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The Brazilian Legal Amazon Odonatofauna: a perspective of diversity and knowledge gaps

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Abstract. The Brazilian legal Amazon occupies approximately 61% of its territory, covering a large part of Brazil's biodiversity. This large territorial dimension generates huge gaps in the animal diversity understanding, for example, the poor knowledge regarding the Odonata order. Worldwide, Odonata has almost 6,500 described species, with approximately 1,800 being recorded for the Neotropical region. Data on the Odonata order in the legal Amazon is still scarce, mainly due to its particularities, and little is known about the diversity of dragonflies in some of Brazilian states. Thus, the objective of this study is to present a list of species occurring in the states that make up the Brazilian legal Amazon. The list was made from the analysis of approximately 165 scientific papers, in addition to occurrence records contained in the SiBBr and GBIF databases. 641 species were found, which is equivalent to approximately 69% of the odonatofauna in Brazil. The states with the greatest diversity were Amazonas (n=364), Pará (n=310) and Mato Grosso (n=285). The study also indicated a low level of knowledge of the Odonata order in the states of Tocantins and Maranhão, in addition to the area of the Guianas shields, especially in the states of Amapá and Roraima. Carrying out new inventories and building catalogs is essential for understanding the biodiversity in this region, especially in areas with greater need.

Keywords: Anisoptera; Brazil; Inventories; Zygoptera.

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In Brazil, the Legal Amazon encompasses nine states, an area correspondent to approximately 61% of the country's territory (IBGE 2021). In addition to the Amazon biome, the Cerrado, Pantanal and Caatinga biomes are present in some of the Legal Amazon states that compose this area of Brazil. The Legal Amazon has suffered from the increase of deforestation, where between the years 2018-2019 alone, there was a 34% increase in the number of deforested areas (INPE 2020). According to Marcovitch & Pinsky (2020), the increase in deforestation rates in the Amazon region is a consequence of the systematic dismantling of environmental policies in Brazil. Also according to Marcovitch & Pinsky (2020), environmental preservation in the Amazon faces another serious problem, which is the poor economic development planning. In addition to deforestation, the major threats to biodiversity in the region are the increase in fires and the fragmentation of forest areas (Laurence *et al.* 2001). This continuous degradation has caused enormous impacts on Brazilian biodiversity, as many species are restricted to the Amazon region (Silva *et al.* 2005).

Due to its large territorial dimension, the Legal Amazon has huge gaps in the diversity knowledge of many groups, including the Odonata order. Almost 6,500 species of dragonflies are described worldwide (Paulson *et al.* 2021), with around 1,800 species only for the Neotropical region (Von Ellenrieder 2009). Considered charismatic insects (Corbet 1999), odonates are easy to observe and handle in the field (De Marco & Vianna 2005). Even so, only ~29% of the Brazilian territory has available data regarding this insect order (De Marco & Vianna 2005). According to Juen & De Marco (2012), many species of Odonata have their distribution limited by a number of factors, which makes understanding the order even more difficult. In addition, due to anthropic actions, such as the removal of vegetation along water bodies, there has been a reduction in some groups, especially representatives of the suborder Zygoptera (De Marco *et al.* 2015; Oliveira-Junior & Juen 2019).

In the Amazon region, despite the growing number of studies published with dragonflies, mainly in the last ten years (Calvão *et al.* 2014; Neiss & Hamada 2014; Juen *et al.* 2014; Miguel *et al.* 2017; Alves-Martins *et al.* 2019; Bastos *et al.* 2019; Koroiva *et al.* 2020; Moura *et al.* 2020; Garcia Júnior *et al.* 2020, 2021a, 2021b; Brito *et al.* 2021), knowledge concerning the diversity of the order is still scarce. Thus, the objective of this study is to present data from a bibliographic review of Odonata species occurring in the Legal Amazon states. In addition, we aim to indicating areas that, after reviewing the literature, contain little information about the Odonata order.

MATERIAL AND METHODS

The list of species occurring in the states of the Brazilian legal Amazon was made based on the analysis of approximately 165 scientific papers contained in the open access platforms of the Scientific Electronic Library Online (SciELO) and on the "Coordenação

de Aperfeiçoamento de Pessoal de Nível Superior" (CAPES Portal). The search for works was carried out using the following descriptors: Amazônia, Odonata, Dragonfly, Damselfly, Amazonian, Zygoptera and Anisoptera, in addition to the names of the nine states that compose the Legal Amazon: Acre, Amapá, Amazonas, Maranhão, Mato Grosso, Pará, Rondônia, Roraima, and Tocantins (Figure 1). We also included in the study: Course completion papers, dissertations, theses and articles written in English and Portuguese that met the used filters used. Finally, we also used data already added to the databases of the Brazilian Biodiversity Information System "Sistema de Informação sobre a Biodiversidade Brasileira" (SiBBr 2021) and the Global Biodiversity Information Facility (GBIF).

RESULTS

During the present study, 16 doctoral theses, 11 masters dissertations, five course completion papers and 133 scientific articles were analyzed. In addition, were also analyzed the records of 328 species in SiBBR and approximately 230 in the GBIF platform (GBIF 2021). We found records of 641 species, 16 families and 122 genera to the Legal Amazon states (Table 1). Anisoptera, with 340 species inserted in five families, was the suborder with the greatest diversity, followed by Zygoptera with 10 families and 301 species. Among the most representative families in this study are Coenagrionidae, Libellulidae and Gomphidae with 216, 199 and 82 species respectively. These three families totaled approximately 78% of all species found. Megapodagronidae, Platystictidae and the monotypic family Rimanellidae were the families with the lowest recorded diversity, with only one species each.

In Table 1, it is possible to observe that among the Legal Amazon states, Amazonas has the largest number of species restricted only to its territory (n=100), followed by Mato Grosso (n=69) and Pará (n=40). Among the genera found with the highest number of species are *Erythrodiplax* Brauer, 1868 (n=32), *Micrathyria* Kirby, 1889 (n=31), *Argia* Rambur, 1842 (n=30) and *Acanthagrion* Selys, 1876 (n=25). Together, these four genera comprise almost 19% of the total recorded species.

The greatest diversities were found in the states of Amazonas (n=364), Pará (n=310) and Mato Grosso (n=285) (Table 2). In contrast, Roraima (n=79), and Tocantins (n=49) had the lowest species richness. The number of confirmed occurrences for Amazonas (n=364) represents about 57% of the species found during the study, while Tocantins, with 49 species, reached only close to 8% of the total number of records.

DISCUSSION

By using our search methodology (SciELO, CAPES Portal, SiBBr and GBIF), 641 species were found with occurrence records for at least one of the states in the Legal Amazon. This number corresponds to approximately 69% of the odonatofauna recorded for Brazil, which has just over 900 species (Pinto 2020). If we compare only the results of the diversity found in the states of Acre, Amazonas, Amapá, Pará, Rondônia and Roraima, where the Amazon biome fully covers its territories, the number of 545 species is almost 8% greater than the 503 occurrences cited for the Amazon region by Brasil *et al.* (2021).

So far, the odontofauna of Amazonas state had recorded 324 species according to Koroiva *et al.* (2020). From the

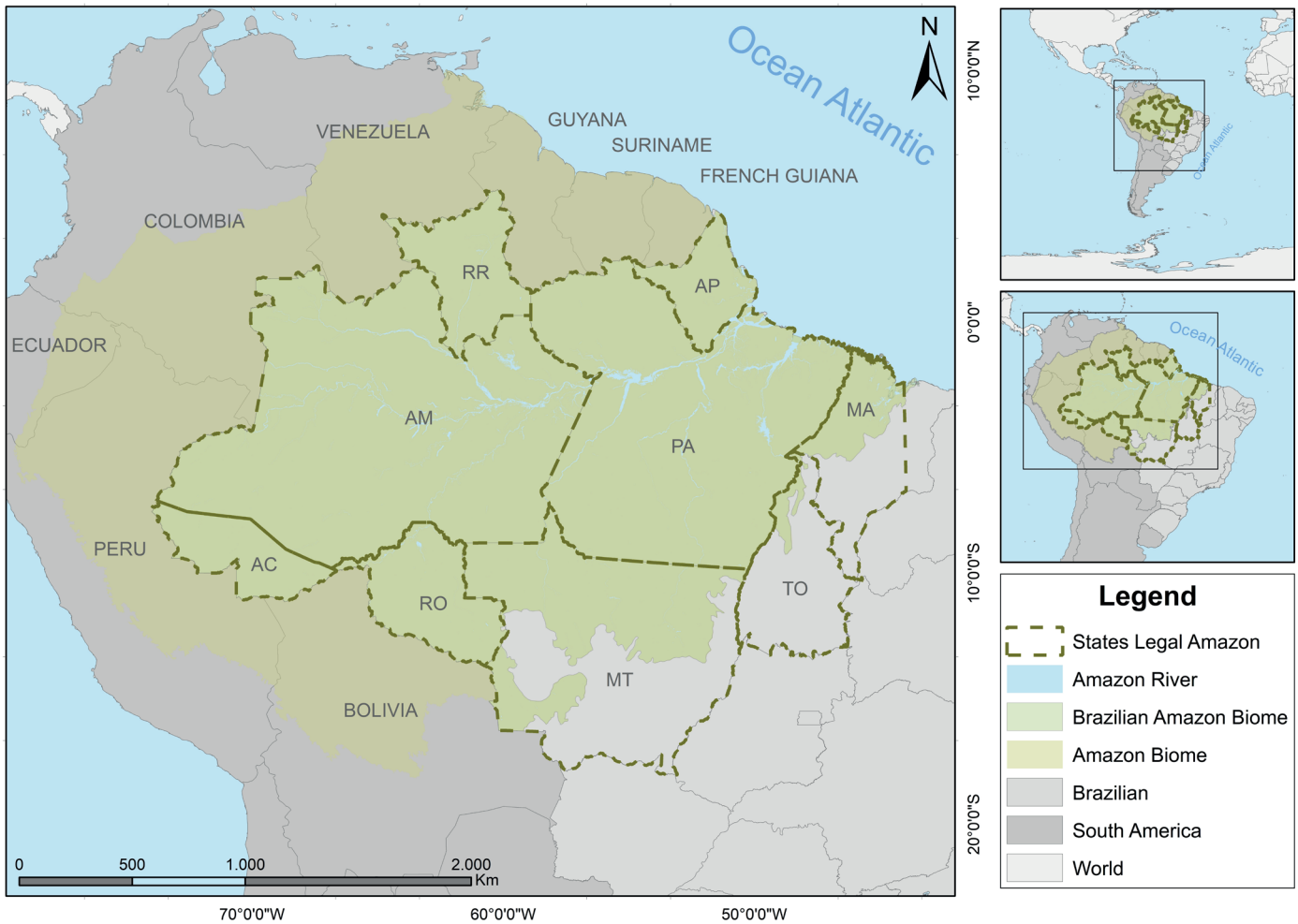

Figure 1. Map of Brazilian Legal Amazon states. Acre- Ac, Amazonas- AM, Amapá- AP, Maranhão- MA, Mato Grosso- MT, Pará- PA, Rondônia-RO, Roraima- RR e Tocantins- TO.

Table 1. List of species occurring in Legal Amazon states. Acre-Ac, Amazonas-AM, Amapá-AP, Maranhão-MA, Mato Grosso-MT, Pará-PA, Rondônia-RO, Roraima-RR and Tocantins-TO.

Suborder/Family	Species	Brazilian Legal Amazon states
Zygoptera		
Calopterygidae		
	Hetaerina amazonica Sjöstedt, 1918	AM, AP, MA, MT, PA, RO
	Hetaerina auripennis (Burmeister, 1839)	AM, MA, MT, PA, RO
	Hetaerina brightwelli (Kirby, 1823)	AM, PA
	Hetaerina caja (Drury, 1773)	AM
	Hetaerina curvicauda Garrison, 1990	MA, MT, PA, RO
	Hetaerina fuscoguttata Selys, 1878	MT
	Hetaerina hebe Selys, 1853	RO
	Hetaerina indeprensa Garrison, 1990	AP, PA, RO
	Hetaerina laesa Hagen in Selys, 1853	AC, AM, AP, MT, PA, RO
	Hetaerina medinai Rácenis, 1968	AM
	Hetaerina moribunda Hagen in Selys, 1853	AM, AP, MT, PA, RO
	Hetaerina mortua Hagen in Selys, 1853	AP, RR, RO
	Hetaerina occisa Hagen in Selys, 1853	AM
	Hetaerina rosea Selys, 1853	AM, MA, MT, PA, RO
	Hetaerina sanguinea Selys, 1853	AC, AM, MA, PA, RR, RO
	Hetaerina simplex Selys, 1853	MA, TO
	Hetaerina westfalli Rácenis, 1968	AM, MT, PA, RR, RO
	Mnesarete aenea (Selys, 1853)	AC, AM, MT, PA, RO
	Mnesarete astrape De Marmels, 1989	AM, PA
	Mnesarete cupraea (Selys, 1853)	AC, AM, PA, MT, RO
	Mnesarete fuscibasis (Calvert, 1909)	MT
	Mnesarete guttifera (Selys, 1873)	MT, TO
	Mnesarete lencionii Garrison, 2006	MT
	Mnesarete loutoni Garrison, 2006	AM
	Mnesarete machadoi Garrison, 2006	MT
	Mnesarete pudica (Hagen in Selys, 1853)	MT
	Mnesarete smaragdina (Selys, 1869)	MT, PA, RO
	Mnesarete williamsoni Garrison, 2006	MT, PA
Coenagrionidae		
	Acanthagrion abunae Leonard, 1977	AP, MT, RO
	Acanthagrion adustum Williamson, 1916	AM, AP, PA, RR, RO
	Acanthagrion aepiolum Tennessen, 2004	MA, PA, RO
	Acanthagrion amazonicum Sjöstedt, 1918	AM, AP, MA, PA, RO
	Acanthagrion ascendens Calvert, 1909	AP, MT, PA, RO
	Acanthagrion apicale Selys, 1876	AC, AM, AP, MT, PA, RR, RO
	Acanthagrion chacoense Calvert, 1909	MT
	Acanthagrion chararum Calvert, 1909	AM, MT
	Acanthagrion cuyabae Calvert, 1909	AM, MT, RO
	Acanthagrion egleri (Santos, 1961)	AP, PA
	Acanthagrion flaviae Machado, 2012	AM
	Acanthagrion gracile (Rambur, 1842)	AC, MA, MT, PA, RR
	Acanthagrion hildegarda Gloger, 1967	TO
	Acanthagrion jessei Leonard, 1977	MT, PA, RO
	Acanthagrion Kaori Machado, 2012	AM
	Acanthagrion kennedii Williamson, 1916	AP, MA, PA
	Acanthagrion longispinosum Leonard, 1977	AM, RO
	Acanthagrion minutum Leonard, 1977	AM, MT, PA
	Acanthagrion floridense Fraser, 1946	RO
	Acanthagrion phallicorne Leonard, 1977	AM, AP, MT, PA, RO

To be continue...

Table 1. *Continue...*

Suborder/Family	Species	Brazilian Legal Amazon states
Coenagrionidae	*Acanthagrion quadratum* Selys, 1876	AM
	Acanthagrion rubrifrons Leonard, 1977	AM, PA
	Acanthagrion temporale Selys, 1876	MT, RO
	Acanthagrion tepuiense De Marmels, 1985	AM
	Acanthagrion truncatum Selys, 1876	AP, MA, MT, PA, TO
	Acanthallagma caeruleum Williamson & Williamson, 1924	AM
	Acanthallagma luteum Williamson & Williamson, 1924	PA, RO
	Acanthallagma strohmi Williamson & Williamson, 1924	RO
	Aceratobasis macilenta (Rambur, 1842)	AP, PA
	Aeolagrion dorsale (Burmeister, 1839)	AP, AM, PA, RO
	Aeolagrion inca (Selys, 1876)	AM
	Amazoneura ephippigera (Selys, 1886)	AM
	Amazoneura juruaensis Machado, 2004	AC
	Argia angelae Vilela, Guillermo-Ferreira, Del-Claro & Cordero-Rivera, 2018	MT
	Argia bicellulata (Calvert, 1909)	AM, MT
	Argia botacudo Calvert, 1909	AM, MT
	Argia chapadae Calvert, 1909	MT, PA, TO
	Argia collata Selys, 1865	AM, PA
	Argia croceipennis Selys, 1865	MT, PA
	Argia cuneifera Garrison & von Ellenrieder, 2015	AM
	Argia euphorbia Fraser, 1946	AC, AM, PA, RO
	Argia fumigata Hagen in Selys, 1865	AM, AP, PA, RO
	Argia gemella Garrison & Von Ellenrieder, 2015	AM, AP
	Argia hasemani Calvert, 1909	AM, MA, MT, PA
	Argia impura Rambur, 1842	AM
	Argia indicatrix Calvert, 1901	AM, AP, MA, PA, RO
	Argia infumata Selys, 1865	AC, AM, PA, RO
	Argia insipida Hagen in Selys, 1865	AM, MT, PA
	Argia lilacina Selys, 1865	MA, MT, PA, TO
	Argia loutoni Garrison & von Ellenrieder, 2015	AM
	Argia meioura Garrison & von Ellenrieder, 2015	AM
	Argia modesta Selys, 1865	PA
	Argia mollis Hagen in Selys, 1865	AM, MT, PA, RO
	Argia oculata Hagen in Selys, 1865	AM, AP, MT, PA, RO
	Argia palmata Garrison & von Ellenrieder, 2015	AM, MA
	Argia pulla Hagen in Selys, 1865	AM, AP, RR
	Argia reclusa Selys, 1865	AM, MA, MT, PA
	Argia smithiana Calvert, 1909	MT, PA, RO
	Argia subapicalis Calvert, 1909	AM, MT
	Argia tamoyo Calvert, 1909	MT
	Argia thespis Hagen in Selys, 1865	AM, PA, RO, TO
	Argia tinctipennis Selys, 1865	AM, MT, PA, RO
	Argia translata Hagen in Selys, 1865	AM, AP
	Argia tupi Calvert, 1909	MT, PA
	Bromeliagrion beebeanum (Calvert, 1948)	AM
	Bromeliagrion rehni Garrison, 2005	AM
	Calvertagrion charis Tennessen, 2015	AM
	Calvertagrion minutissimum (Selys, 1876)	AM, PA, RO
	Carajathemis simone Machado, 2012	PA
	Cyanallagma ferenigrum De Marmels, 2003	MT, PA, TO

To be continue...

Table 1. *Continue...*

Suborder/Family	Species	Brazilian Legal Amazon states
Coenagrionidae	*Denticulobasis ariken* Machado, 2009	AM, RO
	Denticulobasis garrisoni Machado, 2009	RO
	Drepanoneura janirae Von Ellenrieder & Garrison, 2008	RO
	Drepanoneura muzoni Von Ellenrieder & Garrison, 2008	AM
	Dolonagrion fulvellum (Selys, 1876)	AM, AP
	Epipleoneura albuquerquei Machado, 1964	AM, PA, RO
	Epipleoneura angeloi Pessacq & Costa, 2010	MT, TO
	Epipleoneura capilliformis (Selys, 1886)	AM, AP, MT, PA
	Epipleoneura demarmelsi Von Ellenrieder & Garrison, 2008	AM
	Epipleoneura fuscaenea Williams, 1915	AM, PA
	Epipleoneura haroldoi Santos, 1964	AM, PA
	Epipleoneura humeralis (Selys, 1886)	AM, PA
	Epipleoneura janirae Machado, 2005	AM, PA
	Epipleoneura kaxuriana Machado, 1985	AM, AP, PA, RO
	Epipleoneura lamina Williamson, 1915	AM, PA, RO
	Epipleoneura machadoi Rácenis, 1960	MT, PA, TO
	Epipleoneura manauensis Santos, 1964	AM, PA
	Epipleoneura metallica Rácenis, 1955	AM, MA, MT, PA, RO, TO
	Epipleoneura ocuene De Marmels, 1989	PA
	Epipleoneura pereirai Machado, 1964	AP, PA
	Epipleoneura solitaria De Marmels, 1989	PA
	Epipleoneura spatulata Rácenis, 1960	AM, PA
	Epipleoneura susanae Pessacq, 2014	MT
	Epipleoneura tariana Machado, 1985	AC, AM, PA
	Epipleoneura uncinata De Marmels, 1989	AM
	Epipleoneura venezuelensis Rácenis, 1955	AP, MT, MA, PA, RO
	Epipleoneura waiwaiana Machado, 1985	AM, PA
	Epipleoneura westfalli Machado, 1986	MA, MT, PA, RO
	Epipleoneura williamsoni Santos, 1957	MA, MT, PA, TO
	Epipotoneura machadoi Von Ellenrieder & Garrison, 2008	PA
	Epipotoneura nehalennia Williamson, 1915	AM
	Forcepsioneura itatiaiae Santos, 1970	AM
	Helveciagrion obsoletum (Selys, 1876)	MT
	Homeoura nepos (Selys, 1876)	AM, AP, MT, PA, RO
	Homeoura obrieni Von Ellenrieder, 2008	AM
	Hylaeonympha magoi Rácenis, 1968	AM
	Inpabasis machadoi Santos, 1961	AM, PA, RO
	Inpabasis rosea (Selys, 1877)	AM, AP
	Ischnura capreolus (Hagen, 1861)	AC, AM, AP, MA, MT, PA, RR
	Ischnura fluviatilis Selys, 1876	AM, AP, MT, PA, RR
	Ischnura hastata (Say, 1840)	RR
	Leptagrion aculeatum Santos, 1965	AP, PA
	Leucobasis candicans Rácenis, 1959	AM
	Mecistogaster amalia (Burmeister, 1839)	AC, AM, AP, MT, PA, RO, RR
	Mecistogaster lucretia (Drury, 1773)	AM, AP, MT, PA
	Mecistogaster ornata Rambur, 1842	AM, MT, PA, RO, RR
	Mesoleptobasis acuminata Santos, 1961	AM, PA, MT, RO
	Mesoleptobasis cantralli Santos, 1961	AM, RO
	Mesoleptobasis elongata Garrison & von Ellenrieder, 2009	AM, RR
	Mesoleptobasis incus Sjöstedt, 1918	AM, RO
	Metaleptobasis amazonica Sjöstedt, 1918	AM

To be continue...

Table 1. *Continue...*

Suborder/Family	Species	Brazilian Legal Amazon states
Coenagrionidae	*Metaleptobasis bicornis* (Selys, 1877)	AM, PA, RR
	Metaleptobasis brysonima Williamson, 1915	AM
	Metaleptobasis diceras (Selys, 1877)	AP, MT, PA, RO, RR, TO
	Metaleptobasis falcifera Von Ellenrieder, 2013	AC
	Metaleptobasis inermis Von Ellenrieder, 2013	AC
	Metaleptobasis leniloba Von Ellenrieder, 2013	PA
	Metaleptobasis lillianae Daigle, 2004	MT
	Metaleptobasis longicauda Von Ellenrieder, 2013	MT
	Metaleptobasis minteri Daigle, 2003	AC
	Metaleptobasis paludicola Von Ellenrieder, 2013	AM
	Metaleptobasis quadricornis (Selys, 1877)	RO
	Metaleptobasis selysi Santos, 1956	MT, RO
	Metaleptobasis spatulata Von Ellenrieder, 2013	RO
	Metaleptobasis tridentigera Von Ellenrieder, 2013	AM, PA, RO
	Metaleptobasis truncata Von Ellenrieder, 2013	PA
	Microstigma anomalum Rambur, 1842	AC, AM, PA, RO
	Microstigma maculatum Hagen in Selys, 1860	AM, AP, PA, RO
	Microstigma rotundatum Selys, 1860	AC, AM, AP, PA
	Minagrion canaanense (Santos, 1967)	PA
	Minagrion waltheri (Selys, 1876)	TO
	Nehalennia minuta (Selys in Sagra, 1857)	AP
	Neoneura bilinearis Selys, 1860	AC, AM, AP, MT, PA, RR, RO
	Neoneura denticulata Williamson, 1917	AC, AM, MT, PA, RR, RO
	Neoneura desana Machado, 1989	AM, AP
	Neoneura ethela Williamson, 1917	MA
	Neoneura fulvicollis Selys, 1886	MA, MT, PA
	Neoneura joana Williamson, 1917	AP, PA, RO, RR
	Neoneura lucas Machado, 2002	MT, PA
	Neoneura luzmarina De Marmels, 1989	AM, MT, PA
	Neoneura mariana Williamson, 1917	AM
	Neoneura moorei Machado, 2003	RO
	Neoneura myrthea Williamson, 1917	AM, AP, PA, RR
	Neoneura rubriventris Selys, 1860	AM, AP, PA, RR, RO
	Neoneura rufithorax Selys, 1886	AC, AM, PA, RO
	Neoneura schreiberi Machado, 1975	AP
	Neoneura sylvatica Hagen in Selys, 1886	AP, MA, MT, PA, RR, RO, TO
	Oxyagrion basale Selys, 1876	MT
	Oxyagrion chapadense Costa, 1978	MT, TO
	Oxyagrion evanescens Calvert, 1909	MT, TO
	Oxyagrion fernandoi Costa, 1988	MT, PA
	Oxyagrion impunctatum Calvert, 1909	MT, TO
	Oxyagrion microstigma Selys, 1876	MT
	Oxyagrion sulmatogrossense Costa, Souza e Santos, 2000	MT
	Oxyagrion pavidum Hagen, 1876	MT
	Oxyagrion terminale Selys, 1876	AM, PA
	Peristicta aeneoviridis Calvert, 1909	MT
	Peristicta forceps Hagen in Selys, 1860	MT
	Peristicta muzoni Pessacq & Costa, 2007	MT
	Phasmoneura exigua (Selys, 1886)	AM, AP, MT, PA
	Phasmoneura janirae Lencioni, 1999	MT, PA
	Phoenicagrion flammeum (Selys, 1876)	AC, AM, AP, MT, PA, RO, RR

To be continue...

Table 1. *Continue...*

Suborder/Family	Species	Brazilian Legal Amazon states
Coenagrionidae	*Phoenicagrion flavescens* Machado, 2010	AP, PA
	Phoenicagrion ibseni Machado, 2010	AP
	Phoenicagrion karaja Machado, 2010	MT, PA
	Phoenicagrion megalobos Machado, 2010	PA
	Platystigma buckleyi (McLachlan, 1881)	AM
	Platystigma jocaste (Hagen, 1869)	AC, RO
	Protoneura amatoria Calvert, 1907	AM, RR
	Protoneura paucinervis Selys, 1886	MT
	Protoneura scintilla Gloyd, 1939	AM, AP, PA, RO
	Protoneura tenuis Selys, 1860	AC, AM, MT, PA, RR, RO
	Psaironeura bifurcata (Sjöstedt, 1918)	AC, AM
	Psaironeura tenuissima (Selys, 1886)	AM, AP, PA, RO
	Telebasis abuna Bick & Bick, 1995	AM, MA, RO
	Telebasis carmesina Calvert, 1909	AC, MT
	Telebasis carminita Calvert, 1909	AP, MT, PA, RR
	Telebasis carvalhoi Garrison, 2009	PA
	Telebasis celiovallei Machado, 2010	PA
	Telebasis coccinea (Selys, 1876)	MA, MT, PA, TO
	Telebasis corallina (Selys, 1876)	PA, RR
	Telebasis corbeti Garrison, 2009	AC
	Telebasis demarara (Williamson, 1917)	AM, MA, PA
	Telebasis divaricata Machado, 2010	PA, TO
	Telebasis dunklei Bick & Bick, 1995	AM
	Telebasis filiola (Perty, 1833)	MA, MT, PA
	Telebasis griffinii (Martin, 1896)	AC, AM, AP, MT, PA, RO
	Telebasis inalata (Calvert, 1961)	AM
	Telebasis lenkoi Machado, 2010	MT
	Telebasis leptocyclia Garrison, 2009	RO
	Telebasis obsoleta (Selys, 1876)	AC, AM, PA, MT
	Telebasis racenisi Bick & Bick, 1995	MT, PA, RO, TO
	Telebasis rubricauda Bick & Bick, 1995	AC, RO
	Telebasis sanguinalis Calvert, 1909	AM, MT, PA
	Telebasis simulacrum (Calvert, 1909)	MT
	Telebasis simulata Tennessen, 2002	AM, PA
	Telebasis vulcanoae (Machado, 1980)	PA
	Telebasis willinki Fraser, 1984	MT
	Tigriagrion aurantinigrum Calvert, 1909	AC, MA, MT, PA, RO
	Tuberculobasis arara Machado, 2009	RO
	Tuberculobasis inversa (Selys, 1876)	AM, PA, RO
	Tuberculobasis karitiana Machado, 2009	RO
	Tuberculobasis macuxi Machado, 2009	RR
	Tuberculobasis mammilaris (Calvert, 1909)	MT
	Tuberculobasis tirio Machado, 2009	PA
	Tuberculobasis yanomami (De Marmels, 1992)	PA
	Tukanobasis corbeti Machado, 2009	AM
Dicteriadidae		
	Dicterias atrosanguinea Selys, 1853	AM, PA
	Heliocharis amazona Selys, 1853	AC, AM, AP, MT, PA, RO
Heteragrionidae		
	Dimeragrion percubitale Calvert, 1913	AM

To be continue...

Table 1. *Continue...*

Suborder/Family	Species	Brazilian Legal Amazon states
Heteragrionidae	*Heteragrion angustipenne* Selys, 1886	AM, RO
	Heteragrion aurantiacum Selys, 1862	PA
	Heteragrion bariai De Marmels, 1989	AC, AM, PA, RO
	Heteragrion cinnamomeum Selys, 1862	AP
	Heteragrion consors Hagen in Selys, 1862	AM
	Heteragrion ictericum Williamson, 1919	AM, AP, PA, RO
	Heteragrion icterops Selys, 1862	AM, MT, PA, RO
	Heteragrion inca Calvert, 1909	AM, RO
	Heteragrion silvarum Sjöstedt, 1918	AM, PA, RO
	Heteragrion simulatum Williamson, 1919	AM
	Heteragrion triangulare Calvert, 1901	MT
	Oxystigma cyanofrons Williamson, 1919	AM, AP
	Oxystigma petiolatum (Selys, 1862)	AM, AP, PA, RR, RO
Lestidae		
	Lestes bipupillatus Calvert, 1909	MT
	Lestes dichrostigma Calvert, 1909	MT
	Lestes falcifer Sjöstedt, 1918	AM, RR
	Lestes fernandoi Costa, De Souza & Muzón, 2006	MA
	Lestes forficula Rambur, 1842	MA, MT, RO, RR
	Lestes helix Ris, 1918	RO
	Lestes jurzitzai Muzón, 1994	RO
	Lestes minutus Selys, 1862	MT, RR
	Lestes paulistus Calvert, 1909	MT
	Lestes pictus Hagen in Selys, 1862	MT
	Lestes quadristriatus Calvert, 1909	MT
	Lestes tricolor Erichson, 1848	AM
Megapodagrionidae		
	Megapodagrion megalopus (Selys, 1862)	AM, MT, PA, RO
Perilestidae		
	Perilestes attenuatus Selys, 1886	AM, PA, RO
	Perilestes bispinus Kimmins, 1958	AM
	Perilestes fragilis Hagen in Selys, 1862	AM, PA
	Perilestes gracillimus Kennedy, 1941	AM, AP, PA
	Perilestes kahli Williamson & Williamson, 1924	PA, RO
	Perilestes minor Williamson & Williamson, 1924	RO
	Perilestes solutus Williamson & Williamson, 1924	AM, MA, MT, PA, RR, RO
	Perissolestes aculeatus Kennedy, 1941	RO
	Perissolestes cornutus (Selys, 1886)	AM, AP, PA, RO
	Perissolestes flinti De Marmels, 1989	AM
	Perissolestes paprzyckii Kennedy, 1941	AC, AM
Philogeniidae		
	Philogenia margarita Selys, 1862	AM
	Philogenia silvarum Ris, 1918	AM
Platystictidae		
	Palaemnema brasiliensis Machado, 2009	AM, AP
Polythoridae		
	Chalcopteryx machadoi Costa, 2005	PA
	Chalcopteryx radians Ris, 1914	AM, PA
	Chalcopteryx rutilans (Rambur, 1842)	AC, AM, MT, PA, RO
	Chalcopteryx scintillans McLachlan, 1870	AM, RO
	Chalcopteryx seabrai Santos & Machado, 1861	AM, AP

To be continue...

Table 1. *Continue...*

Suborder/Family	Species	Brazilian Legal Amazon states
Polythoridae	*Euthore fasciata* (Hagen in Selys, 1853)	AM
	Polythore aurora (Selys, 1879)	AM
	Polythore batesi (Selys, 1869)	AM
	Polythore beata (McLachlan, 1869)	AM
	Polythore manua Bick and Bick, 1990	AC
	Polythore picta (Rambur, 1842)	AC, AM, PA
	Polythore procera (Selys, 1869)	AM
	Polythore vittata (Selys, 1869)	AC, AM, RO
Rimanellidae		
	Rimanella arcana (Needham, 1933)	AM
Anisoptera		
Aeshnidae		
	Aeshna williamsoniana Calvert, 1905	MT
	Anax amazili (Burmeister, 1839)	AM
	Anax concolor Brauer, 1865	AM, MT
	Anax longipes Hagen, 1861	MT
	Castoraeschna corbeti Carvalho, Pinto & Ferreira, 2009	PA
	Castoraeschna januaria (Hagen, 1867)	MT
	Castoraeschna longfieldae (Kimmins, 1929)	MT
	Castoraeschna tepuica De Marmels, 1989	AM
	Coryphaeschna adnexa (Hagen, 1861)	AC, AM, AP, MT, PA
	Coryphaeschna amazonica De Marmels, 1989	AM, PA, RR
	Coryphaeschna viriditas Calvert, 1952	AM, MT, RR
	Gynacantha auricularis Martin, 1909	AM, MT, PA, RO
	Gynacantha bifida Rambur, 1842	AM, PA, RO
	Gynacantha chelifera McLachlan, 1895	MT
	Gynacantha dryadula Neiss & De Marmels, 2017	AM
	Gynacantha gracilis (Burmeister, 1839)	AM, PA, RO
	Gynacantha interioris Williamson, 1923	AC, AM, MT
	Gynacantha klagesi Williamson, 1923	AM, PA
	Gynacantha litoralis Williamson, 1923	AM, PA, RO
	Gynacantha membranalis Karsch, 1891	AM, AP, MT, PA, RO
	Gynacantha mexicana Selys, 1868	AM, AP, PA, RR
	Gynacantha nervosa Rambur, 1842	AM, AP, MT, RR, RO
	Gynacantha tenuis Martin, 1909	AM
	Neuraeschna calverti Kimmins, 1951	AC, AM, MA
	Neuraeschna capillata Machet, 1990	AM
	Neuraeschna claviforcipata Martin, 1909	AM, PA
	Neuraeschna costalis (Burmeister, 1839)	AM, AP, PA
	Neuraeschna dentigera Martin, 1909	AM, PA
	Neuraeschna harpya Martin, 1909	AM, PA
	Neuraeschna maxima Belle, 1989	PA
	Neuraeschna mina Williamson & Williamson, 1930	RO
	Neuraeschna producta Kimmins, 1933	PA
	Neuraeschna tapajonica Machado, 2002	PA
	Rhionaeschna planaltica (Calvert, 1952)	AM, MT
	Remartinia luteipennis (Burmeister, 1839)	AC, MT, PA
	Staurophlebia gigantula Martin, 1909	AM
	Staurophlebia reticulata (Burmeister, 1839)	AC, AP, MT, PA
	Staurophlebia wayana Geijskes, 1959	AM, MT

To be continue...

Table 1. *Continue...*

Suborder/Family	Species	Brazilian Legal Amazon states
Aeshnidae	*Triacanthagyna caribbea* Williamson, 1923	AM
	Triacanthagyna dentata (Geijskes, 1943)	AM, RO
	Triacanthagyna ditzleri Williamson, 1923	AM, AP
	Triacanthagyna satyrus (Martin, 1909)	AM
	Triacanthagyna septima (Selys in Sagra, 1857)	AM, AP, MT, PA, RR
	Triacanthagyna trifida (Rambur, 1842)	AM, MT
Corduliidae		
	Aeschnosoma auripennis Geijskes, 1970	AM, MT
	Aeschnosoma elegans Selys, 1871	PA
	Aeschnosoma forcipula Hagen in Selys, 1871	AM, MT, PA
	Aeschnosoma hamadae Fleck & Neiss, 2012	AM
	Aeschnosoma louissiriusi Fleck, 2012	RO
	Navicordulia amazonica Machado & Costa, 1995	MT
	Navicordulia errans (Calvert, 1909)	MT, TO
	Paracordulia sericea (Selys, 1871)	AM
Gomphidae		
	Agriogomphus sylvicola Selys, 1869	AM
	Aphylla barbata Belle, 1994	AM
	Aphylla brasiliensis Belle, 1970	AM, PA, TO
	Aphylla brevipes Selys, 1854	PA
	Aphylla caudalis Belle, 1987	PA
	Aphylla dentata Selys, 1859	AM, MT, PA
	Aphylla distinguenda Campion, 1920	MT
	Aphylla edentata Selys, 1869	AM
	Aphylla exilis Belle, 1994	PA
	Aphylla janirae 1994	AP
	Aphylla linea Belle, 1994	MT
	Aphylla molossus Selys, 1859	AM, PA
	Aphylla producta Selys, 1854	AP
	Aphylla theodorina (Navás, 1933)	MA
	Aphylla scapula Belle, 1992	RO
	Archaeogomphus nanus Needham, 1944	RR, TO
	Archaeogomphus vanbrinkae Machado, 1994	MT
	Cacoides latro (Erichson in Schomburgk, 1848)	AM, PA
	Cyanogomphus comparabilis Belle, 1994	MT
	Cyanogomphus waltheri Selys, 1873	MT
	Desmogomphus tigrivensis Williamson, 1920	AM
	Diaphlebia angustipennis Selys, 1854	AM, MT, PA, RO
	Diaphlebia nexans Calvert, 1903	MT, TO
	Ebegomphus schroederi (Belle, 1970)	PA
	Ebegomphus demerarae (Selys, 1894)	MA
	Epigomphus hylaeus Ris, 1918	AM, MT, PA
	Gomphidia kirschii Selys, 1878	PA
	Gomphoides infumata (Rambur, 1842)	AM
	Idiogomphoides emmeli Belle, 1995	RO
	Melanocacus mungo (Needham, 1940)	AM, MT, RR
	Peruviogomphus bellei Machado, 2005	AM
	Phyllocycla armata Belle, 1977	AM, MT, PA
	Phyllocycla bartica Calvert, 1948	PA
	Phyllocycla brasilia Belle, 1988	MA
	Phyllocycla diphylla (Selys, 1854)	AM

To be continue...

Table 1. *Continue...*

Suborder/Family	Species	Brazilian Legal Amazon states
Gomphidae	*Phyllocycla hamata* Belle, 1990	MT, RO
	Phyllocycla medusa Belle, 1988	PA
	Phyllocycla modesta Belle, 1970	AM, AP
	Phyllocycla neotropica Belle, 1970	AM
	Phyllocycla ophis (Selys, 1869)	AM, AP
	Phyllocycla pegasus (Selys, 1869)	AM, MT
	Phyllocycla sordida (Selys, 1854)	RO
	Phyllocycla volsella (Calvert, 1905)	AM
	Phyllogomphoides andromeda (Selys, 1869)	AM, PA
	Phyllogomphoides angularis Belle, 1982	AM, AP, RO
	Phyllogomphoides annectens (Selys, 1869)	MT
	Phyllogomphoides atlanticus (Belle, 1970)	AM
	Phyllogomphoides audax (Hagen in Selys, 1854)	PA
	Phyllogomphoides calverti (Kirby, 1897)	PA, RO
	Phyllogomphoides cepheus Belle, 1980	AM, AP, MT
	Phyllogomphoides fuliginosus (Hagen in Selys, 1854)	PA
	Phyllogomphoides major Belle, 1984	AM
	Phyllogomphoides pedunculus Belle, 1984	AM
	Phyllogomphoides praedatrix Belle, 1982	RO
	Phyllogomphoides pseudangularis Belle, 1994	AM, AP
	Phyllogomphoides selysi (Navás, 1924)	AM
	Phyllogomphoides spiniventris Belle, 1994	MT
	Phyllogomphoides suspectus Belle, 1994	MT, RO
	Phyllogomphoides undulatus (Needham, 1944)	AM, AP, PA
	Progomphus amazonicus Belle, 1973	AM, RR, RO
	Progomphus angeloi Belle, 1994	AM
	Progomphus approximatus Belle, 1966	AM
	Progomphus boliviensis Belle, 1973	AM
	Progomphus delicatus Belle, 1973	AM
	Progomphus fassli Belle, 1973	PA
	Progomphus geijskesi Needham, 1944	MT, PA
	Progomphus guyanensis Belle, 1966	AM
	Progomphus intricatus Hagen in Selys, 1858	AM, MT, PA
	Progomphus maculatus Belle, 1984	AM, PA
	Progomphus nigellus Belle, 1990	RO
	Progomphus phylocramus Ris, 1918	AM
	Progomphus perithemoides Belle, 1980	MT
	Progomphus perpusillus Ris, 1918	AM
	Progomphus pijpersi Belle, 1966	AM, RO
	Progomphus pygmaeus Selys, 1873	MT, PA
	Progomphus recticarinatus Calvert, 1909	MT
	Progomphus tibialis Belle, 1973	AM
	Zonophora batesi Selys, 1869	AM, AP, PA
	Zonophora calippus Selys, 1869	AC, AM, PA, RO, TO
	Zonophora nobilis Belle, 1983	AM
	Zonophora supratriangularis Schmidt, 1941	AM
	Zonophora surinamensis Needham, 1944	AP
	Zonophora wucherpfennigi Schmidt, 1941	AM, PA
Libellulidae		
	Anatya guttata (Erichson in Schomburgk, 1848)	AM, AP, MT, PA, RR
	Antidythemis trameiformis Kirby, 1889	MT, PA

To be continue...

Table 1. *Continue...*

Suborder/Family	Species	Brazilian Legal Amazon states
Libellulidae	*Argyrothemis argentea* Ris, 1911	AM, MT, PA, RO
	Brachymesia furcata (Hagen, 1861)	AC
	Brachymesia herbida (Gundlach, 1889)	AC, AM, AP, MT, PA, TO
	Brechmorhoga mendax (Hagen, 1861)	MT
	Brechmorhoga nubecula (Rambur, 1842)	AM, MT
	Brechmorhoga praecox Hagen, 1861	RR
	Brechmorhoga praedatrix Calvert, 1909	AM, MT
	Brechmorhoga travassosi Santos, 1946	MT
	Dasythemis esmeralda Ris, 1910	AM, MT, PA, RO
	Dasythemis essequiba Ris, 1919	AM, PA
	Dasythemis venosa (Burmeister, 1839)	MT
	Diastatops dimidiata (Linnaeus, 1758)	AP, PA
	Diastatops emilia Montgomery 1940	PA
	Diastatops estherae Montgomery, 1940	AM
	Diastatops intensa Montgomery, 1940	AM, MT, PA, RO
	Diastatops maxima Montgomery, 1940	AM
	Diastatops nigra Montgomery, 1940	AM, AP, RO
	Diastatops obscura (Fabricius, 1775)	AC, AM, AP, MA, MT, PA, RO, RR, TO
	Diastatops pullata (Burmeister, 1839)	AP, AM, MT, PA, RR
	Dythemis nigra Martin, 1897	AM, TO, MT
	Dythemis sterilis Hagen, 1861	AC, PA, MT, RR
	Elasmothemis cannacrioides (Calvert, 1906)	MT, PA, RR
	Elasmothemis constricta (Calvert, 1898)	TO
	Elasmothemis williamsoni (Ris, 1919)	AM, MT, PA
	Elga leptostyla Ris, 1909	AM, MT, RO
	Erythemis attala (Selys in Sagra, 1857)	AM, AP, PA, RO
	Erythemis carmelita Williamson, 1923	AM
	Erythemis credula (Hagen, 1861)	AC, MT, PA, RR
	Erythemis haematogastra (Burmeister, 1839)	AC, AM, AP, MA, MT, PA
	Erythemis mithroides (Brauer in Therese, 1900)	AC, AM, AP, PA
	Erythemis peruviana (Rambur, 1842)	AM, AP, MA, MT, PA, RR
	Erythemis plebeja (Burmeister, 1839)	AM, PA, MA, MT, RO
	Erythemis vesiculosa (Fabricius, 1775)	AC, AM, AP, MA, MT, PA, RR, RO, TO
	Erythrodiplax abjecta (Rambur, 1842)	MT
	Erythrodiplax acantha Borror, 1942	TO
	Erythrodiplax amazonica Sjöstedt, 1918	AM, MT, PA, RO
	Erythrodiplax ana Guillermo-Ferreira, Vilela, Del-Claro e Bispo, 2016	MT
	Erythrodiplax anatoidea Borror, 1942	AM, RO
	Erythrodiplax angustipennis Borror, 1942	RO
	Erythrodiplax attenuata (Kirby, 1889)	AC, AM, PA, MT, RR, RO
	Erythrodiplax avittata Borror, 1942	PA
	Erythrodiplax basalis (Kirby, 1897)	AC, AM, AP, MA, MT, PA, RR, RO
	Erythrodiplax branconensis Sjöstedt, 1929	AC
	Erythrodiplax castanea (Burmeister, 1839)	AM, MA, MT, PA, RO, TO
	Erythrodiplax clitella Borror, 1942	AC
	Erythrodiplax famula (Erichson, 1848)	AM, AP, MT, PA, RR, RO
	Erythrodiplax fusca (Rambur, 1842)	AC, AM, AP, MA, MT, PA, RR, RO, TO
	Erythrodiplax juliana Ris, 1911	AM, MT, PA, RR, RO, TO
	Erythrodiplax latimaculata Ris, 1911	AC, MA, MT, PA
	Erythrodiplax lativittata Borror, 1942	AM, MT, RR, RO, TO

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Table 1. *Continue...*

Suborder/Family	Species	Brazilian Legal Amazon states
Libellulidae	*Erythrodiplax laurentia* Borror, 1942	AM, AP
	Erythrodiplax longitudinalis (Ris, 1919)	AM, MT, PA, RO
	Erythrodiplax lygaea Ris, 1911	MT
	Erythrodiplax luteofrons Santos, 1956	TO
	Erythrodiplax maculosa (Hagen, 1861)	MT, PA
	Erythrodiplax melanica Borror, 1942	MA, PA, RO, TO
	Erythrodiplax melanorubra (Borror, 1942)	MA
	Erythrodiplax minuscula (Rambur, 1842)	MT
	Erythrodiplax nataliae Palacio, Muzon, Juen, Ferreira & Batista, 2020	MT
	Erythrodiplax ochracea (Burmeister, 1834)	MT, PA
	Erythrodiplax paraguayensis (Förster, 1905)	AC, MT, PA, RR, RO
	Erythrodiplax solimaea Ris, 1911	AM, PA
	Erythrodiplax tenuis Borror, 1942	RO
	Erythrodiplax umbrata (Linnaeus, 1758)	AC, AM, AP, MA, MT, PA, RR, RO
	Erythrodiplax unimaculata (De Geer, 1773)	AM, PA, MT, RO
	Erythrodiplax venusta (Kirby, 1897)	AM, AP, MT, RR
	Fylgia amazonica (Kirby, 1889)	AC, AM, MA, MT, PA, RO
	Gynothemis aurea Navás, 1933	MT
	Gynothemis pumila (Karsch, 1890)	AM, MT, PA, RO
	Gynothemis venipunctata Calvert in Ris, 1909	MT, TO
	Idiataphe amazonica (Kirby, 1889)	AM, MT, PA, RR
	Idiataphe batesi (Ris, 1913)	AM, MT, PA, TO
	Idiataphe cubensis Scudder, 1866	AM
	Idiataphe longipes (Hagen, 1861)	AM, MT, PA, RO
	Libellula herculea Karsch, 1889	AM
	Macrothemis absimilis Costa, 1991	PA
	Macrothemis brevidens Belle, 1983	AM
	Macrothemis declivata Calvert, 1909	MT
	Macrothemis flavescens (Kirby, 1897)	MT, RR
	Macrothemis extensa Ris, 1913	AM, PA
	Macrothemis hemichlora (Burmeister, 1839)	MT
	Macrothemis heteronycha (Calvert, 1909)	MA, MT, TO
	Macrothemis idalia Ris, 1919	AM
	Macrothemis imitans Karsch, 1890	MT, PA
	Macrothemis inacuta (Calvert, 1898)	MA
	Macrothemis ludia Belle, 1987	PA
	Macrothemis musiva Calvert, 1898	MT, RO
	Macrothemis newtoni Costa, 1990	AM
	Macrothemis nobilis Rácenis, 1957	AM
	Macrothemis pseudimitans Calvert, 1898	MT
	Macrothemis rupicola Rácenis, 1957	AM
	Macrothemis taurepan De Marmels, 2008	AM
	Macrothemis ultima González, 1992	MT
	Miathyria marcella (Selys in Sagra, 1857)	AM, AP, MA, MT, PA, RR
	Miathyria simplex (Rambur, 1842)	AC, AM, AP, MT, PA, RR, RO
	Micrathyria aequalis (Hagen, 1861)	PA
	Micrathyria almeidai Santos, 1945	TO
	Micrathyria artemis Ris, 1911	AC, AM, AP, MA, MT, PA, RO
	Micrathyria athenais Calvert, 1909	MT
	Micrathyria atra (Martin, 1897)	AM, AP, MT, PA

To be continue...

Table 1. *Continue...*

Suborder/Family	Species	Brazilian Legal Amazon states
Libellulidae	*Micrathyria cambridgei* Kirby, 1897	AM
	Micrathyria catenata Calvert, 1909	AM, MA, MT, PA
	Micrathyria coropinae Geijskes, 1963	MT
	Micrathyria dido Ris, 1911	PA, RO
	Micrathyria divergens Westfall, 1992	MA
	Micrathyria dunklei Westfall, 1992	RO
	Micrathyria eximia Kirby, 1897	MA, MT, PA, RO
	Micrathyria hesperis Ris, 1911	PA, MT
	Micrathyria hippolyte Ris, 1911	AM, MT
	Micrathyria kleerekoperi Calvert, 1946	RO
	Micrathyria laevigata Calvert, 1909	AM
	Micrathyria longifasciata Calvert, 1909	MT
	Micrathyria mengeri Ris, 1919	MA, MT, RO
	Micrathyria occipita Westfall, 1992	MT
	Micrathyria ocellata Martin, 1897	AC, MA, MT, PA
	Micrathyria paruensis Geijskes, 1963	MA
	*Micrathyria pirassununga*e Santos, 1953	PA, MT
	Micrathyria pseudeximia Westfall, 1992	AM, MA, MT, PA, RO
	Micrathyria pseudhypodidyma Costa, Lourenço & Viera, 2002	MT
	Micrathyria romani Sjöstedt, 1918	AM, MA, PA
	Micrathyria spinifera Calvert, 1909	AM, AP, MT, PA, RO
	Micrathyria spuria (Selys in Therese, 1900)	MT, RR
	Micrathyria stawiarskii Santos, 1953	PA, MT
	Micrathyria tibialis Kirby, 1987	AM, MT, PA, RR
	Micrathyria ungulata Förster, 1907	PA, MT
	Micrathyria venezuelae De Marmels, 1989	AM
	Misagria calverti Geijskes, 1951	AM, RO
	Misagria divergens De Marmels, 1981	AM
	Misagria parana Kirby, 1889	AM, PA, RR, RO
	Nephepeltia aequisetis Calvert, 1909	MT
	Nephepeltia berlai Santos, 1950	MA, PA
	Nephepeltia flavifrons (Karsch, 1889)	AC, AP, PA, MA, MT, RO, RR
	Nephepeltia flavipennis Von Ellenrieder, 2014	RO
	Nephepeltia leonardina Rácenis, 1953	MT, RO
	Nephepeltia phryne (Perty, 1834)	AP, MA, MT, PA, RO, RR
	Oligoclada abbreviata (Rambur, 1842)	AM, MT, PA, RO, RR
	Oligoclada amphinome Ris, 1909	AM, PA, MT, RO
	Oligoclada borrori Santos, 1945	AM
	Oligoclada crocogaster Borror, 1931	PA, RO
	Oligoclada monosticha Borror, 1981	AC, AM
	Oligoclada nemesis (Ris, 1909)	AM
	Oligoclada pachystigma Karsch, 1890	AM, MT, PA, RO
	Oligoclada risi Geijskes, 1984	AM
	Oligoclada stenoptera Borror, 1931	MA, PA, RO
	Oligoclada sylvia (Kirby, 1889)	AM, PA, RO
	Oligoclada waikinimae De Marmels, 1992	PA
	Oligoclada walkeri Geijskes, 1931	AM, PA, MT, RO
	Oligoclada xanthopleura Borror, 1931	AM, PA, MT, RO
	Orthemis aequilibris Calvert, 1909	AM, MT, PA, RO
	Orthemis ambinigra Calvert, 1909	MA
	Orthemis ambirufa Calvert, 1909	PA, MT, TO

To be continue...

Table 1. *Continue...*

Suborder/Family	Species	Brazilian Legal Amazon states
Libellulidae	*Orthemis anthracina* De Marmels, 1989	MT
	Orthemis attenuata (Erichson in Schomburgk, 1848)	AM, MT, PA
	Orthemis biolleyi Calvert, 1906	AC, AM, MA, MT, PA, RO
	Orthemis celata Von Ellenrieder, 2012	PA
	Orthemis concolor Ris, 1919	MT, PA
	Orthemis cultriformis Calvert, 1899	AC, AM, AP, MA, MT, PA, RO
	Orthemis discolor (Burmeister, 1839)	AM, MA, MT, PA, RR, RO
	Orthemis faaseni Von Ellenrieder, 2012	RO
	Orthemis ferruginea (Fabricius, 1775)	AM, PA, RO
	Orthemis flavopicta Kirby, 1889	MT, RO
	Orthemis schmidti Buchholz, 1950	AM, MA
	Orthemis sulphurata Hagen, 1868	AP
	Pantala flavescens (Fabricius, 1798)	AC, AM, AP, PA, MT, RR, RO, TO
	Perithemis bella Kirby, 1889	AM, PA
	Perithemis cornelia Ris, 1910	AC, AM, PA, RO
	Perithemis domitia (Drury, 1773)	MT
	Perithemis electra Ris, 1930	AC, AM, MT, RO
	Perithemis icteroptera (Selys in Sagra, 1857)	RO
	Perithemis lais (Perty, 1834)	AM, AP, MA, MT, PA, RR, RO
	Perithemis tenera (Say, 1840)	AM, MT, PA, RO
	Perithemis parzefalli Hoffmann, 1991	MT
	Perithemis thais Kirby, 1889	AC, AM, AP, MA, PA, MT, RO
	Planiplax arachne Ris, 1912	PA
	Planiplax erythropyga (Karsch, 1891)	MA
	Planiplax machadoi Santos, 1949	PA
	Planiplax phoenicura Ris, 1912	AM, MA, MT, PA
	Rhodopygia cardinalis (Erichson in Schomburgk, 1848)	AC, AM, AP, MT, PA, RO, RR
	Rhodopygia geijskesi Belle, 1964	AM, MT, RO, RR
	Rhodopygia hollandi Calvert, 1907	AM, MT, RO
	Sympetrum roraimae De Marmels, 1988	RR
	Tauriphila argo (Hagen, 1869)	AC, PA
	Tauriphila australis (Hagen, 1867)	AM, PA
	Tholymis citrina Hagen, 1867	AM, AP, MT, PA
	Tramea binotata (Rambur, 1842)	AC, AM, AP, MA, MT, PA
	Tramea darwini Kirby, 1889	AM, AP, PA, RO
	Tramea cophysa Hagen, 1867	AC, MT, PA
	Tramea minuta De Marmels & Rácenis, 1982	AM, AP, MA, MT, PA, RO
	Tramea rustica De Marmels & Rácenis, 1982	AC, AM, AP, RR, RO
	Uracis fastigiata (Burmeister, 1839)	AC, AM, AP, PA, MA, MT, RR, RO, TO
	Uracis imbuta (Burmeister, 1839)	AC, AM, AP, PA, MA, MT, RR, RO, TO
	Uracis infumata (Rambur, 1842)	AC, AM, PA, MT, RO
	Uracis ovipositrix Calvert, 1909	AM, AP, PA, MT, RR, RO
	Uracis reducta Fraser, 1946	MT, RO
	Uracis siemensi Kirby, 1897	AC, AM, PA, MA, MT, RO, TO
	Zenithoptera anceps Pujol-Luz, 1993	AM, MA, PA, RO
	Zenithoptera fasciata (Linnaeus, 1758)	AC, AM, AP, PA, MT, RO, RR
	Zenithoptera lanei Santos, 1941	AC, AM, MT, MA, PA, RO, TO
	Zenithoptera viola Ris, 1910	AM, AP, MT, PA
Synthemistidae		
	Neocordulia androgynis (Selys, 1871)	MT
	Neocordulia batesi Selys, 1871	AM

To be continue...

Table 1. *Continue...*

Suborder/Family	Species	Brazilian Legal Amazon states
Synthemistidae	*Neocordulia setifera* (Hagen in Selys, 1871)	MT
	Neocordulia volxemi (Selys, 1874)	MT

Table 2. Species diversity on Brazilian Legal Amazon states. Acre- Ac, Amazonas -AM, Amapá- AP, Maranhão- MA, Mato Grosso- MT, Pará- PA, Rondônia-RO, Roraima- RR e Tocantins- TO.

Suborder/Famliy	Number of species per state								
Zygoptera	**AC**	**AM**	**AP**	**MA**	**MT**	**PA**	**RO**	**RR**	**TO**
Calopterygidae Selys in Selys & Hagen, 1850	04	15	05	06	17	15	14	03	02
Coenagrionidae Kirby, 1890	26	114	47	22	84	116	69	24	19
Dicteriadidae Montgomery, 1959	01	02	01	00	01	02	01	00	00
Heteragrionidae Rácenis, 1959	01	11	04	00	02	06	07	01	00
Lestidae Calvert, 1901	00	03	00	02	07	00	02	03	00
Megapodagrionidae Tillyard, 1917	00	01	00	00	01	01	01	00	00
Perilestidae Kennedy, 1920	01	08	02	01	01	06	06	01	00
Philogeniidae Rácenis, 1959	00	02	00	00	00	00	00	00	00
Platystictidae Kennedy, 1920	00	01	01	00	00	00	00	00	00
Polythoridae Munz, 1919	04	11	01	00	01	04	03	00	00
Rimanellidae Davies & Tobin, 1984	00	01	00	00	00	00	00	00	00
Anisoptera									
Aeshnidae Leach in Brewster, 1815	05	32	08	01	18	20	08	05	00
Corduliidae Selys in Selys & Hagen, 1850	00	04	00	00	04	02	01	00	01
Gomphidae Rambur, 1842	01	47	10	02	22	27	13	03	04
Libellulidae Leach in Brewster, 1815	39	111	40	48	124	111	81	39	23
Synthemistidae Tillyard, 1911	00	01	00	00	03	00	00	00	00
Total number of species	**82**	**364**	**119**	**82**	**285**	**310**	**206**	**79**	**49**

data collected during the present study, 40 new records were added to the fauna of the state. With the current 364 confirmed species, the Amazonas state is the richest state in Odonata species in Brazil. The second greatest diversity in the country is found outside the Amazon region, more precisely in the state of Minas Gerais, which has 323 species recorded (Vilela 2021). This large richness found in Minas Gerais state is due probably to the environmental heterogeneity of the state, since, according to Paulson (2006), Odonata species are distributed in a wide variety of habitats. Apart from its environmental conditions, the odonatofauna of Minas Gerais has been intensively studied in recent years (Amorim *et al.* 2018; Barbosa *et al.* 2019; Ávila Júnior *et al.* 2020; Vilela *et al.* 2020, Venâncio *et al.* 2021; Vilela 2021) which has also considerably increased knowledge of the order in the state. It is believed that the state of Pará, due to its dimensions and natural characteristics, has the possibility of occupying the second largest diversity of dragonflies in Brazil. Perhaps this has not happened yet due to the peculiarities existing in the Amazon, such as difficulty in transport, lack of infrastructure in many places, in addition to the complexity of forms of communication (Molento & Vieira 2016). Thus, those factors are directly linked to the low species numbers found for some of the studied states.

With the exception of the states of Amazonas and Pará, which have consolidated large groups of studies on aquatic insects, the other states in the Legal Amazon still publish few studies on this topic. Probably the low diversities found for the states of Acre (n=82), Maranhão (n=82), Roraima (n=79) and Tocantins (n=49) (Table 2) are due to this lack of laboratories centered on the odontofauna studies. According to De Marco & Vianna (2005), the areas of the states of Tocantins and Maranhão were practically untouched by researchers. Even with the recent increase in studies addressing odonatofauna (Bastos *et al.* 2019; Moura *et al.* 2020), these states are still undersampled. For example, Tocantins, with 49 species, comprised approximately 8% of the organisms recorded during the study; however, it is possible that the species richness for the state is much higher, because samplings were only made in very few locations.

Another poorly explored area, according to De Marco & Vianna (2005), is the Guiana shield region, especially in the states of Amapá and Roraima. In recent studies published by Garcia Junior *et al.* (2020, 2021a, 2021b) 58 new records of Odonata were added to the state of Amapá, increasing the number of confirmed occurrences by 48%. Roraima, with 79 species, had the second lowest diversity among the states in the Legal Amazon, results that indicate that the shield region is still underexplored.

According to Vieira *et al.* (2005) deforestation is the main consequence of the biodiversity loss in the Amazon. In addition, many species in this environment have small populations, which makes these organisms very sensitive to changes in habitats (Thiollay 1994). According to Clausnitzer *et al.* (2009), about 10% of the world's species of Odonata are in some category of extinction risk, which reinforces the urgency of recognizing the species, mainly from the Amazon region, before the areas are totally affected by anthropic action. In conclusion, the elaboration of inventories and the construction of catalogs will play a fundamental role in the knowledge of biodiversity of the Amazon region, also helping to carry out new initiatives aimed at recognizing fauna and preserving certain areas.

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