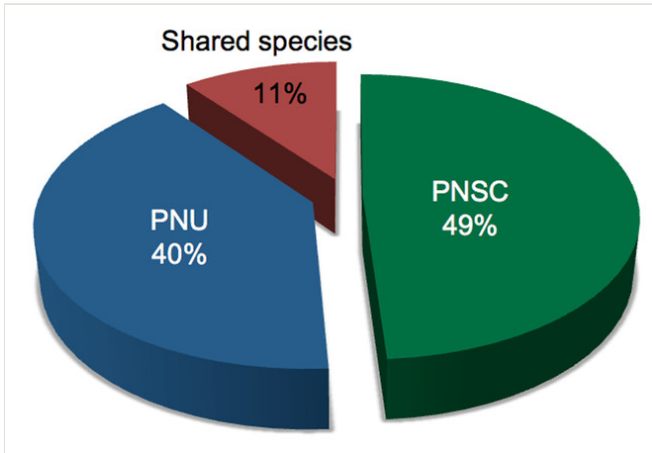


Figure 18.

Percentage of total species of aquatic insects found only at Ubajara (PNU, blue), only at Sete Cidades (PNCS, green), and in both National Parks (red).

## Aquatic insects from Parque Nacional de Ubajara (PNU)

### Order Coleoptera

#### Family Elmidae

**Notes:** New family record for CE.

#### Genus *Cylloepus* Erichson, 1847

**Notes:** New genus record for CE.

#### *Cylloepus* sp. 1

##### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 1; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Brunno H. L. Sampaio; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

#### Genus *Macrelmis* Motschulsky, 1859

**Notes:** New genus record for CE.



***Macrelmis* sp. 1****Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 2; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Brunno H. L. Sampaio; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Genus *Microcyллоepus* Hinton, 1935**

**Notes:** New genus record for CE.

***Microcyллоepus* sp. 1****Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 17.ii.13; individualCount: 1; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Brunno H. L. Sampaio; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 5; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Brunno H. L. Sampaio; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 23.iv.12; individualCount: 1; lifeStage: immature; recordedBy: Takiya, D.M.; identifiedBy: Brunno H. L. Sampaio; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 23.iv.12; individualCount: 2; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Brunno H. L. Sampaio; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Family Epimetopidae**

**Notes:** New family record for CE.

## Genus *Epimetopus* Lacordaire, 1854

**Notes:** New genus record for CE.

### *Epimetopus* sp. 1

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 15.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species in the lanceolatus group.

## Family Hydrophilidae

## Genus *Australocyon* Hansen, 1990

**Notes:** New genus record for CE.

### *Australocyon* sp. 1

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 24.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

## Genus *Chasmogenus* Sharp, 1882

**Notes:** New genus record for CE.

### *Chasmogenus* (*Chasmogenus*) sp. 1\*

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 4; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Genus *Enochrus* Thomson, 1859**

**Notes:** New genus record for CE.

***Enochrus (Methydrus) melanthus* Orchymont, 1943****Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 9; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Portão Neblina; maximumElevationInMeters: 849; verbatimCoordinates: 3°50'18"S, 40°53'54"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CEI, PE, MS, SP.

**Notes:** New species record for CE.

**Genus *Helochares* Mulsant, 1844**

**Notes:** New genus record for CE.

***Helochares (Helochares) sp. 1\******Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Manual; verbatimEventDate: 19.ii.13; individualCount: 1; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Genus *Hemiosus* Sharp, 1882

### *Hemiosus varidius* Orchymont, 1940

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio da Minas abaixo do teleférico; maximumElevationInMeters: 395; verbatimCoordinates: 3°49'43.3"S, 40°53'51.5"W; samplingProtocol: Manual; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CEI, PE.

**Notes:** New species record for CE.

## Genus *Oocyclus* Sharp, 1882

**Notes:** New genus record for CE.

### *Oocyclus schubarti*\* Orchymont, 1940

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 13; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 15; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 3; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PI, CE, AL. Argentina?

**Notes:** New species record for CE.

## Genus *Paracymus* Thomson, 1867

### *Paracymus rufocinctus* Bruch, 1915

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Widespread in South America. Brazil: PI, CE, PE. Argentina.

## Genus *Phaenostoma* Orchymont, 1937

**Notes:** New genus record for CE.

### *Phaenostoma* sp. 1

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Ponte sobre Rio Miranda; maximumElevationInMeters: 792; verbatimCoordinates: 3°50'7.4"S, 40°54'47.5"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 15.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

## Genus *Phaenonotum* Sharp, 1882

### *Phaenonotum* sp. 1

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Santos, A.P.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Genus *Tropisternus* Solier, 1834

### *Tropisternus (Pristoternus) flavipalpis* Sharp, 1883

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Ponte sobre Rio Miranda; maximumElevationInMeters: 792; verbatimCoordinates: 3°50'7.4"S, 40°54'47.5"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 15.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Mexico. Brazil: CE, RJ.

**Notes:** New species record for Northeastern Brazil.

## Family Torridincolidae

**Notes:** New family record for CE.

## Genus *Claudiella* Reichardt & Vanin, 1976

**Notes:** New genus record for CE.

### *Claudiella* sp. 1

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio Cafundó; maximumElevationInMeters: 753; verbatimCoordinates: 3°50'12"S, 40°54'31"W; samplingProtocol: Manual; verbatimEventDate: 17.ii.13; individualCount: 21; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Brunno H. L. Sampaio; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 69; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Brunno H. L. Sampaio; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 22.iv.12; individualCount: 1; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Brunno H. L. Sampaio; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524;

verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual;  
 verbatimEventDate: 23.iv.12; individualCount: 5; lifeStage: adult; recordedBy: Takiya,  
 D.M.; identifiedBy: Brunno H. L. Sampaio; institutionCode: DZRJ; basisOfRecord:  
 PreservedSpecimen

- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Manual; verbatimEventDate: 23.iv.12; individualCount: 3; lifeStage: immature; recordedBy: Takiya, D.M.; identifiedBy: Brunno H. L. Sampaio; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Manual; verbatimEventDate: 23.iv.12; individualCount: 19; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Brunno H. L. Sampaio; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species. See Fig. 19.



Figure 19.

Specimen of *Claudiella* sp. 1 collected at PNU-02, an undescribed species representing the first record of Torrindicolidae for Ceará.

### Genus *Ytu* Reichardt, 1973

**Notes:** New genus record for CE.

#### *Ytu* sp. 1

##### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524;

verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual;  
 verbatimEventDate: 18.ii.13; individualCount: 64; lifeStage: adult; recordedBy: Santos,  
 A.P.M. | Takiya, D.M.; identifiedBy: Brunno H. L. Sampaio; institutionCode: DZRJ;  
 basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

## Order Diptera

## Family Empididae

## Subfamily Hemerodromiinae

**Notes:** Subfamily firstly recorded from CE in Câmara et al. 2015.

## Genus *Hemerodromia* Meigen, 1823

**Notes:** Genus firstly recorded from CE in Câmara et al. 2015.

## *Hemerodromia brevicercata* Câmara, Takiya, Plant & Rafael, 2015



Figure 20.

Lateral habitus of male holotype of *Hemerodromia brevicercata* collected at PNU-07 (CZMA), species described based on material collected during this project.

## Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.ii.13; individualCount: 258; lifeStage: adult; recordedBy: Rafael,



J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Josenir Teixeira Câmara; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE.

**Notes:** Species described in Câmara et al. 2015. See Fig. 20.

### ***Hemerodromia membranosa* Câmara, Takiya, Plant & Rafael, 2015**

#### **Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 33; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Josenir Teixeira Câmara; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE.

**Notes:** Species described in Câmara et al. 2015.

### ***Hemerodromia mesomelaena*\* Bezzi, 1909**

#### **Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 15; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Josenir Teixeira Câmara; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PII, CEI, PR. Peru. Argentina.

**Notes:** New species record for Northeastern Brazil.

### ***Hemerodromia mourai* Câmara, Takiya, Plant & Rafael, 2015**

#### **Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 18; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Josenir Teixeira Câmara; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE.

**Notes:** Species described in Câmara et al. 2015. See Fig. 21.



Figure 21.

Lateral habitus of male holotype of *Hemerodromia mourai* collected at PNU-07 (CZMA), species described based on material collected during this project.

### ***Hemerodromia ubajaraensis* Câmara, Takiya, Plant & Rafael, 2015**

#### **Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.ii.13; individualCount: 5; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Josenir Teixeira Câmara; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE.

**Notes:** Species described in Câmara et al. 2015. See Fig. 22.

### ***Hemerodromia* sp. 1**

#### **Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 3; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Josenir Teixeira Câmara; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.



Figure 22.

Lateral habitus of male holotype of *Hemerodromia ubajaraensis* collected at PNU-07 (CZMA), species described based on material collected during this project.

## Genus *Metachela* Coquillett, 1903

**Notes:** New genus record for CE.

### *Metachela* sp. 1

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 24.iv.12; individualCount: 28; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Josenir Teixeira Câmara; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

### *Metachela* sp. 2

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 15; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Josenir Teixeira Câmara; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

## Genus *Neoplasta* Coquillett, 1895

**Notes:** New genus record for CE.

### *Neoplasta* sp. 1

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.ii.13; individualCount: 1986; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Josenir Teixeira Câmara; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

### *Neoplasta* sp. 2

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 24.iv.12; individualCount: 326; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Josenir Teixeira Câmara; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

## Order Ephemeroptera

### Family Leptophlebiidae

**Notes:** New family record for CE.

## Genus *Farrodes* Peters, 1971

**Notes:** New genus record for CE.

### *Farrodes tepui*\* Domínguez, Molineri & Peters, 1996

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount:

1; sex: male; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Brazil: PII, CEI, PE.

**Notes:** New species record for CE.

## Order Hemiptera

### Infraorder Gerromorpha

### Family Gerridae

#### Genus *Limnogonus* Stål, 1868

**Notes:** Genus firstly recorded from CE in Cordeiro and Moreira 2015.

#### *Limnogonus profugus* Drake & Harris, 1930

##### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Felipe F. F. Moreira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE, PB, PE, MT, GO, MG, MS, SP, RJ. Peru. Paraguay. Argentina.

**Notes:** Species firstly recorded from CE in Cordeiro and Moreira 2015.

### Family Veliidae

#### Genus *Rhagovelia* Mayr, 1865

**Notes:** Genus firstly recorded from CE in Cordeiro and Moreira 2015.

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

##### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 23.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy:

Takiya, D.M.; identifiedBy: Felipe F. F. Moreira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 23.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Felipe F. F. Moreira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PA, CE, MA, MT, GO, MG, MS, SP. Paraguay.

**Notes:** Species firstly recorded from CE in Cordeiro and Moreira 2015.

## ***Rhagovelia* sp. 1**

### **Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 17.ii.13; individualCount: 12; lifeStage: immature; recordedBy: Takiya, D.M.; identifiedBy: Felipe F. F. Moreira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Manual; verbatimEventDate: 24.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Felipe F. F. Moreira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## **Infraorder Nepomorpha**

## **Family Belostomatidae**

## **Genus *Belostoma* Latreille, 1807**

## ***Belostoma* sp. 1\***

### **Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Manual; verbatimEventDate: 21.iv.12; individualCount: 4; lifeStage: immature; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Family Corixidae

### Genus *Tenagobia* Bergroth, 1899

#### *Tenagobia* sp. 1

##### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 7; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Family Gelastocoridae

**Notes:** New family record for CE.

### Genus *Gelastocoris* Kirkaldy, 1897

**Notes:** New genus record for CE.

#### *Gelastocoris angulatus* (Melin, 1929)

##### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Manual; verbatimEventDate: 16.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: YPT; verbatimEventDate: 22.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Câmara, J.T.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Guyana. Suriname. Brazil: PA, AM, CE!, MT, BA, GO, MG, SP, RJ. Bolivia. Paraguay. Argentina.

**Notes:** New species record for CE.

### ***Gelastocoris* sp.**

#### **Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 22.iv.12; individualCount: 1; lifeStage: immature; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: YPT; verbatimEventDate: 22.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Câmara, J.T.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

### **Family Naucoridae**

**Notes:** New family record for CE.

### **Genus *Limnocoris* Stål, 1858**

**Notes:** New genus record for CE.

### ***Limnocoris* sp. 1**

#### **Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 14.ii.13; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

### **Family Notonectidae**

### **Genus *Martarega* White, 1879**

### ***Martarega bentoi*\* Truxal, 1949**

#### **Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates:



3°50'12"S, 40°54'35"W; samplingProtocol: Manual; verbatimEventDate: 16.ii.13; individualCount: 9; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Manual; verbatimEventDate: 16.ii.13; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Manual; verbatimEventDate: 16.ii.13; individualCount: 28; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

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

**Notes:** New species record for CE.

## Order Odonata

### Suborder Anisoptera

### Family Aeshnidae

### Genus *Castoraeschna* Calvert, 1952

### *Castoraeschna corbeti* Carvalho, Pinto & Ferreira-Jr, 2009

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 16.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Alcimar do Lago Carvalho | Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Alcimar do Lago Carvalho | Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PA, CE!.

**Notes:** New species record for CE.

## Genus *Gynacantha* Rambur, 1842

### *Gynacantha nervosa*\* Rambur, 1842

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Portão Neblina; maximumElevationInMeters: 849; verbatimCoordinates: 3° 50'18"S, 40°53'54"W; samplingProtocol: Manual; verbatimEventDate: 17.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** USA south to Panama. Trinidad and Tobago. Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: RR, PII, CE, PE, MT, MG, MS, ES, RJ. Ecuador. Peru. Bolivia.

## Family Gomphidae

### Genus *Progomphus* Selys, 1854

#### *Progomphus complicatus* Selys, 1854

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Ângelo Parise Pinto | Marcus Vinicius O. de Almeida; institutionCode: CZMA; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Ângelo Parise Pinto | Marcus Vinicius O. de Almeida; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Ângelo Parise Pinto | Marcus Vinicius O. de Almeida; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE, BA, MG, ES, SP, RJ, SC, RS. Paraguay. Argentina.

**Notes:** Species firstly recorded from CE in De Almeida et al. 2013.

### ***Progomphus dorsopallidus* Byers, 1934**

#### **Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Ângelo Parise Pinto | Marcus Vinicius O. de Almeida; institutionCode: CZMA; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Ângelo Parise Pinto | Marcus Vinicius O. de Almeida; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Ângelo Parise Pinto | Marcus Vinicius O. de Almeida; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Trinidad and Tobago. Venezuela. Guyana. Brazil: CE, ES.

### **Family Libellulidae**

### **Genus *Brechmorhoga* Kirby, 1889**

### ***Brechmorhoga nubecula* (Rambur, 1842)**

#### **Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Mexico. Belize. Costa Rica. Panama. Trinidad and Tobago. Colombia. Venezuela. Brazil: CE!, MT, BA, MG, ES, SP, RJ, SC. Ecuador. Peru. Paraguay. Argentina

**Notes:** New species record for CE.

## Genus *Dasythemis* Karsch, 1889

### *Dasythemis esmeralda* Ris, 1910

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Manual; verbatimEventDate: 24.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Cavicholi, R.R.; identifiedBy: Alcimar do Lago Carvalho | Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Trinidad and Tobago. Colombia. Venezuela. Suriname. French Guiana. Brazil: AM, CE, PE, MT, RO, GO, MS, SP, RJ. Ecuador. Peru. Bolivia.

## Genus *Dythemis* Hagen, 1861

### *Dythemis nigra* Martin, 1897

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Ângelo Parise Pinto | Marcus Vinicius O. de Almeida; institutionCode: CZMA; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto | Marcus Vinicius O. de Almeida; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Mexico south to Panama. Trinidad and Tobago. Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: RR, PA, AM, CE, PE, MT, RO, BA, GO, MG, MS, ES, SP, RJ, SC. Ecuador. Peru. Paraguay. Argentina.

**Genus *Erythrodiplax* Brauer, 1868*****Erythrodiplax basalis*\* (Kirby, 1897)****Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Manual; verbatimEventDate: 24.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Cavichioli, R.R.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Trinidad and Tobago. Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: RR, PA, AM, MA, PI, CE, PE, MT, RO, BA, MG, MS, ES, SP, RJ, RS. Ecuador. Peru. Bolivia. Paraguay. Argentina. Uruguay.

***Erythrodiplax castanea* (Burmeister, 1839)****Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Manual; verbatimEventDate: 24.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Cavichioli, R.R.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Belize. Guatemala. Costa Rica. Trinidad and Tobago. Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: PA, AM, CE, PE, MT, RO, BA, GO, MS, ES, SP, RJ, SC. Ecuador. Peru. Bolivia. Paraguay. Argentina.

**Notes:** New species record for CE.

***Erythrodiplax fusca*\* (Rambur, 1842)****Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** USA south to Panama. Trinidad and Tobago. Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: PA, AM, MA, PI, CE, RN, PE, MT, RO, BA, GO, MG, MS, ES, SP, RJ, SC, RS. Ecuador. Peru. Bolivia. Paraguay. Argentina. Uruguay.

***Erythrodiplax paraguayensis* (Förster, 1904)****Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Suspended intercept trap; verbatimEventDate: 10.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Câmara, J.T.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Colombia. Venezuela. Guyana. Suriname. Brazil: RR, MA, CE, MT, MG, MS, SP, RJ, RS. Ecuador. Bolivia. Paraguay. Argentina.

**Genus *Macrothemis* Hagen, 1868*****Macrothemis rupicola* Rácenis, 1957****Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. French Guiana. Brazil: CE!, MG, RJ.

**Notes:** New species record for Northeastern Brazil.

**Family incertae sedis****Genus *Neocordulia* Selys, 1882**

**Notes:** New genus record for CE.

***Neocordulia setifera* (Hagen in Selys, 1871)****Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CEI, SP, RJ, PR. Argentina.

**Notes:** New species record for Northeastern Brazil. See Fig. 23.



Figure 23.

Lateral habitus of a male of *Neocordulia setifera* collected at PNU-02 (DZRJ), representing its first record for Northeastern Brazil. Scale bar = 10 mm.

## Suborder Zygoptera

### Family Calopterygidae

#### Genus *Hetaerina* Hagen in Selys, 1853

#### *Hetaerina indepressa* Garrison, 1990

##### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 16.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PA, CEI.

**Notes:** New species record for Northeastern Brazil.

## Genus *Mnesarete* Cowley, 1934

### *Mnesarete* sp. 1

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Family Coenagrionidae

## Genus *Acanthagrion* Selys, 1876

### *Acanthagrion* aff. *quadratum* Selys, 1876

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.xi.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira, F. | Marques, D.W.A.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Genus *Argia* Rambur, 1842

### *Argia lilacina* Selys, 1865

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Manual; verbatimEventDate: 13.xi.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira, F. | Marques, D.W.A.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen



**Distribution:** Brazil: CE!, TO, MT, GO, MG, MS, ES, SP, RJ. Bolivia. Paraguay. Argentina.

**Notes:** New species record for Northeastern Brazil.

### *Argia modesta* Selys, 1865

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Manual; verbatimEventDate: 13.xi.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira, F. | Marques, D.W.A.; identifiedBy: Rosser W. Garrison; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Suspended intercept trap; verbatimEventDate: 16.xii.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira, F. | Pinto Júnior, J.S.; identifiedBy: Rosser W. Garrison; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Suspended intercept trap; verbatimEventDate: 16.xii.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira, F. | Pinto Júnior, J.S.; identifiedBy: Rosser W. Garrison; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.xi.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira, F. | Marques, D.W.A.; identifiedBy: Rosser W. Garrison; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

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

### *Argia tinctipennis*\* Selys, 1865

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 18.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Suspended intercept trap; verbatimEventDate: 1.xii.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira,

F. | Pinto Júnior, J.S.; identifiedBy: Rosser W. Garrison; institutionCode: DZRJ;  
basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: AM, PI, CE, MT, GO, MS. Peru.

**Notes:** New species record for Northeastern Brazil.

## *Argia* sp. 1

### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Suspended intercept trap; verbatimEventDate: 1.xii.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira, F. | Pinto Júnior, J.S.; identifiedBy: Rosser W. Garrison; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Manual; verbatimEventDate: 24.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Cavichioli, R.R.; identifiedBy: Alcimar Carvalho; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Genus *Oxyagrion* Selys, 1876

### *Oxyagrion chapadense* Costa, 1978

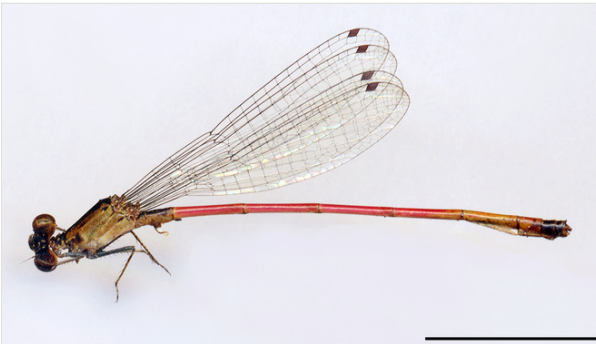


Figure 24.

Lateral habitus of a male melanistic morph of *Oxyagrion chapadense* collected at PNU-02 (DZRJ). Scale bar = 10 mm.

### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual;

verbatimEventDate: 18.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE, MT, BA, GO, MG, MS, SP, PR. Bolivia. Paraguay. Argentina. Uruguay.

**Notes:** See Fig. 24.

## Order Plecoptera

### Family Perlidae

#### Genus *Anacroneuria* Klapálek, 1909

#### *Anacroneuria calori*\* Duarte & Lecci, 2016

##### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio da Minas abaixo do teleférico; maximumElevationInMeters: 395; verbatimCoordinates: 3°49'43.3"S, 40°53'51.5"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M | et al.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio da Minas abaixo do teleférico; maximumElevationInMeters: 395; verbatimCoordinates: 3°49'43.3"S, 40°53'51.5"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M | et al.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 16.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy:

- Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M | et al.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Manual; verbatimEventDate: 16.ii.13; individualCount: 4; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Portão Neblina; maximumElevationInMeters: 849; verbatimCoordinates: 3° 50'18"S, 40°53'54"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 19.ii.13; individualCount: 1; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 7; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 22.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Somavilla, A.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio Cafundó; maximumElevationInMeters: 753; verbatimCoordinates: 3°50'12"S, 40°54'31"W; samplingProtocol: Manual; verbatimEventDate: 23.iv.12; individualCount: 1; lifeStage: immature; recordedBy: Takiya, D.M.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- m. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 23.iv.12; individualCount: 7;

sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- n. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 24.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PII, CE.

**Notes:** See Fig. 25.



Figure 25.

General adult specimen of *Anacroneuria calori* collected at PNU-02. This species was also recorded from PNSC, representing the first record of Plecoptera for Piauí.

## Order Trichoptera

### Family Calamoceratidae

#### Genus *Phylloicus* Müller, 1880

#### *Phylloicus obliquus* Navás, 1931

##### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.xii.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy:

- Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
  - c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
  - d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
  - e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
  - f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
  - g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
  - h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 13; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
  - i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy:

- Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 6; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 24.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE, BA, MG, RJ, SC.

### ***Phylloicus pirapo* Prather, 2003**

#### **Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Suspended intercept trap; verbatimEventDate: 1.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | Rafael, J.A. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Suspended intercept trap; verbatimEventDate: 1.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | Rafael, J.A. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.ii.13; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.xii.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy:

- Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 12; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 15; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 12; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya,



- D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- m. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- n. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- o. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 5; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- p. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 6; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- q. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 6; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- r. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 14; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- s. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy:

- Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- t. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- u. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- v. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- w. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- x. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Suspended intercept trap; verbatimEventDate: 19.i.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- y. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Suspended intercept trap; verbatimEventDate: 19.i.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- z. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- aa. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico;

- maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 5; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- ab. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 14; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- ac. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- ad. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.v.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- ae. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.v.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil!: CE!. Paraguay. Argentina.

**Notes:** New species record for Brazil.

## Family Ecnomidae

**Notes:** New family record for CE.

## Genus *Austrotinodes* Schmid, 1955

**Notes:** New genus record for CE.

## *Austrotinodes paraguayensis*\* Flint, 1983

### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap;

- verbatimEventDate: 1.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Mirante da cachoeira do Gameleira; maximumElevationInMeters: 880; verbatimCoordinates: 3°50'21"S, 40°54'23"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 15.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874;

- verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- m. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- n. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- o. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- p. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- q. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- r. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 13; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- s. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 12; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- t. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- u. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- v. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.v.12; individualCount: 6; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- w. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.v.12; individualCount: 5; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- x. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Mirante da cachoeira do Gameleira; maximumElevationInMeters: 880; verbatimCoordinates: 3°50'21"S, 40°54'23"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 23.iv.12; individualCount:

1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PII, CEI, MG. Paraguay.

**Notes:** New species record for Northeastern Brazil.

## Family Helicopsychidae

### Genus *Helicopsyche* von Siebold, 1856

#### *Helicopsyche (Feropsyche) monda* Flint, 1983

##### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 13.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 13.ii.13; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 13.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap;

- verbatimEventDate: 14.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 15.ii.13; individualCount: 8; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Ponte sobre Rio Miranda; maximumElevationInMeters: 792; verbatimCoordinates: 3°50'7.4"S, 40°54'47.5"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 15.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Ponte sobre Rio Miranda; maximumElevationInMeters: 792; verbatimCoordinates: 3°50'7.4"S, 40°54'47.5"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 15.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- m. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- n. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874;



- verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- o. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- p. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- q. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Mirante da cachoeira do Gameleira; maximumElevationInMeters: 880; verbatimCoordinates: 3°50'21"S, 40°54'23"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 23.iv.12; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- r. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Mirante da cachoeira do Gameleira; maximumElevationInMeters: 880; verbatimCoordinates: 3°50'21"S, 40°54'23"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 23.iv.12; individualCount: 8; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- s. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 24.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CEI, MG, SP, SC.

**Notes:** New species record for Northeastern Brazil.

### *Helicopsyche (Feropsyche) vergelana*\* Ross, 1956

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.ix.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 4; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 32; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 36; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio da Minas abaixo do teleférico; maximumElevationInMeters: 395; verbatimCoordinates: 3°49'43.3"S, 40°53'51.5"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 15.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy:

Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 4; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- m. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- n. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- o. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 6; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- p. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 11; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya,

- D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- q. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 20; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- r. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 15; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- s. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.v.12; individualCount: 18; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- t. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.v.12; individualCount: 38; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- u. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 22.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Somavilla, A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- v. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 22.iv.12; individualCount: 18; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Somavilla, A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- w. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 24.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Mexico. Belize. Guatemala. Honduras. Costa Rica. Panama. Trinidad and Tobago. Venezuela. Suriname. Brazil: PII, CEI, PE. Peru.

**Notes:** New species record for CE.

## Family Hydropsychidae

### Genus *Leptonema* Guérin, 1843

#### *Leptonema spinulum* Flint, McAlpine & Ross, 1987

##### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 24.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Guyana. Brazil: PA, AM, CEI, MT, DF. Peru. Argentina.

**Notes:** New species record for Northeastern Brazil.

#### *Leptonema viridianum*\* Navás, 1916

##### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 5; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 6; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Manual; verbatimEventDate: 17.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 10; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya,

- D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- m. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 57; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- n. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 5; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- o. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 52; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- p. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 11; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- q. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 25; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- r. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 22.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Somavilla, A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- s. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 22.iv.12; individualCount: 11; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Somavilla, A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Colombia. Venezuela. Guyana. Brazil: PA, PI, CE, GO, MG, DF, ES, RJ. Ecuador. Peru. Bolivia. Paraguay. Argentina.

## Genus *Macrostemum* Kolenati, 1859

### *Macrostemum hyalinum* (F.J. Pictet, 1836)

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.ii.13; individualCount: 5; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.ii.13; individualCount: 4; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.xii.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.xii.12; individualCount: 6; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 8; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 5; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795;



- verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- m. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.xi.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- n. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.xi.12; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- o. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- p. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- q. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- r. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Colombia. Venezuela. Guyana. Brazil: PA, CE, PB, PE, MT, AC, BA, ES, SP, RJ, PR. Peru.

### *Macrostemum ulmeri*\* (Banks, 1913)

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.xii.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.xii.12; individualCount: 6; sex: female; lifeStage: adult; recordedBy:

- Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 8; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 5; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy:

- Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- m. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.xi.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- n. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.xi.12; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- o. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- p. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- q. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- r. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Honduras. Costa Rica. Panama. Colombia. Suriname. Brazil: PA, AM, PII, CEI, MT, AC, RO, SP. Ecuador. Peru.

**Notes:** New species record for CE.

## Genus *Smicridea* McLachlan, 1871

***Smicridea (Smicridea) bivittata\** (Hagen, 1861)****Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 8; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 6; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 18; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 10; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap;

- verbatimEventDate: 22.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Somavilla, A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 22.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Somavilla, A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 24.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Mexico. Guatemala. Honduras. El Salvador. Costa Rica. Trinidad and Tobago. Venezuela. Suriname. Brazil: PA, PI, CE, MG, SP. Ecuador.

**Notes:** New species record for Northeastern Brazil.

## ***Smicridea (Smicridea) franciscana* Rocha, Dumas & Nessimian, 2016**

### **Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 8; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 6; sex: female; lifeStage: adult; recordedBy:

- Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 18; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 21.iv.12; individualCount: 10; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 22.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Somavilla, A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 22.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Somavilla, A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 24.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE!, MG.

**Notes:** New species record for Northeastern Brazil.

***Smicridea (Smicridea) sp. 2\******Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.ix.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 8; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 5; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 28; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 48; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.



***Smicridea (Smicridea) sp. 3*****Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 5; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

## Family Hydroptilidae

**Notes:** Family firstly recorded from CE in Souza et al. 2014b.

## Genus *Alisotrichia* Flint, 1964

**Notes:** New genus record for CE.

***Alisotrichia* sp. 1****Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.ix.12; individualCount: 23; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.ix.12; individualCount: 10; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.ix.12; individualCount: 23; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.ix.12; individualCount: 10; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 4; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 10; sex: male; lifeStage: adult; recordedBy:

- Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 10; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
  - j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
  - k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
  - l. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 6; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

## ***Alisotrichia* sp. 2**

### **Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 11; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 18; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 25; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 27; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 79; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.v.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico;

- maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.v.12; individualCount: 7; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 6; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

### *Alisotrichia* sp. 3

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount:

- 11; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 18; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 25; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 27; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 79; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.v.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.v.12; individualCount: 7; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

## Genus *Hydroptila* Dalman, 1918

**Notes:** Genus firstly record from CE in Souza et al. 2014a.

### *Hydroptila marighellai* Souza, Santos & Takiya, 2014

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 22.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Somavilla, A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE, PE, AL.

**Notes:** Species described in Souza et al. 2014a.

## Genus *Metrichia* Ross, 1938

**Notes:** Genus firstly recorded from CE in Santos et al. 2016a.

### *Metrichia acuminata* Santos, Takiya & Nessimian, 2016

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap;



verbatimEventDate: 14.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Mirante da cachoeira do Gameleira; maximumElevationInMeters: 880; verbatimCoordinates: 3°50'21"S, 40°54'23"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 23.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE, AL.

**Notes:** Species described in Santos et al. 2016a.

### ***Metrichia vulgaris* Santos, Takiya & Nessimian, 2016**

#### **Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Mirante da cachoeira do Gameleira; maximumElevationInMeters: 880; verbatimCoordinates: 3°50'21"S, 40°54'23"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 23.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE, GO, MG, RJ.

**Notes:** Species described in Santos et al. 2016a.

### ***Metrichia rafaeli* Santos, Takiya & Nessimian, 2016**

#### **Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap;

- verbatimEventDate: 13.ix.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 15.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE.

**Notes:** Species described in Santos et al. 2016a.

## ***Metrichia ubajara* Santos, Takiya & Nessimian, 2016**

### **Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy:

- Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 10; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 26; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 7; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 9; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.xi.12; individualCount: 9; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico;

maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W;  
 samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1;  
 sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M.  
 | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ;  
 basisOfRecord: PreservedSpecimen

- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico;  
 maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W;  
 samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1;  
 sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M.  
 | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ;  
 basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE.

**Notes:** Species described in Santos et al. 2016a.

### Genus *Neotrichia* Morton, 1905

**Notes:** New genus record for CE.

### *Neotrichia* sp. 2\*

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874;  
 verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap;  
 verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy:  
 Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos;  
 institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio da Minas abaixo do teleférico; maximumElevationInMeters: 395;  
 verbatimCoordinates: 3°49'43.3"S, 40°53'51.5"W; samplingProtocol: Pennsylvania light trap;  
 verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult;  
 recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos;  
 institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico;  
 maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W;  
 samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1;  
 sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M.  
 | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ;  
 basisOfRecord: PreservedSpecimen

***Neotrichia* sp. 5****Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio da Minas abaixo do teleférico; maximumElevationInMeters: 395; verbatimCoordinates: 3°49'43.3"S, 40°53'51.5"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Genus *Ochrotrichia* Mosely, 1934**

**Notes:** Genus firstly recorded from CE in Souza et al. 2014a.

***Ochrotrichia caatinga* Souza, Santos & Takiya, 2014****Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap;

verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE.

**Notes:** Species described in Souza et al. 2014a.

## *Ochrotrichia limeirai* Souza, Santos & Takiya, 2014

### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy:

- e. Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen  
country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE.

**Notes:** Species described in Souza et al. 2014a.

### ***Ochrotrichia patulosa* (Wasmund & Holzenthal, 2007)**

#### **Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE, RJ.

**Notes:** Species firstly recorded from CE in Souza et al. 2014a.

### **Genus *Oxyethira* Eaton, 1873**

**Notes:** New genus record for CE.

### ***Oxyethira parce* (Edwards & Arnold, 1961)**

#### **Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 22.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Somavilla, A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** USA, Mexico. Costa Rica. Panama. Trinidad and Tobago. Colombia. Venezuela. Guyana. Brazil: CEI, MG. Ecuador. Peru. Bolivia. Argentina.

**Notes:** New species record for Northeastern Brazil.

## *Oxyethira tica*\* Harris & Holzenthal, 1992

### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 22.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Somavilla, A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen



- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 24.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Mexico. Honduras. Costa Rica. Panama. Guadeloupe. Dominica. Santa Lucia. Saint Vicent and the Grenadines. Granada. Trinidad and Tobago. Venezuela. Brazil: AM, PII, CEI, MG, RJ. Ecuador.

**Notes:** New species record for Northeastern Brazil.

## Family Leptoceridae

### Genus *Atanatolica* Mosely, 1936

**Notes:** Genus firstly recorded from CE in Henriques-Oliveira and Santos 2014.

### *Atanatolica nordestina* Henriques-Oliveira & Santos, 2014

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Ana Lucia Henriques Oliveira | Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 1.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Ana Lucia Henriques Oliveira | Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Ana Lucia Henriques Oliveira | Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Manual; verbatimEventDate: 16.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira | Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio Cafundó; maximumElevationInMeters: 753;

- verbatimCoordinates: 3°50'12"S, 40°54'31"W; samplingProtocol: Manual; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira | Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio Cafundó; maximumElevationInMeters: 753; verbatimCoordinates: 3°50'12"S, 40°54'31"W; samplingProtocol: Manual; verbatimEventDate: 17.ii.13; individualCount: 12; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira | Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Manual; verbatimEventDate: 17.ii.13; individualCount: 11; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira | Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.xi.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Ana Lucia Henriques Oliveira | Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.xi.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Ana Lucia Henriques Oliveira | Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ana Lucia Henriques Oliveira | Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 24.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Ana Lucia Henriques Oliveira | Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE.

**Notes:** Species described in Henriques-Oliveira and Santos 2014. See Fig. 26.



Figure 26.

Adult and immature specimens of *Atanotolica nordestina* collected at PNU-04, species described based on material collected during this project.

## Genus *Nectopsyche* Müller, 1879

### *Nectopsyche* sp.

#### Material

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio Cafundó; maximumElevationInMeters: 753; verbatimCoordinates: 3°50'12"S, 40°54'31"W; samplingProtocol: Manual; verbatimEventDate: 23.iv.12; individualCount: 10; lifeStage: immature; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Genus *Oecetis* McLachlan, 1877

### *Oecetis fibra* Chen & Morse, 2012

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap;

- verbatimEventDate: 13.xi.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.xi.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.xi.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CEI, ES, SP, RJ, PR, SC.

**Notes:** New species record for Northeastern Brazil.

## Family Odontoceridae

### Genus *Marilia* Müller, 1880

#### *Marilia flexuosa* Ulmer, 1905

##### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 13.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap;

- verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 6; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 6; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 6; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio da Minas abaixo do teleférico; maximumElevationInMeters: 395; verbatimCoordinates: 3°49'43.3"S, 40°53'51.5"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio da Minas abaixo do teleférico; maximumElevationInMeters: 395; verbatimCoordinates: 3°49'43.3"S, 40°53'51.5"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- m. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- n. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Cachoeira do Cafundó; maximumElevationInMeters: 783; verbatimCoordinates: 3°50'12"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 15.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- o. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- p. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- q. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept

- trap; verbatimEventDate: 17.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- r. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- s. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.i.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- t. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- u. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- v. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- w. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- x. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 5; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya,

- D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- y. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- z. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.v.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- aa. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.v.12; individualCount: 4; sex: female; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- ab. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Mirante da cachoeira do Gameleira; maximumElevationInMeters: 880; verbatimCoordinates: 3°50'21"S, 40°54'23"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 23.iv.12; individualCount: 5; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Câmara, J.T.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Canada. USA. Mexico. Guatemala. Nicaragua. Costa Rica. Panama. Colombia. Brazil: CE!. Peru. Argentina.

**Notes:** New species record for Northeastern Brazil.

## Genus *Chimarra* Stephens, 1829

### *Chimarra (Chimarra) calori* Blahnik & Holzenthal, 2012

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 4; sex: female; lifeStage: adult; recordedBy:



- Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 6; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 8; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 13; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 10; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.;

- identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 14; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 5; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CEI, MG, SP.

**Notes:** New species record for Northeastern Brazil.

### ***Chimarra (Curgia) conica* Flint, 1983**

#### **Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 5; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya,

- D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 25; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 12; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 12; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 39; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 19; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 37; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy:

- Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 19; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 13; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- m. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- n. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- o. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- p. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 7; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE, MT, RO, GO, MG, ES, RJ, SC.

***Chimarra (Curgia) cultellata* Flint, 1983****Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 22.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Somavilla, A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 22.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Somavilla, A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 24.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 12; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 39; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 19; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 37; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 19; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio das Minas, próximo ao Portão Araticum; maximumElevationInMeters: 328; verbatimCoordinates: 3°49'32.6"S, 40°53'32.8"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 13; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- m. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- n. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- o. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- p. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 7; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PA, AM, CE!, RO, MG, DF, RJ, SC.

**Notes:** New species record for Northeastern Brazil.

### Family Polycentropodidae

**Notes:** New family record for CE.

### Genus *Cernotina* Ross, 1938

**Notes:** New genus record for CE.

### *Cernotina* sp. 2\*

#### Materials

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- d. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Samambaia, Rio Gameleira; maximumElevationInMeters: 874; verbatimCoordinates: 3°50'25"S, 40°54'19"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas na altura da trilha do teleférico; maximumElevationInMeters: 420; verbatimCoordinates: 3°49'58"S, 40°53'53"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 20.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 10; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen



**Genus *Polycentropus* Curtis, 1835**

**Notes:** New genus record for CE.

***Polycentropus* sp. 1****Material**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Trilha Araticum, Rio das Minas; maximumElevationInMeters: 524; verbatimCoordinates: 3°50'3"S, 40°54'18"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Family Xiphocentronidae**

**Notes:** New family record for CE.

**Genus *Xiphocentron* Brauer, 1870**

**Notes:** New genus record for CE.

***Xiphocentron* sp. 1****Materials**

- a. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.ii.13; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Ceará; municipality: Ubajara; locality: Parque Nacional de Ubajara, Rio Cafundó, pouco acima da cachoeira; maximumElevationInMeters: 795; verbatimCoordinates: 3°50'13"S, 40°54'35"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 13.xi.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Aquatic insects from Parque Nacional de Sete Cidades (PNSC)

### Order Coleoptera

#### Family Epimetopidae

**Notes:** New family record for PI.

#### Genus *Epimetopus* Lacordaire, 1854

**Notes:** New genus record for PI.

#### *Epimetopus lacordairei* Orchymont, 1933

##### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: White sheet light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PI, MS. Bolivia. Paraguay

**Notes:** New species record for Northeastern Brazil.

### Family Hydrophilidae

#### Genus *Crenitulus* Winters, 1926

**Notes:** New genus record for PI.

#### *Crenitulus suturalis* (LeConte, 1866)

##### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olha d'água dos Milagres; maximumElevationInMeters: 180; verbatimCoordinates: 4°5'31.8"S, 41°40'48.2"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 15.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Manual; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy:

Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** USA. Mexico. Belize. Guatemala. Honduras. Nicaragua. Costa Rica. Dominican Republic. Jamaica. Brazil: PI, CE, PE, AL, MS, SP, RJ, SC. Peru. Bolivia. Paraguay. Argentina.

**Notes:** New species record for PI.

## Genus *Berosus* Leach, 1817

### *Berosus patruelis* Berg, 1885

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Brazil: PI, PE, MS. Bolivia. Paraguay. Argentina.

### *Berosus consobrinus* Knisch, 1921

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4° 5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 18.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4° 5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Brazil: PII, MS.

**Notes:** New species record for Northeastern Brazil.

### ***Berosus erraticus* Mouchamps, 1963**

#### **Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Brazil: AM, PII, RJ. Bolivia. Paraguay. Argentina. Uruguay.

**Notes:** New species record for Northeastern Brazil.

### ***Berosus festivus* Berg, 1885**

#### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 19.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy:

Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ;  
basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Guyana. Brazil: PII, CE, PE, MT, MS, RJ. Argentina. Uruguay.

**Notes:** New species record for PI.

### ***Berosus* sp. 1**

#### **Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 11.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

### ***Berosus* sp. 2**

#### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

## Genus *Chasmogenus* Sharp, 1882

**Notes:** New genus record for PI.

### *Chasmogenus (Chasmogenus) sp. 1\**

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 20.iv.12; individualCount: 2; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Genus *Enochrus* Thomson, 1859

### *Enochrus (Methyrus) atlantis* Orchymont, 1943

#### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 8.11.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PI, PE, MS, SP, RJ.

### *Enochrus (Methyrus) sp. 1*

#### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olha d'água dos Milagres; maximumElevationInMeters: 180; verbatimCoordinates: 4°5'31.8"S, 41°40'48.2"W; samplingProtocol: Manual; verbatimEventDate: 9.11.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Genus *Helochares* Mulsant, 1844**

**Notes:** New genus record for PI.

***Helochares (Helochares) tectiformis* Fernández 1982****Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 10.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Brazil: PI, MS. Paraguay. Argentina.

**Notes:** New species record for Northeastern Brazil.

***Helochares (Helochares) sp. 1\******Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Genus *Hemiosus* Sharp, 1882*****Hemiosus varidius* Orchymont, 1940****Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 19.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual;

- verbatimEventDate: 19.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 19.ii.13; individualCount: 1; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 6; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 9; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PII, PE.

**Notes:** New species record for PI.

## ***Hemiosus* sp. 1**

### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olha d'água dos Milagres; maximumElevationInMeters: 180;



verbatimCoordinates: 4°5'31.8"S, 41°40'48.2"W; samplingProtocol: Manual;  
 verbatimEventDate: 11.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy:  
 Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ;  
 basisOfRecord: PreservedSpecimen

## Genus *Oocyclus* Sharp, 1882

**Notes:** New genus record for PI.

## *Oocyclus schubarti*\* Orchymont, 1940

### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171;  
 verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual;  
 verbatimEventDate: 9.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy:  
 Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ;  
 basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PII, CEI, AL. Argentina?

**Notes:** New species record for PI.

## Genus *Paracymus* Thomson, 1867

## *Paracymus gracilis* Orchymont, 1942

### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olho d'água Piscina do Bacuri; maximumElevationInMeters: 171;  
 verbatimCoordinates: 4°6'1.2"S, 41°42'38.8"W; samplingProtocol: White sheet light trap;  
 verbatimEventDate: 11.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy:  
 Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ;  
 basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olho d'água Piscina do Bacuri; maximumElevationInMeters: 171;  
 verbatimCoordinates: 4°6'1.2"S, 41°42'38.8"W; samplingProtocol: White sheet light trap;  
 verbatimEventDate: 11.ii.13; individualCount: 3; sex: female; lifeStage: adult; recordedBy:  
 Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ;  
 basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158;  
 verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Pennsylvania light trap;  
 verbatimEventDate: 11.ii.13; individualCount: 1; sex: male; lifeStage: adult;  
 recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode:  
 DZRJ; basisOfRecord: PreservedSpecimen

- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PI, PE, SP. Paraguay.

**Notes:** New species record for PI.

### ***Paracymus limbatus* Wooldridge, 1973**

#### **Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 10.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Trinidad and Tobago. Colombia. Venezuela. Suriname. Brazil: PA, PI, RN, BA, MT, SP. Peru. Bolivia. Paraguay.

**Notes:** New species record for PI.

### **Genus *Tropisternus* Solier, 1834**

#### ***Tropisternus (Streptitornus) collaris* Fabricius, 1775**

#### **Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** USA. Mexico. Nicaragua. Costa Rica. Cuba. Haiti. Virgin Islands. Venezuela. Brazil: AM, CE, PI, PE, AL, SP, RJ, PR, RS. Peru. Bolivia. Paraguay. Argentina.

***Tropisternus (Pristoternus) laevis* (Sturm, 1826)****Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 11.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Bruno Clarkson; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Guyana. French Guiana. Brazil: PA, AM, PI, CE, PE, AL, RJ. Paraguay. Argentina.

**Order Diptera****Family Empididae**

**Notes:** New family record for PI.

**Subfamily Hemerodromiinae**

**Notes:** New subfamily record for PI.

**Genus *Hemerodromia* Meigen, 1823**

**Notes:** New genus record for PI.

***Hemerodromia mesomelaena*\* Bezzi, 1909****Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 14.ii.13; individualCount: 7; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | Santos, A.P.M. | et al.; identifiedBy: Josenir Teixeira Câmara; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PI, CE, PR. Peru. Argentina.

**Notes:** New species record for Northeastern Brazil.

## Order Ephemeroptera

### Family Baetidae

#### Genus *Callibaetis* Eaton, 1881

#### *Callibaetis itannae* Cruz, Salles & Hamada, 2014

##### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 11; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PII, RO.

**Notes:** New species record for Northeastern Brazil.

#### *Callibaetis nigracyclus* Cruz, Salles & Hamada, 2014

##### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olha d'água dos Milagres; maximumElevationInMeters: 180; verbatimCoordinates: 4°5'31.8"S, 41°40'48.2"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 9.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: White sheet light trap; verbatimEventDate: 9.ii.13; individualCount: 1; sex: female; lifeStage: immature; recordedBy: Santos, A.P.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

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

**Notes:** New species record for Northeastern Brazil.

## Family Leptophlebiidae

**Notes:** New family record for PI.

## Genus *Farrodes* Peters, 1971

**Notes:** New genus record for PI.

## *Farrodes tepui*\* Domínguez, Molineri & Peters, 1996

### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 8; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Brazil: PI, CE!, PE.

**Notes:** New species record for PI.

## Genus *Fittkaulus* Savage & Peters, 1978

**Notes:** New genus record for PI.

## *Fittkaulus cururuensis* Savage, 1986

### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Manual; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 20.iv.12; individualCount: 5; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PA, PII, PE, MT, ES.

**Notes:** New species record for PI.

### Genus *Miroculis* Edmunds, 1963

**Notes:** New genus record for PI.

***Miroculis* sp. 1****Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

**Genus *Simothraulopsis* Demoulin, 1966**

**Notes:** New genus record for PI.

***Simothraulopsis demerara* (Traver, 1947)****Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy:

- Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 20.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 22.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olha d'água dos Milagres; maximumElevationInMeters: 180; verbatimCoordinates: 4°5'31.8"S, 41°40'48.2"W; samplingProtocol: White sheet light trap; verbatimEventDate: 9.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 10.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 11.ii.13; individualCount: 6; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: PA, AM, PII, PE, ES. Ecuador. Bolivia. Argentina.

**Notes:** New species record for PI.



**Genus *Thraulodes* Ulmer, 1920**

**Notes:** New genus record for PI.

***Thraulodes* sp. 1****Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Genus *Ulmeritoides* Traver, 1959**

**Notes:** New genus record for PI.

***Ulmeritoides flavopedes* (Spieth, 1943)****Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 10.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 11.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 11.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 9.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap;

- verbatimEventDate: 19.iv.12; individualCount: 7; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 20.iv.12; individualCount: 14; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 20.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Suriname. Brazil: RR, PI, PE, MT.

**Notes:** New species record for PI.

## Family Polymitarcyidae

### Genus *Campsurus* Eaton, 1868

#### *Campsurus truncatus* Ulmer, 1920

##### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap;

- verbatimEventDate: 19.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olho d'água Piscina do Bacuri; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'1.2"S, 41°42'38.8"W; samplingProtocol: White sheet light trap; verbatimEventDate: 20.iv.12; individualCount: 5; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 12.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 8.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: White sheet light trap; verbatimEventDate: 8.ii.13; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: White sheet light trap; verbatimEventDate: 8.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olho d'água Piscina do Bacuri; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'1.2"S, 41°42'38.8"W; samplingProtocol: White sheet light trap; verbatimEventDate: 8.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 9.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Inês Corrêa Gonçalves; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Colombia. Brazil: PI!, PE, ES, RJ. Peru. Bolivia.

**Notes:** New species record for PI.

## Order Hemiptera

### Infraorder Gerromorpha

### Family Gerridae

#### Genus *Neogerris* Matsumura, 1913

**Notes:** Genus firstly recorded from PI in Cordeiro and Moreira 2015.

#### *Neogerris lubricus* (White, 1879)

##### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 12.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Isabelle da R. S. Cordeiro; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Panama. Trinidad & Tobago. Colombia. Guyana. Suriname. Brazil: AP, PA, AM, PI, MT, RO, BA, MG, MS, SP, RJ. Ecuador. Peru. Bolivia. Paraguay. Argentina.

**Notes:** Species firstly recorded from PI in Cordeiro and Moreira 2015.

### Family Mesoveliidae

**Notes:** New family record for PI.

#### Genus *Mesovelis* Mulsant & Rey, 1852

**Notes:** New genus record for PI.

#### *Mesovelis* sp. 1

##### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 1; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Isabelle da R. S. Cordeiro; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Family Veliidae

**Notes:** Family firstly recorded from PI in Cordeiro and Moreira 2015.

### Genus *Microvelia* Westwood, 1834

**Notes:** Genus firstly recorded from PI in Cordeiro and Moreira 2015.

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

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Isabelle da R. S. Cordeiro; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Isabelle da R. S. Cordeiro; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Guyana. Suriname. Brazil: PA, PI, ES.

**Notes:** Species firstly recorded from Northeastern Brazil in Cordeiro and Moreira 2015.

### *Microvelia pulchella* Westwood, 1834

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Rio da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 8.ii.13; individualCount: 5; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Isabelle da R. S. Cordeiro; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Rio da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 8.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Isabelle da R. S. Cordeiro; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Canada. USA. Mexico. Guatemala. Costa Rica. Panama. Bahamas. Cuba. Dominican Republic. Cayman Islands. Jamaica. Puerto Rico. U.S. Virgin Islands. Anguilla. St. Martin. Saba. St. Kitts & Nevis. Guadeloupe. Martinique. Aruba. St.

Vincent & Grenadines. Barbados. Curaçao. Klein Curaçao. Bonaire. Klein Bonaire. Grenada. Trinidad and Tobago. Colombia. Venezuela. Brazil: PA, AM, MA, PI, PE, BA, AL, MG, MS, ES, SP, RJ, SC. Ecuador. Peru. Argentina.

**Notes:** Species firstly recorded from PI in Cordeiro and Moreira 2015.

### Genus *Platyvelia* Polhemus & Polhemus, 1993

**Notes:** Genus firstly recorded from PI in Cordeiro and Moreira 2015.

#### *Platyvelia brachialis* (Stål, 1860)

##### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olha d'água dos Milagres; maximumElevationInMeters: 180; verbatimCoordinates: 4°5'31.8"S, 41°40'48.2"W; samplingProtocol: Manual; verbatimEventDate: 11.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Isabelle da R. S. Cordeiro; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** USA. Mexico. Guatemala. Nicaragua. Costa Rica. Panama. Cuba. Dominican Republic. Jamaica. Grenada. Trinidad and Tobago. Suriname. Brazil: PI, PE, MT, GO, MG, MS, ES, RJ, SC. Peru. Argentina.

**Notes:** Species firstly recorded from PI in Cordeiro and Moreira 2015.

### Infraorder Nepomorpha

#### Family Belostomatidae

#### Genus *Belostoma* Latreille, 1807

#### *Belostoma* sp. 1\*

##### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 12.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Family Corixidae

**Notes:** New family record for PI.

### Genus *Tenagobia* Bergroth, 1899

**Notes:** New genus record for PI.

#### *Tenagobia (Incertagobia) sp.*

##### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Isabelle da R. S. Cordeiro; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Family Gelastocoridae

**Notes:** New family record for PI.

### Genus *Gelastocoris* Kirkaldy, 1897

**Notes:** New genus record for PI.

#### *Gelastocoris sp. 1*

##### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 8.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olha d'água dos Milagres; maximumElevationInMeters: 180; verbatimCoordinates: 4°5'31.8"S, 41°40'48.2"W; samplingProtocol: Manual; verbatimEventDate: 8.ii.13; individualCount: 1; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Isabelle da R. S. Cordeiro; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Family Pleidae

**Notes:** New family record for PI.

## Genus *Neoplea* Esaki & china, 1928

**Notes:** New genus record for PI.

### *Neoplea* sp. 1

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 4; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Family Naucoridae

**Notes:** New family record for PI.

## Genus *Pelocoris* Stal, 1876

**Notes:** New genus record for Northeastern Brazil.

### *Pelocoris* sp. 1

#### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen



## Family Notonectidae

### Genus *Buenoa* Kirkaldy, 1904

**Notes:** New genus record for PI.

### *Buenoa mutabilis* Truxal, 1953

#### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 8.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Haiti. Venezuela. Guyana. Brazil: PI, GO, MG. Peru. Paraguay.

**Notes:** New species record for Northeastern Brazil.

### *Buenoa pseudomutabilis* Barbosa, Ribeiro & Nessimian, 2010

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Manual; verbatimEventDate: 8.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 14; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PI, RJ.

**Notes:** New species record for Northeastern Brazil.

### ***Buenoa salutaris* Kirkaldy, 1904**

#### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 18.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ | CZMA; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: CZMA; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: male; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ | CZMA; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: female; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ | CZMA; basisOfRecord: PreservedSpecimen

**Distribution:** Trinidad and Tobago. Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: RR, PA, AM, PI, CE, PB, PE, MT, MS, MG, SP, RJ, RS. Bolivia. Paraguay. Argentina.

**Notes:** New species record for PI.

### ***Buenoa tarsalis* Truxal, 1953**

#### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 8.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 8.ii.13; individualCount: 15; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 18.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PA, AM, PI, CE, RN, PB, PE, MG, RJ.

**Notes:** New species record for PI.

### ***Buenoa unguis* Truxal, 1953**

#### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 8.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 8.ii.13; individualCount: 9; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 10; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 16; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 18.iv.12; individualCount: 7; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 18.iv.12; individualCount: 15; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 12; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Brazil: PA, AM, PI!, CE, RN, TO, PB, PE, MG, SP, RJ. Peru. Bolivia. Paraguay. Argentina.

**Notes:** New species record for PI.

**Buenoa sp. 1****Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 12.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 12.ii.13; individualCount: 1; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

**Genus *Martarega* White, 1879*****Martarega bentoi*\* Truxal, 1949****Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: Manual; verbatimEventDate: 12.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: Manual; verbatimEventDate: 12.ii.13; individualCount: 5; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 18.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 18.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PI, CEI, PE, MT, MG, RJ. Argentina.

### ***Martarega membranacea* White, 1870**

#### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 6; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Colombia. Guyana. Suriname. Brazil: PA, AM, PII, TO, RO, MT, GO, MG, MS, SP, RJ. Ecuador. Bolivia. Argentina.

**Notes:** New species record for Northeastern Brazil.

### **Genus *Notonecta* Linnaeus, 1758**

**Notes:** Genus firstly recorded from PI in Barbosa and Nessimian 2013.

### ***Notonecta disturbata* Hungerford, 1926**

#### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: Manual; verbatimEventDate: 12.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: Manual; verbatimEventDate: 12.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 2; sex: male; lifeStage: adult; recordedBy:

- Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 1; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Julianna Freires Barbosa; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PA, PII, TO, MT, GO, MG, SP, RJ, RS. Paraguay. Argentina.

**Notes:** Species firstly recorded from Northeastern Brazil in Barbosa and Nessimian 2013.

## Family Ochteridae

**Notes:** Family firstly recorded from PI in Cordeiro et al. 2014.

## Genus *Ochterus* Latreille, 1807

**Notes:** Genus firstly recorded from PI in Cordeiro et al. 2014.

## *Ochterus santosi* Cordeiro & Moreira, 2014

### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olha d'água dos Milagres; maximumElevationInMeters: 180; verbatimCoordinates: 4°5'31.8"S, 41°40'48.2"W; samplingProtocol: Manual; verbatimEventDate: 8.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Isabelle da R. S. Cordeiro; institutionCode: CZMA; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Isabelle da R. S. Cordeiro; institutionCode: CZMA; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PI.

**Notes:** Species described in Cordeiro et al. 2014.

## Order Odonata

### Suborder Anisoptera

### Family Aeshnidae

### Genus *Coryphaeschna*

**Notes:** New genus record for PI.

### *Coryphaeschna viriditas* Calvert, 1952

#### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olho d'água Piscina do Bacuri; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'1.2"S, 41°42'38.8"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** USA south to Panama. Trinidad and Tobago. Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: AM/PA, PI!, PE, MT, MG, ES, RJ. Ecuador. Peru. Bolivia. Paraguay.

**Notes:** New species record for PI. See Fig. 27.



Figure 27.

Lateral habitus of a male of *Coryphaeschna viriditas* collected at PNSC-06 (DZRJ), representing a new state record for Piauí. Scale bar = 10 mm.



**Genus *Gynacantha* Rambur, 1842**

**Notes:** New genus record for PI.

***Gynacantha nervosa*\* Rambur, 1842****Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4° 5'57"S, 41°42'34"W; samplingProtocol: Suspended intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | et al.; identifiedBy: Ângelo Parise Pinto; institutionCode: CZMA; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olha d'água dos Milagres; maximumElevationInMeters: 180; verbatimCoordinates: 4°5'31.8"S, 41°40'48.2"W; samplingProtocol: Manual; verbatimEventDate: 8.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4° 5'57"S, 41°42'34"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** USA south to Panama. Trinidad and Tobago. Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: RR, PII, CE, PE, MT, MG, MS, ES, RJ. Ecuador. Peru. Bolivia.

**Notes:** New species record for PI.

**Genus *Triacanthagyna***

**Notes:** New genus record for PI.

***Triacanthagyna caribbea* Williamson, 1923****Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olho d'água Piscina do Bacuri; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'1.2"S, 41°42'38.8"W; samplingProtocol: White sheet light trap; verbatimEventDate: 9.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Mexico. Belize. Guatemala. Honduras. Costa Rica. Dominican Republic. Puerto Rico. Trinidad and Tobago. Colombia. Venezuela. Suriname. French Guiana. Brazil: PA, PI, MT, BA, ES, SP, RJ, PR. Ecuador. Peru. Bolivia.

**Notes:** New species record for PI.

## Family Libellulidae

### Genus *Brechmorhoga* Kirby, 1889

**Notes:** New genus record for PI.

#### *Brechmorhoga* sp. 1

##### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4° 5'57"S, 41°42'34"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

### Genus *Diastatops* Rambur, 1842

**Notes:** New genus record for PI.

#### *Diastatops obscura* (Fabricius, 1775)

##### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Alcimar Carvalho | Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Alcimar Carvalho | Ângelo Parise Pinto; institutionCode: INPA; basisOfRecord: PreservedSpecimen

**Distribution:** Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: RR, PA, AM, MA, PI, CE, RN, TO, PE, MT, BA, MG, MS, ES, SP, RJ. Peru. Bolivia. Paraguay. Argentina.

**Notes:** New species record for PI.

### Genus *Erythrodiplax* Brauer, 1868

**Notes:** New genus record for PI.

### *Erythrodiplax basalis*\* (Kirby, 1897)

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Manual; verbatimEventDate: 11.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Trinidad and Tobago. Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: RR, PA, AM, MA, PII, CE, PE, RO, BA, MT, MG, MS, ES, SP, RJ, RS. Ecuador. Peru. Bolivia. Paraguay. Argentina. Uruguay.

**Notes:** New species record for PI.

### *Erythrodiplax famula* (Erichson in Schomburgk, 1848)

#### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Manual; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Cavichioli, R.R.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Trinidad and Tobago. Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: PA, AM, PII, PE, GO, MG, ES, SP, RJ. Peru. Argentina.

**Notes:** New species record for PI.

***Erythrodiplax fusca*\* (Rambur, 1842)****Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4° 5'57"S, 41°42'34"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** USA south to Panama. Trinidad and Tobago. Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: PA, AM, MA, PI, CE, RN, PE, MT, RO, BA, GO, MG, MS, ES, SP, RJ, SC, RS. Ecuador. Peru. Bolivia. Paraguay. Argentina. Uruguay.

**Notes:** New species record for PI.

***Erythrodiplax umbrata* (Linnaeus, 1758)****Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: CZMA; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Manual; verbatimEventDate: 19.iv.12; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Cavichioli, R.R.; identifiedBy: Alcimar Carvalho | Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olha d'água dos Milagres; maximumElevationInMeters: 180; verbatimCoordinates: 4°5'31.8"S, 41°40'48.2"W; samplingProtocol: White sheet light trap; verbatimEventDate: 9.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** USA south to Panama. Trinidad and Tobago. Colombia. Venezuela. Guyana. Suriname. French Guyana. Brazil: RR, PA, AM, PI, CE, PE, MT, RO, BA, MG, MS, ES, SP, RJ, RS. Ecuador. Peru. Bolivia. Paraguay. Argentina. Uruguay.

**Notes:** New species record for PI.

### Genus *Orthemis* Hagen, 1861

**Notes:** New genus record for PI.

### *Orthemis aequilibris* [red morph] Calvert, 1909

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 13.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: CZMA; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 8.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Costa Rica. Panama. Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: PA, AM, PI, CE, BA, MG, MS, ES, RJ. Ecuador. Peru. Bolivia. Paraguay. Argentina.

**Notes:** New species record for PI.

### *Orthemis flavopicta* Kirby, 1889

#### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olho d'água Piscina do Bacuri; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'1.2"S, 41°42'38.8"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 8.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Brazil: PA, PI, CE, RO, BA, GO. Bolivia.

**Notes:** New species record for PI. See Fig. 28.



Figure 28.

Lateral habitus of a female of *Orthemis flavopicta* collected at PNSC-06 (DZRJ), representing a new state record for Piauí. Scale bar = 10 mm.

## Genus *Pantala* Hagen, 1861

**Notes:** New genus record for PI.

## *Pantala flavescens* (Fabricius, 1798)

### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olho d'água Piscina do Bacuri; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'1.2"S, 41°42'38.8"W; samplingProtocol: Manual; verbatimEventDate: 10.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olho d'água Piscina do Bacuri; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'1.2"S, 41°42'38.8"W; samplingProtocol: Manual; verbatimEventDate: 10.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: CZMA; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: CZMA; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual;

- verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: CZMA; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: Manual; verbatimEventDate: 13.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Manual; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Cavichioli, R.R.; identifiedBy: Alcimar Carvalho | Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Manual; verbatimEventDate: 8.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olho d'água Piscina do Bacuri; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'1.2"S, 41°42'38.8"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy:

Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: CZMA; basisOfRecord: PreservedSpecimen

**Distribution:** Pantropical. Widespread in the Americas. Brazil: RR, PA, AM, MA, PII, CE, TO, PE, MT, RO, BA, MG, MS, ES, SP, RJ, PR, SC, RS, also in Fernando de Noronha and Trindade e Martim Vaz archipelagoes.

**Notes:** New species record for PI.

## Genus *Perithemis* Hagen, 1861

### *Perithemis lais* (Perty, 1834)

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4° 5'57"S, 41° 42'34"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olha d'água dos Milagres; maximumElevationInMeters: 180; verbatimCoordinates: 4°5'31.8"S, 41°40'48.2"W; samplingProtocol: White sheet light trap; verbatimEventDate: 9.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Trinidad and Tobago. Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: RR, PA, AM, MA, PII, PE, MT, RO, MS, ES, SP. Ecuador. Peru. Bolivia. Argentina.

**Notes:** New species record for PI.

## Suborder Zygoptera

## Family Calopterygidae

### Genus *Hetaerina* Hagen in Selys, 1853

**Notes:** New genus record for PI.

### *Hetaerina* sp. 1

#### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°



5°57"S, 41°42'34"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Family Coenagrionidae

### Genus *Acanthagrion* Selys, 1876

**Notes:** New genus record for PI.

### *Acanthagrion jessei* Leonard, 1977

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4° 5'57"S, 41°42'34"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 16.xii.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Limeira-de-Oliveira, F. | Pinto Júnior, J.S.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4° 5'57"S, 41°42'34"W; samplingProtocol: Suspended intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | et al.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PI!, MT, RO, MS. Ecuador.

**Notes:** New species record for PI.

***Acanthagrion truncatum* Selys, 1876****Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Manual; verbatimEventDate: 11.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Guyana. Brazil: PI, TO, MT, GO, MG, MS, SP.

**Notes:** New species record for PI.

***Genus Argia* Rambur, 1842**

**Notes:** New genus record for PI.

***Argia tinctipennis*\* Selys, 1865****Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Suspended intercept trap; verbatimEventDate: 17.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | et al.; identifiedBy: Rosser W. Garrison; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: AM, PI, CE, MT, GO, MS. Peru.

**Notes:** New species record for Northeastern Brazil.

***Genus Epipleoneura* Williamson, 1915**

**Notes:** New genus record for PI.

***Epipleoneura metallica* Rácenis, 1955****Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°

5°57"S, 41°42'34"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Colombia. Venezuela. Brazil: PA, AM, MA, PII, CE, TO, PE, MT, RO, BA, GO, MG, DF, ES.

**Notes:** New species record for PI.

## Genus *Ischnura*

**Notes:** New genus record for PI.

### *Ischnura capreolus* (Hagen, 1861)

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Manual; verbatimEventDate: 11.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: CZMA; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Manual; verbatimEventDate: 11.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Mexico south to Panama. Trinidad and Tobago. Colombia. Venezuela. Guyana. Suriname. French Guiana. Brazil: PA, AM, PII, CE, PB, PE, MT, RO, BA, MG, MS, ES, SP, RJ, RS. Ecuador. Peru. Bolivia. Paraguay. Argentina.

**Notes:** New species record for PI.

## Genus *Neoneura* Selys, 1860

**Notes:** New genus record for PI.

### *Neoneura sylvatica* Hagen in Selys, 1886

#### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 16.xii.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Limeira-de-

Oliveira, F. | Pinto Júnior, J.S.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Colombia. Venezuela. Suriname. French Guiana. Brazil: MA, PII, CE, TO, PE, MT, RO, BA, GO, MG, MS, SP, RJ, PR. Bolivia. Argentina.

**Notes:** New species record for PI.

### Genus *Oxyagrion* Selys, 1876

**Notes:** New genus record for PI.

### *Oxyagrion* sp. 1 [O. basale group]

#### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4° 5'57"S, 41°42'34"W; samplingProtocol: Suspended intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | et al.; identifiedBy: Ângelo Parise Pinto; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Likely an undescribed species.

### Order Plecoptera

**Notes:** New order record for PI.

### Family Perlidae

**Notes:** New family record for PI.

### Genus *Anacroneuria* Klapálek, 1909

**Notes:** New genus record for PI.

### *Anacroneuria calori*\* Duarte & Lecci, 2016

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171;

verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Fernanda Avelino-Capistrano; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: CE, PI.

**Notes:** New species record for PI. See Fig. 25.

## Order Trichoptera

### Family Ecnomidae

**Notes:** New family record for PI.

### Genus *Austrotinodes* Schmid, 1955

**Notes:** New genus record for PI.

### *Austrotinodes paraguayensis*\* Flint, 1983

#### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PI, CE, MG. Paraguay.

**Notes:** New species record for Northeastern Brazil.

## Family Helicopsychidae

### Genus *Helicopsyche* von Siebold, 1856

#### *Helicopsyche* (*Feropsyche*) *vergelana*\* Ross, 1956

##### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 13; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Mexico. Belize. Guatemala. Honduras. Costa Rica. Panama. Trinidad and Tobago. Venezuela. Suriname. Brazil: PII, CEI, PE. Peru.

**Notes:** New species record for PI.

## Family Hydropsychidae

**Notes:** New family record for PI.

### Genus *Leptonema* Guérin, 1843

**Notes:** New genus record for PI.

### *Leptonema viridianum*\* Navás, 1916

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 4; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Colombia. Venezuela. Guyana. Brazil: PA, PI!, CE, GO, MG, DF, ES, RJ. Ecuador. Peru. Bolivia. Paraguay. Argentina.

**Notes:** New species record for PI.

### Genus *Macronema* Pictet, 1836

**Notes:** New genus record for PI.

### *Macronema* sp. 1

#### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 0; sex: female; lifeStage: adult; recordedBy:

Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Genus *Macrostemum* Kolenati, 1859

Notes: New genus record for PI.

## *Macrostemum ulmeri*\* (Banks, 1913)

### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 6; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 22; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap;



- verbatimEventDate: 18.iv.12; individualCount: 22; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 22; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 22; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 6; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- l. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: INPA; basisOfRecord: PreservedSpecimen
- m. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 50; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- n. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 33; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- o. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy:

Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Honduras. Costa Rica. Panama. Colombia. Suriname. Brazil: PA, AM, PII, CEI, MT, AC, RO, SP. Ecuador. Peru.

**Notes:** New species record for PI.

## Genus *Smicridea* McLachlan, 1871

**Notes:** New genus record for PI.

### *Smicridea (Rhyacophylax)* sp. 1

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

### *Smicridea (Smicridea) bivittata\** (Hagen, 1861)

#### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy:

Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ;  
basisOfRecord: PreservedSpecimen

**Distribution:** Mexico. Guatemala. Honduras. El Salvador. Costa Rica. Trinidad and Tobago. Venezuela. Suriname. Brazil: PA, PII, CEI, MG, SP. Ecuador.

**Notes:** New species record for Northeastern Brazil.

## *Smicridea (Smicridea) sp. 1*

### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 17; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 17; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169;

- verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 26; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 27; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 28; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

## *Smicridea (Smicridea) sp. 2\**

### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap;

- f. verbatimEventDate: 19.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen  
country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169;  
verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap;  
verbatimEventDate: 21.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

## Family Hydroptilidae

**Notes:** Family firstly recorded from PI in Souza et al. 2014a.

## Genus *Betrichia* Mosely, 1939

**Notes:** Genus firstly recorded from PI in Souza et al. 2016b.

## *Betrichia nhundiaquara* Souza, Santos & Takiya, 2016

### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169;  
verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap;  
verbatimEventDate: 21.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PI, BA, MG, PR.

**Notes:** Species described in Souza et al. 2016b.

## Genus *Flintiella* Angrisano, 1995

**Notes:** Genus firstly recorded from PI in Souza et al. 2016a.

## *Flintiella harrisi* Souza, Santos & Takiya, 2016

### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169;  
verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap;  
verbatimEventDate: 21.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PI.

**Notes:** Species described in Souza et al. 2016a.

### **Genus *Hydroptila* Dalman, 1918**

**Notes:** Genus firstly recorded from PI in Souza et al. 2014a.

### ***Hydroptila florestani* Souza, Santos & Takiya, 2014**

#### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PI.

**Notes:** Species described in Souza et al. 2014a.

### **Genus *Neotrichia* Morton, 1905**

**Notes:** New genus record for PI.

***Neotrichia* sp. 1****Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 16; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

***Neotrichia* sp. 2\*****Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

***Neotrichia* sp. 3****Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

***Neotrichia* sp. 4****Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Genus *Ochrotrichia* Mosely, 1934**

**Notes:** New genus record for PI.

***Ochrotrichia* sp. 1****Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Genus *Oxyethira* Eaton, 1873**

**Notes:** New genus record for PI.

***Oxyethira longissima* Flint, 1974****Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy:



Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ;  
basisOfRecord: PreservedSpecimen

**Distribution:** Suriname. Brazil: AM, PII.

**Notes:** New species record for Northeastern Brazil.

### ***Oxyethira merga* Kelley, 1983**

#### **Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Brazil: RR, PII.

**Notes:** New species record for Northeastern Brazil.

### ***Oxyethira spissa* Kelley, 1983**

#### **Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

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

**Notes:** New species record for Northeastern Brazil.

### ***Oxyethira tica*\* Harris & Holzenthal, 1992**

#### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy:

- Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M. | Rafael, J.A.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Mexico. Honduras. Costa Rica. Panama. Guadeloupe. Dominica. Santa Lucia. Saint Vicent and the Grenadines. Granada. Trinidad and Tobago. Venezuela. Brazil: AM, PII, CEI, MG, RJ. Ecuador.

**Notes:** New species record for Northeastern Brazil.

## *Oxyethira* sp. 1

### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 13; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

## ***Oxyethira* sp. 2**

### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 11.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 11.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

## ***Oxyethira* sp. 3**

### **Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

### ***Oxyethira* sp. 4**

#### **Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 9.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

### ***Oxyethira* sp. 5**

#### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Wagner Rafael Maciel de Souza; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

## **Family Leptoceridae**

### **Genus *Nectopsyche* Müller, 1879**

#### ***Nectopsyche* cf. *multilineata* Flint, 1983**

#### **Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Centro de visitantes; maximumElevationInMeters: 202; verbatimCoordinates: 4°6'20"S, 41°41'52"W; samplingProtocol: White sheet light trap; verbatimEventDate: 19.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Brazil: RR, PII. Argentina.

**Notes:** if confirmed, new species record for Northeastern Brazil.

### ***Nectopsyche muhni* Flint, 1983**

#### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 7; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 8; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 8; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Venezuela. Guyana. Suriname. Brazil: RR, PII, MG, SP, RJ. Ecuador. Peru. Bolivia. Paraguay. Argentina.

**Notes:** New species record for Northeastern Brazil.

***Nectopsyche* sp.****Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4° 5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4° 5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 20.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

**Genus *Oecetis* McLachlan, 1877*****Oecetis* sp. 1****Material**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

***Oecetis connata* Flint, 1974****Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 5; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- h. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189;

- verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- m. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- n. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- o. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- p. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 20.iv.12; individualCount: 38; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- q. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Alojamento; maximumElevationInMeters: 193; verbatimCoordinates: 4°5'57"S, 41°42'34"W; samplingProtocol: White sheet light trap; verbatimEventDate: 20.iv.12; individualCount: 15; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- r. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- s. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 4; sex: female; lifeStage: adult; recordedBy:



Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Ana Lucia Henriques Oliveira; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Guyana. Suriname. Brazil: PA, AM, PI, MT, BA.

**Notes:** Species firstly recorded from PI in Henriques-Oliveira et al. 2014.

## Family Philopotamidae

**Notes:** New family record for PI.

## Genus *Chimarra* Stephens, 1829

**Notes:** New genus record for PI.

### *Chimarra (Chimarra)* sp. 1

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

### *Chimarra (Chimarra)* sp. 2

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

### ***Chimarra (Chimarra) sp. 3***

#### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olho d'água Piscina do Bacuri; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'1.2"S, 41°42'38.8"W; samplingProtocol: White sheet light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Olho d'água Piscina do Bacuri; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'1.2"S, 41°42'38.8"W; samplingProtocol: White sheet light trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Centro de visitantes; maximumElevationInMeters: 202; verbatimCoordinates: 4°6'20"S, 41°41'52"W; samplingProtocol: White sheet light trap; verbatimEventDate: 19.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Notes:** Undescribed species.

### ***Chimarra (Curgia) jugescens* Flint, 1998**

#### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

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

**Notes:** New species record for Northeastern Brazil.

## Family Polycentropodidae

**Notes:** New family record for PI.

## Genus *Cernotina* Ross, 1938

**Notes:** New genus record for PI.

## *Cernotina* sp. 1

### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap;

verbatimEventDate: 21.iv.12; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## ***Cernotina* sp. 2\***

### **Materials**

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 18.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 4; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 3; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 67; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Genus *Cynrellus* Banks, 1913

Notes: New genus record for PI.

### *Cynrellus fraternus* (Banks, 1915)

#### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 10.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 10.ii.13; individualCount: 5; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- c. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 10.ii.13; individualCount: 8; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- d. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 10.ii.13; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- e. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: male; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- f. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 18.iv.12; individualCount: 2; sex: female; lifeStage: adult; recordedBy: Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- g. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 5; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

- h. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Bananeira; maximumElevationInMeters: 189; verbatimCoordinates: 4°5'59"S, 41°40'48"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 19.iv.12; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- i. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 8.ii.13; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- j. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 9.ii.13; individualCount: 3; sex: male; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- k. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Poço do Bananeira; maximumElevationInMeters: 158; verbatimCoordinates: 4°5'55.8"S, 41°40'33.8"W; samplingProtocol: Pennsylvania light trap; verbatimEventDate: 9.ii.13; individualCount: 1; sex: female; lifeStage: adult; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** USA. Mexico. El Salvador. Nicaragua. Costa Rica. Panama. Venezuela. Suriname. Brazil: PA, AM, PI!, BA, MG, MS, ES, RJ, PR, SC. Ecuador. Paraguay. Argentina. Uruguay.

**Notes:** New species record for PI.

### Genus *Polyplectropus* Ulmer, 1905

**Notes:** New genus record for PI.

### *Polyplectropus rondoniensis* Chamorro & Holzenthal, 2010

#### Material

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Riacho da Piedade; maximumElevationInMeters: 169; verbatimCoordinates: 4°6'34"S, 41°43'39"W; samplingProtocol: Malaise intercept trap; verbatimEventDate: 21.iv.12; individualCount: 1; sex: male; lifeStage: adult; recordedBy: Rafael, J.A. | Limeira-de-Oliveira, F. | Takiya, D.M. | et al.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

**Distribution:** Brazil: PI!, RO.

**Notes:** New species record for Northeastern Brazil.

## Family Xiphocentronidae

**Notes:** New family record for PI.

## Genus *Xiphocentron* Brauer, 1870

**Notes:** New genus record for PI.

## *Xiphocentron* sp. 2

### Materials

- a. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 11.ii.13; individualCount: 9; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen
- b. country: Brazil; stateProvince: Piauí; municipality: Piracuruca; locality: Parque Nacional de Sete Cidades, Cachoeira do Riachão; maximumElevationInMeters: 171; verbatimCoordinates: 4°6'28"S, 41°40'13"W; samplingProtocol: Manual; verbatimEventDate: 9.ii.13; individualCount: 23; lifeStage: immature; recordedBy: Santos, A.P.M. | Takiya, D.M.; identifiedBy: Allan Paulo Moreira dos Santos; institutionCode: DZRJ; basisOfRecord: PreservedSpecimen

## Discussion

### Species shared with other phytogeographical domains

Although the Caatinga shares with Cerrado similar landscapes, in part due its savannah-like formation and their geographical proximity, under a spatial evolution standpoint historically the biota from Northeastern Brazil forested areas are largely linked to Amazonia and Atlantic Forest (see Santos et al. 2007) and even appears disjunct from other savannah-like South American formations such as the Bolivian Chaco (Werneck et al. 2012). Considering the better known Odonata, the composition of the dragonfly assemblage is remarkable by virtually lacking typical Cerrado species and mixing elements from forested biomes of Amazonia and Atlantic Forest domains. Sampling from the two National Parks comprises largely common species occurring in lentic environments of almost all American countries (e.g., *Ischnura capreolus* at PNSC and *Erythrodiplax fusca* at PNU), while a smaller number of species were only previously known from Amazonia (e.g., *Castoraeschna corbeti* at PNU; Carvalho et al. 2009) or from Atlantic Forest (e.g., *Neocordulia setifera* at PNU; Pinto and Lamas 2010). Some of them are largely common and characteristic of these domains, such as *P. complicatus* in the Atlantic Forest (see distribution data in De Almeida et al. 2013).

Past connections between Amazonia and Atlantic Forest biotas are open to debate, hypotheses diverging if they occurred during the Miocene through South America's dry

diagonal vegetation, including currently the Cerrado and Chaco formations, or during the Plio–Pleistocene through forested areas in the Caatinga Domain (see references in Batalha-Filho et al. 2013). Furthermore, wet period intervals every 20,000–200,000 years during at least 2 million years created intermittent corridors of between forested areas in Brazil (Wang et al. 2004) and can explain the mixing of fauna among Amazonia–Caatinga–Atlantic Forest. At least the PNU can be considered an island of humid forest surrounded by savannah-like formation and studies focusing the aquatic insect assemblages can strongly help understand the spatial evolution of these forested patches in the Northeastern Brazil and past connections between the two largest tropical forest domains in South America.

### New distributional records and notes on species records

Based on the collected material during this project, one caddisfly species was firstly recorded from Brazil, *Phylloicus pirapo* (Calamoceratidae) previously known from Argentina and Paraguay. Eighteen species collected at PNU and 21 at PNSC (5 species shared between parks) represent their first record for Northeastern Brazil.

Several new state records are made based on this material, especially for Piauí State. Thirty and 56 species are firstly recorded from Ceará and Piauí states, respectively. These exclude records previously published, but based on material collected during this project, which add other 10 new species records for these states (see Table 2). Herein, it is also recorded 25 and 47 new genera and 9 and 14 aquatic insect families from Ceará and Piauí states, respectively.

Some of these new records are for widespread species in South America, such as for many dragonflies (see below), however, others significantly expand species ranges in Brazil. For example, the caddisflies *Helicopsyche monda* (Helicopsychidae) and *Chimarra calori* (Philopotamidae) previously known from Southeastern and/or Southern Brazil have their ranges expanded for over 1,000 km.

The knowledge of stoneflies from Northeastern Brazil is still very scarce, when compared to the other aquatic insects studied. In the Neotropical Plecoptera catalogue, only two species, *Anacroneuria lacunosa* (Navás, 1926) and *A. parilobata* Klapálek, 1922, from this Brazilian Region was recorded (Froehlich 2010), both from Bahia State. In the last ten years, following an increase of local taxonomists and inventories, species number boosted from two to 27 stoneflies (Lecci and Froehlich 2011, Righi-Cavallaro et al. 2013, Duarte et al. 2014, Duarte and Lecci 2014, Lecci et al. 2014, Duarte and Lecci 2016). However, most sampling localities are still concentrated in some regions of Bahia State. Nevertheless, stonefly diversity still seems higher in the Atlantic forest, than in the Caatinga. A single *Anacroneuria* species has been recently described from PNU (Duarte and Lecci 2016) and was recorded herein from both National parks, thus representing the first record of Plecoptera from Piauí State.

Except by few Amazonian and Atlantic Forest representatives, most dragonflies correspond to common species and are now firstly recorded mainly due to undersampling. Thus, field



surveys must be one of the priority efforts for assessment of the diverse dragonfly fauna of tropical South America (e.g., Pinto and Lamas 2010). Amongst the new records, the known distribution of *Acanthagrion jessei* (Coenagrionidae) was extended considerably from previous localities at Brazilian Amazonia and Pantanal. Another unexpected occurrence is of the South American emerald *Neocordulia setifera* (Anisoptera, *incertae sedis*), a species apparently confined to ombrophilous forested areas in the Atlantic Forest Domain with several misidentified specimens cited in the literature, including records from Brazil (MT, GO, MG), and Ecuador (APP, in prep.). Other specimens need further studies, such as, a possible new species of the *Oxyagrion basale*-group (Coenagrionidae) from PNSC; a single female with mesostigmal plate and mesepisternal fossae similar to that of the Central American *Acanthagrion quadratum* (not a well preserved specimen) from PNU; and specimens of *Argia*, a genus of difficult species identification, which are broken or smashed, thus were determined doubtfully (“cf.”). Specimens from PNU of the Amazonian *Castoraeschna corbeti* (Aeshnidae) and *Hetaerina indepressa* (Calopterygidae), species previously only known from their type localities in Pará State (Brazil) are slightly distinct from typical specimens and need further studies to investigate if they only represent geographical variation.

Several published records of dragonfly species from the states of CE and PI are old, based on misidentifications or wrong localities, or for names currently under a different taxonomic status, and as a result, some of them should be ignored or are pending confirmation. Such cases are discussed below.

The Amazonian damselflies *Mnesarete cupraea* (Selys, 1853) and *Metaleptobasis bicornis* (Selys, 1877) were recorded from Ceará State (Garrison 2006: 21, von Ellenrieder 2013: 20; respectively) based on a misinterpretation of the locality of “Canindé” on the Rio Gurupi Basin at the border of Pará and Maranhão states (see Pinto and Lamas 2011). The occurrence of *M. cupraea* in Ceará was recently proven to be true for Serra da Ibiapaba (Table 2).

Belle 1983: 170-171), in his revision of *Zonophora*, provided a map where *Zonophora calippus calippus* Selys, 1869 and *Zonophora batesi* Selys, 1869 are apparently recorded from Piauí State, however it is clear that their location was based on the material from Maranhão cited by Belle 1972: 236-236). This mistake was reproduced by Garrison et al. 2006: 131) in their thumbnail map. Additionally, several other thumbnail maps for genera (Garrison et al. 2006) show ranges of distribution in both Ceará and Piauí States (e.g., *Phyllogomphoides*, *Aeschnosoma*, and *Ypiranthemis*), however, we have not located references for these records and they should be considered potential distributions rather than actual occurrences. Even considering that species of some of these genera are common and widespread in South America, they are pending confirmation based on voucher specimens.

In the first published list of dragonflies from Ceará State, Navás (1924) cited currently considered dubious or questionable names due to changes in species concepts and very likely also based on misidentifications. These species were not included in Table 2. Navás (1924) cited *Erythrodiplax connata* (Burmeister, 1839), which likely refers to *E. fusca* since

the former is restricted to Chile (Paulson 2003). *Erythrodiplax nigricans* was mentioned dubiously in the generic revision by Borror (1942), and based on its distribution in southern South America with the northernmost record from Rio de Janeiro State (Anjos-Santos and Costa 2006), it seems unlikely that it occurs in Northeastern Brazil. Three other species recorded by Navás (1924), *Micrathyria eximia* Kirby, 1897, *Orthemis ferruginea* (Fabricius, 1775), and *Perithemis domitia* (Drury, 1773), are very likely misidentifications. While reviewing *M. eximia*, Westfall (1992) observed that almost all specimens identified as this species were misidentified, including most Brazilian ones, as they indeed correspond to four species. *Orthemis ferruginea* is a largely North and Central American species with southernmost records to Costa Rica (Donnelly 1995), and its occurrence in South America is very unlikely. Material in which this record was based represent at least five species of the *O. ferruginea* group (see Pinto 2010). Finally, *P. domitia* is a Caribbean and Central America species with southernmost records in Venezuela and Colombia. Costa et al. (2006) considered all records of the latter species from Brazil as records of *P. mooma* and we agree with these authors.

### Increase of the known aquatic insect diversity of Ceará and Piauí states

Besides the high number of taxa recorded for the first time from Ceará and Piauí, effectively increasing the knowledge of aquatic insect diversity for these states, several undescribed species were detected. Twenty-six and 20 undescribed species from PNU and PNSC, respectively, were detected based on the material collected during this project, of those 12 from PNU (Câmara et al. 2015, Henriques-Oliveira and Santos 2014, Souza et al. 2014a, Souza et al. 2014b, Santos et al. 2016a) and four from PNSC (Cordeiro et al. 2014, Souza et al. 2014b, Souza et al. 2016a, Souza et al. 2016b) have already been described.

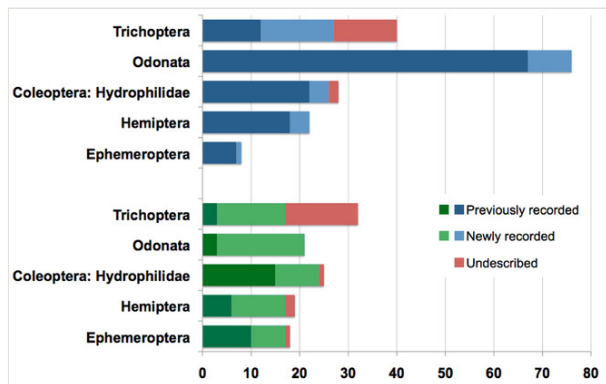


Figure 29.

Number of previously recorded species of Trichoptera, Odonata, Hemiptera, Ephemeroptera, and Hydrophilidae (Coleoptera) for Ceará (blue) and Piauí (green). Dark blue or green represent the number of previously recorded species based on the literature. Light blue and green represent the number of species recorded for the first time in its respective state based on material collected at Ubajara (CE) and Sete Cidades (PI) National Parks. Number of undescribed species collected in these parks are given in red.

Many more aquatic insect species (except of Ephemeroptera) have been recorded from Ceará than Piauí (see Table 2). Our results represent an increase of approximately 16% in the number of known species for Ceará State, except for Trichoptera (Fig. 29). Caddisflies (the most diverse of groups sampled) seem to be understudied in both Brazilian states, with our sampling including a high proportion of species still to be described and results representing an increase of approximately 70% in the number of species known for Ceará and of 91% for Piauí. This increase for Piauí State is especially evident in other groups, such as, for Coleoptera, Ephemeroptera, and Hemiptera, which increased in approximately 51% of known species. This increase is even higher (86%) for dragonflies (Odonata) in Piauí, which is surprising given that they are possibly the most well-studied of focal groups.

### Species richness comparison between Parque Nacional de Ubajara (PNU) and Parque Nacional de Sete Cidades (PNSC)

There are no published lists of insect species for neither Parque Nacional de Ubajara (PNU) nor Parque Nacional de Sete Cidades (PNSC). In PNU's management plan it is cited the occurrence of five orders and 14 insect families, with 6 genera and 9 species identified. However, these names were not made available. In another study, Silva and Ferreira (2009) list 26 families of 9 insect orders, including the identification solely of the genera *Conicera* (Phoridae), *Lutzomyia* (Psychodidae), and *Endecous* (Phalangopsidae), as part of a cave invertebrate inventory of PNU. The only insect faunal study published involving the two parks is a list of *Lutzomyia* (Diptera: Psychodidae) species by Martins et al. (1989), with five species occurring at PNU and seven species at PNSC, while only *Lutzomyia* (*L.*) *longipalpis* (Lutz & Neiva, 1912) occurred in both parks. Thus, this preliminary list of aquatic insect taxa already represents a good sampling of insect diversity for these parks and a baseline for further monitoring and conservation strategies of freshwater macroinvertebrate fauna.

Considering all focal taxa, only 11% of species were found in both National Parks (Fig. 18), their species composition displaying very high complementarity (89% species). Although both parks are relatively close to each other and within the Caatinga Domain, they drastically differ in phytogeography. Specifically in the case of aquatic insects, the low complementarity is more probably explained by the structural differences of water bodies sampled available in the different parks. At PNSC most part of aquatic insects (67 species) were collected at Cachoeira do Riachão (Fig. 3), a (supposedly) permanent stream with broad humid gallery forest and high diversity of microhabitats (sand, litter, and rocks), and in some temporary streams in open savannah vegetation (Fig. 4), which were partially dry during the second expedition and with lentic characteristics. The majority of water bodies sampled at PNU were very homogeneous, bedrock rapid streams and low diversity of microhabitats.

Although for some groups, e.g. Trichoptera, the number of species collected in each National Park was similar, rarefaction curves based on individuals sampled (Fig. 30) surprisingly suggest much higher expected richness of aquatic insect species at PNSC than at PNU, thus much more sampling is needed at PNSC to have a better estimate of

total species richness. This is certainly the result of a higher range of aquatic microhabitats sampled at PNSC, as discussed above. However, it is still surprising that such a high diversity was found at PNSC in this study, given that the second expedition to these parks was conducted at the start of the rainy season, when some bodies of water sampled in the first expedition to PNSC (e.g., stream below Cachoeira do Riachão) were completely dry and resulted in the collection of a low number of individuals. Insect abundances in general seem to conspicuously peak during the rainy season and follow a very strong seasonality in Caatinga areas (Vasconcellos et al. 2010), which probably affected our effective sampling of a much higher richness from PNSC.

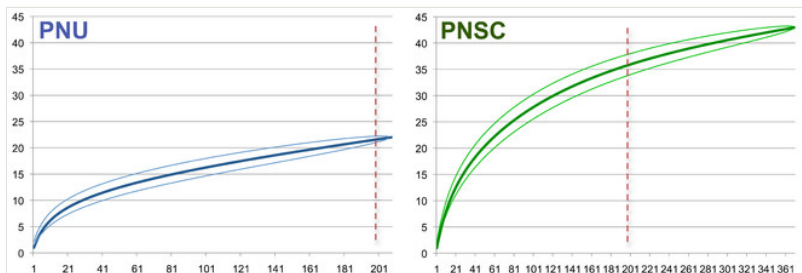


Figure 30.

Rarefaction curves (thick lines) of aquatic insect richness from Ubajara (PNU, blue) and Sete Cidades (PNSC, green) National Parks with 95% confidence limits (fine lines). Dashed red line indicates the sample point of 200 individuals.

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## Author contributions

APMS, ALHO, ALC, APP, BHLS, BC, FFFM, FAC, ICG, IRSC, JTC, JFB, WRMS identified and quantified material and provided distributional data for species cited. DMT, APMS, JAR, conceived project and collected material. DMT, APMS, APP wrote paper.

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