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Inventory

Arctiini Leach, [1815] (Lepidoptera, Erebidae, Arctiinae) of the Brazilian Amazon. IV – Subtribe Euchromiina Butler, 1876

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Abstract: The Euchromiina moths comprise 735 species in the neotropics. Here we provide a list of Euchromiina species from the Brazilian Amazon. The list was produced from specimens deposited in the most important Brazilian collections and from literature data. Nearly 30% (219) of the neotropics Euchromiina species were recorded, including 13 new occurrences for the Brazilian Amazon. Santarém and Belém were the municipalities with the highest number of species records, with 96 and 74, respectively. Although the number of Euchromiina records is high in the Amazon, this value is underestimated because the fauna was never sampled in the vast majority of the biome. This is a worrying scenario because the Amazon has the world highest absolute rate of forest reduction. In order to suggest efficient conservation policies for the Amazon Arctiinae fauna, it is urgent to intensify the sampling effort in this biome.
Keywords: *Amazon, Tiger moths, Inventory, Noctuoidea, Wasp Moths.*

Arctiini Leach, [1815] (Lepidoptera, Erebidae, Arctiinae) da Amazônia Brasileira. IV – Subtribo Euchromiina Butler, 1876

Resumo: As mariposas Euchromiina compreendem 735 espécies na região Neotropical. Neste trabalho, nós apresentamos uma lista das espécies de Euchromiina que ocorrem na Amazônia brasileira. A lista foi produzida através de observação de espécimes depositados nas mais importantes coleções brasileiras e também através de dados da literatura. Aproximadamente 30% (219) das espécies de Euchromiina que ocorrem na região Neotropical foram registradas, incluindo 13 novas ocorrências para a Amazônia brasileira. Santarém e Belém foram os municípios com maior número de espécies registradas, com 96 e 74, respectivamente. Embora o número de registros de Euchromiina seja considerado alto na Amazônia, este valor é subestimado visto que a fauna nunca foi amostrada na imensa maioria do bioma. Este cenário é preocupante, pois a Amazônia possui a maior taxa absoluta de redução florestal do mundo. A fim de podermos sugerir políticas de conservação eficientes para a fauna de Arctiinae da Amazônia, é urgente que se intensifique o esforço de coleta neste bioma.
Palavras-chave: *Amazônia, mariposas-tigre, Inventário, Noctuoidea, mariposas-vespa.*

Introduction

Tropical rainforests support some of the hightest species richness of the Earth and correspond to 60% of the hotspots defined by Myers et al. (2000). The Amazon represents 40% of the tropical rainforest areas (Aragão et al. 2014). It covers part of nine countries in South America, with 69% of this area in Brazil (Vieira et al. 2008). However, the original area of the Brazilian Amazon has been reduced by 20% (INPE 2015).

Lepidoptera inventories in the Brazilian Amazon are scarce (Santos et al. 2008). Although there have been scientific publications on Amazonian Lepidoptera since the 19th century, many earlier inventories in the Brazilian Amazon do not provide an accurate description of the collection sites, which significantly restricts the use of their data (Casagrande et al. 2012). Several recent inventories also have problems, such as being made in a short period of time and/or poorly distributed in space (usually along major rivers or near urban centers).

Arctiinae was worldwide Lepidoptera taxa (Heppner 1991). With approximately 11,000 species, the tiger moths are divided in four tribes (Zahiri et al. 2012), but only Arctiini and Lithosiini occurred in the Neotropics. Arctiini are distributed in seven subtribes: Arctiina, Callimorphina, Spilosomina, Phaegopterina, Pericopina, Ctenuchina and Euchromiina (Weller et al. 2009, Vincent & Laguerre 2014).

The Euchromiina moths are found mainly in the neotropics and comprises approximately 68 genera and 735 species (Weller et al. 2009). Several species have nocturnal activity, but some species are exclusively diurnal (Hagmann 1938). Many species of Euchromiina form mimetic rings with butterflies, beetles, and especially wasps (Simmons 2009). Their wings can have areas or be totally transparent, closely resembling the wings of Hymenoptera. Moreover, some species simulate the petiole of Hymenoptera by reducing of abdomen sclerites and increasing thorax sclerites (Simmons 2009). Males of several species have modified scales below the second abdominal segment that can be released in dangerous situations or during mating (Yack 2004). Some Euchromiina use ultrasound in courtship instead of or in combination with feromonal cues (Sanderford et al. 1998). Several Euchromiina larvae are brilliantly coloured (Weller et al. 2009) and feed on several plant families. Adults of some species are pharmacophagous on pyrrolizidine alkaloids (Conner & Jordan 2009).

We present a list of Euchromina moths occurring in the Brazilian Amazon. We make the species list mainly from specimens deposited in the most important Brazilian collections and also from literature data. This study is a continuation of Teston & Ferro (2016a, b) and Teston et al. (2019) and aims to increase knowledge of the diversity of Arctiinae in the Amazon region.

Materials and Methods

We intensively searched the literature and examined specimens from entomological collections of the Instituto Nacional de Pesquisas na Amazônia (INPA; Manaus), Museu Paraense Emilio Goeldi (MPEG; Belém), Coleção Becker (VOB; Camacan), Coleção Entomológica Padre Jesus Santiago Moure of the Universidade Federal do Paraná (DZUP; Curitiba), Fundação Instituto Oswaldo Cruz (FIOC; Rio de Janeiro), Museu de Zoologia of the Universidade de São Paulo (MZUSP; São Paulo), Museu Nacional of the Universidade Federal do Rio de Janeiro (MNRJ; Rio de Janeiro), and Laboratório de Estudos de Lepidópteros Neotropicais (LELN) of the Universidade Federal do Oeste do Pará (UFOPA; Santarém). To identify the species, we used literature (Hampson 1898, 1914, Seitz 1919-1925) and specimens deposited in the visited collections. The systematic organization to generic level follows Hampson (1898) and Weller et al. (2000), with updates of the generic names according Watson et al. (1995) and corrections of Pinheiro & Duarte (2013), Pinheiro & Gaal-Haszler (2015) and Pinheiro (2016).

The geographical coordinates of the localities in the Brazilian Amazon with Arctiinae records were obtained from the Geo Loc tool of "Species Link date & tools" (http://splink.cria.org.br/geoloc) and Google Earth (https://earth.google.com/web/). The list is organized alphabetically. Species and records without precise location data, and those from locations that belong to more than one biome (e.g., Cerrado and Amazon) were not included in the list.

Results

Our research generated a list of 219 Euchromiina species (Table 1), including 13 new occurrences for the Brazilian Amazon (indicated by "NEW"). Eighteen species appear as new records for the municipalities and their respective States (indicated by "AMZ"). In total, 71 (9.2%) Amazonian municipalities had Euchromiina species records (Table 2 and Figure 1). Santarém (PA), Belém (PA), and São Félix do Xingu (PA) were the municipalities with the highest number of species, with 96, 74, and 47, respectively.

We recorded 49 genera, of which 19 were monospecific. The genera *Cosmosoma* Hübner, [1823] presented the highest number of species (27), followed by *Saurita* Herrich-Schäffer, [1855] (19) and *Leucotmemis* Butler, 1876 (12). The species with the highest number of locality records were *Belemnia eryx* (Fabricius, 1775) and *Isanthrene porphyria* (Walker, 1854) (with 15), followed by *Orcynia calcarata* (Walker, 1854) (14), *Cosmosoma telephus* (Walker, 1854) and *Histioea proserpina* (Hübner, 1827) (13). Ninety-one species (41.4%) occurred in only one locality (Table 1).

Discussion

The number of Euchromiina species recorded for the Brazilian Amazon was high. It corresponds to 29.8% of neotropics Euchromiina fauna (735, Weller et al. 2009) and was more than two times higher than the Mexican (112, Hernández-Baz et al. 2013), the Brazilian Cerrado (76, Ferro et al. 2010), and Rio Grande do Sul Brazilian State (60, Ferro & Teston 2009) Euchromiina richness.

The explanation of Santarém and Belém are the Amazon municipalities with the highest number of Euchromiina records probably are related to the proximity and access to the collection sites, which allow a larger sample effort. Belém is the capital of the state of Pará and has an important museum (Museu Paraense Emílio Goeldi, founded in 1866) and other research institutions, as well as easy access to sampling sites. Santarém was widely sampled by H. Zerny and G. Hagmann (Zerny 1931, Hagmann 1938). Hagmann resided in Santarém and Zerny spent a season collecting moths there. Belém was also the second municipality with the highest number of Phaegopterina, Pericopina and Ctenuchina records (Teston & Ferro 2016a, b, Teston et al. 2019).

Table 1. Euchromiina (Erebidae, Arctiinae, Arctiini) species of the Brazilian Amazon. The record column shows the Brazilian state in abbreviated form followed by municipality. The name of the locality is enclosed in braces and the author of the first record is in parentheses. * New record. States abbreviations: AC = Acre, AM= Amazonas, AP = Amapá, MA = Maranhão, MT = Mato Grosso, PA = Pará, RO = Rondônia and RR = Roraima.

	Species	Record
1.	*Abnormipterus abnormis* (Hampson, 1898)	AM, [Boa Vista do Ramos] {Massauari} (Hampson 1898)
2.	*Autochloris bijuncta* (Walker, 1856)	AM, Tefé {Ega} (Walker [1865]); PA, [Belém] (Walker 1856)
3.	*Autochloris caunus* (Cramer, [1779])	AM, São Paulo [de Olivença] (Zerny 1931); PA, Santarém {Taperinha} (Zerny 1931)
4.	*Autochloris collocata* (Walker, [1865])	AM, Benjamin Constant*, Tefé {Ega} (Walker [1865]); MA, Açailândia*; RO, Cacaulândia*
5.	*Autochloris completa* (Walker, 1854)	AM, [Eirunepé] {Juruá river, São Felipe} (Zerny 1931), São Paulo de Olivença*; PA, [Belém] (Walker 1854a)
6.	*Autochloris crinopoda* Kaye, 1918 NEW	AM, Benjamin Constant*, Maués*; PA, Novo Progresso {Cachimbo}*,
7.	*Autochloris ectomelaena* Hampson, 1898	AM, Itamar[a]t[i] (Rothschild 1931), upper Amazonas [river] (Hagmann 1938); PA, Santarém {Taperinha} (Hagmann 1938)
8.	*Autochloris enagrus* (Cramer, [1779])	AM, Itacoatiara*, Tefé {Ega} (Hampson 1898); PA, Óbidos*, Santarém*, São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
9.	*Autochloris proterva* (Draudt, 1916)	PA, Belterra {National Forest of Tapajós} (Freitas 2014)
10.	*Autochloris simplex* (Walker, 1856)	AM, Tefé (Zerny 1931); PA, [Belém] (Walker 1856), Santarém {Mojú} (Zerny 1931)
11.	*Autochloris solimões* Schaus, 1924	AM, [Tefé] {Mouth of Rio Tefé and Rio Solimões} (Schaus 1924)
12.	*Belemnia eryx* (Fabricius, 1775)	AM, Borba*, Fonte Boa (Rothschild 1910), Humaitá (Rothschild 1910), São Paulo de Olivença*, Tefé (Rothschild 1910); MA, Açailândia*; MT, Sinop*; PA, Itaituba*, Parauapebas {Serra Norte, Carajás}*, Prainha (Butler 1878), Santarém*, Tapajós [river] (Hampson 1901); RO, Ariquemes*, Cacaulândia*, Pimenta Bueno*, Porto Velho {Aliança} (Rothschild 1910)
13.	*Belemnia inaurata* (Sulzer, 1776) AMZ	AM, Manicoré*, São Gabriel da Cachoeira*, Tefé*; AP, Serra do Navio*; MT, Sinop*; PA, Belém*, Santarém*
14.	*Belemnia ochriplaga* Hampson, 1901	AM, Fonte Boa (Rothschild 1910), Humaitá (Rothschild 1910), Manaus*, Tefé (Rothschild 1910); PA, [Belém] (Hampson 1901), Belterra {National Forest of Tapajós} (Freitas 2014), Ju[r]ut[i] (Rothschild 1910), Prainha (Hampson 1901), Santarém*; RO, Porto Velho {Aliança} (Rothschild 1910)
15.	*Belemniastis eucyane* (R. Felder, 1875)	RO, Porto Velho {Aliança} (Hampson 1920)
16.	*Belemniastis whiteleyi* (Druce, 1888) NEW	AM, Benjamin Constant*
17.	*Bodosa tina* (Walker, 1854)	AM, Maués (Machado Filho & Rêgo Barros 1969), Tefé {Ega} (Machado Filho & Rêgo Barros 1969); PA, Óbidos (Machado Filho & Rêgo Barros 1969), Santarém {Taperinha} (Machado Filho & Rêgo Barros 1969)
18.	*Calonotos acutipennis* Zerny, 1931	PA, Belterra {National Forest of Tapajós} (Freitas 2014), Santarém {Taperinha} (Zerny 1931)
19.	*Calonotos aequimaculatus* Zerny, 1931	PA, Altamira {Serra do Pardo National Park} (Teston & Correa 2015), Belterra {National Forest of Tapajós} (Freitas 2014), Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
20.	*Calonotos angustipennis* Zerny, 1931	PA, Belterra {National Forest of Tapajós} (Freitas 2014), Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
21.	*Calonotos chalcipleura* Hampson, 1898	AM, Barcelos {Moura}*, Manaus*; AP, Serra do Navio*; MA, Açailândia*; MT, Aripuanã*; PA, Belém*, Novo Progresso {Cachimbo}*, Parauapebas {Serra Norte, Carajás}*, Óbidos*, Santarém {Taperinha} (Zerny 1931); RO, Cacaulândia*
22.	*Calonotos helymus* (Cramer, [1775])	AP, Serra do Navio*; PA, Santarém (Valente et al. 2018)
23.	*Calonotos hoffmannsi* (Rothschild, 1911)	PA, Itaituba to Óbidos (Rothschild 1911), Itaituba (Hampson 1914)
24.	*Calonotos longipennis* Rothschild, 1911	PA, São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
25.	*Calonotos phlegmon* (Cramer, [1775])	AM, Manaus*, São Paulo [de Olivença] (Zerny 1931); AP, Serra do Navio*; MA, Açailândia*; MT, Aripuanã*; PA, [Belém] (Hampson 1898), Capitão Poço*, Marabá*, Novo Progresso {Cachimbo}*, Parauapebas {Serra Norte, Carajás}*, Óbidos*; RO, Cacaulândia*, Jarú*

Continuation Table 1.

	Species	Record
26.	*Calonotos tiburtus* (Cramer, [1779]) NEW	AM, Manaus*
27.	*Calonotos triplaga* (Hampson, 1909)	AM, Amazons (Hampson 1898), Manaus (Hampson 1909); AP, Serra do Navio*; MA, Açailândia*; PA, Altamira {Monte Santo} (Teston & Delfina 2010) and {Serra do Pardo National Park} (Teston & Correa 2015), Oriximiná {Rio Cuminá}*, Parauapebas {Serra Norte, Carajás}*, Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Cacaulândia*
28.	*Calonotos tripunctata* Druce, 1898	PA, Belterra {National Forest of Tapajós} (Freitas 2014)
29.	*Chrostosoma dhamis* Schaus, 1928	PA, [Belém] (Schaus 1928)
30.	*Chrostosoma dolens* (Walker, 1854)	PA, [Belém] (Walker 1854a)
31.	*Chrostosoma haematica* (Perty, 1834)	AM, Amazon river (Perty 1834), Benjamin Constant*, São Paulo de Olivença*, Tefé {Ega} (Walker [1865]); AP, Serra do Navio*; PA, Belém*, Viseu*
32.	*Chrostosoma tricolor* (R. Felder, 1874)	AM, Amazon river (R. Felder 1874)
33.	*Cosmosoma achemon* (Fabricius, 1781)	AM, Benjamin Constant*, Manaus*; MA, Açailândia*; MT, Aripuanã*; PA, [Belém] (Druce 1897), Óbidos*, Prainha (Butler 1878), Santarém (Hampson 1898) {Taperinha} (Zerny 1931); RO, Porto Velho*
34.	*Cosmosoma ada* (Herrich-Schäffer, [1855])	[AM], Amazonas (Zerny 1912)
35.	*Cosmosoma admota* (Herrich-Schäffer, [1854])	PA, Belterra {National Forest of Tapajós} (Freitas 2014), Santarém (Valente et al. 2018), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
36.	*Cosmosoma anoxanthia* Druce, 1905	PA (Hagmann 1938)
37.	*Cosmosoma auge* (Linnaeus, 1758)	AM, Manicoré*; MA, Açailândia*; PA, Santarém {Mojú and Taperinha} (Zerny 1931) RO, Candeias do Jamari*
38.	*Cosmosoma batesii* (Butler, 1876)	PA, [Belém] (Butler 1876), Santarém {Taperinha} (Zerny 1931)
39.	*Cosmosoma centralis* (Walker, 1854) AMZ	MA, Açailândia*; PA, Belém*; RO, Cacaulândia*
40.	*Cosmosoma consolata* (Walker, 1856)	PA, Belém*, Altamira {Monte Santo} (Delfina & Teston 2013), Parauapebas {Serra Norte, Carajás}*, São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Cacaulândia*, Porto Velho*
41.	*Cosmosoma contracta* (Walker, 1856)	[AC], Upper Juruá river (Zerny 1931); AM, [Lábrea] {Rio Purus, Huitanaã} (Bryk 1953), Valley of Amazon [river] (Walker 1856); PA, Santarém {Taperinha} (Zerny 1931)
42.	*Cosmosoma corvica* (Dognin, 1910)	PA, Santarém {Taperinha} (Zerny 1931), Altamira {Monte Santo} (Delfina & Teston 2013)
43.	*Cosmosoma durca* Schaus, 1896 AMZ	MA, Açailândia*
44.	*Cosmosoma festiva* Walker, 1854	AM, Parintins {Villa Nova} (Hampson 1914); MA, Açailândia*
45.	*Cosmosoma klagesi* Rothschild, 1910	PA, [Belém] (Hampson 1914), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
46.	*Cosmosoma melathoracia* Kaye, 1901	PA, Santarém {Taperinha} (Zerny 1931)
47.	*Cosmosoma metallescens* (Ménétriés, 1857)	AM, [Autazes] {Rio Autaz} (Bryk 1953), [Eirunepé] {Juruá river, São Felipe} (Zerny 1931), Parintins {Villa Nova} (Hampson 1898); PA, Altamira {51°BIS} (Teston et al. 2012) and {Monte Santo} (Delfina & Teston 2013) and {Serra do Pardo National Park} (Teston & Correa 2015), [Belém] (Butler 1876), Belterra {National Forest of Tapajós} (Freitas 2014), Marabá*, Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
48.	*Cosmosoma nelea* Möschler, 1877	PA, São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
49.	*Cosmosoma pheres* (Stoll, [1782]) AMZ	AM, Manaus*; MA, Açailândia*; PA, Belém*; RO, Cacaulândia*
50.	*Cosmosoma rasera* Jones, 1914 AMZ	MA, Açailândia*; PA, Marabá*, Novo Progresso {Cachimbo}*; RO, Candeias do Jamari*
51.	*Cosmosoma remota* (Walker, 1854) AMZ	AM, Manicoré*, Santa Isabel do Rio Negro*; MA, Açailândia*; MT, Aripuanã*; PA, Belém*, Capitão Poço*, Parauapebas {Serra Norte, Carajás}*, Santarém*, Viseu*; RO, Cacaulândia*

Continuation Table 1.

	Species	Record
52.	*Cosmosoma seraphina* (Herrich-Schäffer, [1854])	PA, [Belém] (Herrich-Schäffer [1854]), Novo Progresso {Cachimbo}*; RO, Porto Velho*
53.	*Cosmosoma stibosticta* (Butler, 1876)	PA, Altamira {Monte Santo} (Teston & Delfina 2010)
54.	*Cosmosoma subflamma* (Walker, 1854)	AM, Amazonas (Zerny 1931), Manaus*, Rio Urubu*; PA, Altamira {Monte Santo} (Teston & Delfina 2010), Belém*, Bragança*, Itaituba*, Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
55.	*Cosmosoma telephus* (Walker, 1854)	AM, [Eirunepé] {Juruá river, São Felipe} (Zerny 1931); AP, Serra do Navio*; MA, Açailândia*; MT, Aripuanã*, Sinop*; PA, Altamira {Serra do Pardo National Park} (Teston & Correa 2015), Belém*, Novo Progresso {Cachimbo}*, Parauapebas {Serra Norte, Carajás}*, Peixe Boi*, Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Cacaulândia*
56.	*Cosmosoma tengyra* (Walker, 1854)	PA, [Belém] (Hampson 1898)
57.	*Cosmosoma teuthras* (Walker, 1854)	MA, Açailândia*; MT, Aripuanã*; PA, Altamira {Serra do Pardo National Park} (Teston & Correa 2015), Parauapebas {Serra Norte, Carajás}*, Santarém (Butler 1876) {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Cacaulândia*
58.	*Cosmosoma thoracica* Schaus, 1905	PA, Santarém {Taperinha} (Zerny 1931), Altamira {Monte Santo} (Teston & Delfina 2010), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
59.	*Cosmosoma xanthocera* Hampson, 1898	AM, [Boa Vista do Ramos] {Massauari} (Hampson 1898)
60.	*Diospage rhebus* (Cramer, 1779)	AM, Amazons (Rothschild 1910), Benjamin Constant*, Fonte Boa (Rothschild 1910), Manicoré*, São Paulo de Olivença (Hampson 1901), Tefé (Rothschild 1910); PA, Óbidos*, Santarém*; RO, Cacaulândia*, Porto Velho {Aliança} (Rothschild 1910)
61.	*Dixophlebia quadristrigata* (Walker, [1865])	AM, Tefé {Ega} (Walker [1865]); PA, Santarém {Taperinha} (Zerny 1931)
62.	*Dycladia correbioides* (C. Felder, 1869)	[RR], [Caracaraí] {Rio Branco} (Bryk 1953)
63.	*Dycladia lucetius* (Stoll, [1781])	AM, Fonte Boa*, Manaus*, Rio Urubu*; MA, Açailândia*; PA, Altamira {Monte Santo} (Teston & Delfina 2010) {51°BIS} (Teston et al. 2012), Belém*, Belterra {National Forest of Tapajós} (Freitas 2014), Chaves (Hampson 1898), Santarém (Valente et al. 2018), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015), Soure*
64.	*Dycladia transacta* (Walker, 1856)	PA, São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
65.	*Erruca cruenta* (Perty, 1834)	AM, Amazon river (Perty 1834)
66.	*Erruca erythrarchos* (Walker, 1854) NEW	AM, Benjamin Constant*; MA, Açailândia*; PA, Marabá*
67.	*Gymnelia felderi* Rothschild, 1931	[AM], Amazons (Rothschild 1931)
68.	*Gymnelia scita* (Walker, 1856)	AM, Tefé {Ega} (Walker [1865])
69.	*Gymnelia simillimum* (Rothschild, 1911)	AM, Amazon river (Rothschild 1911)
70.	*Gymnelia vesparia* (Perty, 1834)	AM, Amazon river (Perty 1834), Parintins {Villa Nova} (Walker 1856)
71.	*Gymnelia villia* (Druce, 1906) NEW	RO, Cacaulândia*
72.	*Gymnelia xanthogastra* (Perty, 1834)	AM, São Paulo de Olivença*
73.	*Histioea amazonica* Butler, 1876	AM, Benjamin Constant (Rio Javari) (Machado Filho & Rêgo Barros 1973), [Beruri] {Re[d]e[n][ção] on Rio Purus} (Butler 1878), Borba (Machado Filho & Rêgo Barros 1973), [Ipixuna] {Lago Cerrado on Rio Juruá} (Butler 1878), Manaus (Zerny 1931), Parintins {Villa Nova} (Butler 1876), São Paulo [de Olivença] {Solimões [river]} (Bryk 1953), Tabatinga (Butler 1878), Tefé {Ega} (Butler 1876); PA, Óbidos (Machado Filho & Rêgo Barros 1973), Santarém {Tapará} (Zerny 1931)
74.	*Histioea bellatrix* (Walker, 1854)	AM, Manicoré {Rio Madeira} (Machado Filho & Rêgo Barros 1973)
75.	*Histioea cepheus* (Cramer, 1779)	AM, Benjamin Constant*, [Maués] {Rio Para[u]ar[i]} (Machado Filho & Rêgo Barros 1973), São Paulo de Olivença (Machado Filho & Rêgo Barros 1973), Tefé (Machado Filho & Rêgo Barros 1973); AP, Serra do Navio (ICOMI) (Machado Filho & Rêgo Barros 1973); PA, [Almeirim] {Rio Paru}*, Altamira {51°BIS} (Teston et al. 2012), Marabá*, Óbidos*, Oriximiná {Rio Cuminá}*, Parauapebas {Serra Norte, Carajás}*, Santarém {Taperinha} (Draudt 1931)

Continuation Table 1.

	Species	Record
76.	*Histioea glaucozona* Druce, 1898	[AM], Amazons (Druce 1898b)
77.	*Histioea hoffmannsi* Rothschild, 1911	AM, Humaitá {Rio Madeira} (Rothschild 1911)
78.	*Histioea paraensis* Machado Filho & Rêgo Barros, 1971	PA, Óbidos (Machado Filho & Rêgo Barros 1971)
79.	*Histioea proserpina* (Hübner, 1827)	AC, Porto Walter {Alto Juruá} (Machado Filho & Rêgo Barros 1971), Xapuri (Machado Filho & Rêgo Barros 1971); AM, Amazons (Hampson 1898), [Autazes] {Rio Autaz} (Bryk 1953), Benjamin Constant {Rio Javari} (Machado Filho & Rêgo Barros 1971), [Eirunepé] {Juruá river, São Felipe} (Zerny 1931), Manaus (Machado Filho & Rêgo Barros 1971), Maués*, Rio Negro (Zerny 1931), São Paulo de Olivença (Machado Filho & Rêgo Barros 1971), São Gabriel da Cachoeira*, Tefé {Egas} (Machado Filho & Rêgo Barros 1971); PA, Óbidos (Machado Filho & Rêgo Barros 1971), Oriximiná {Rio Cuminá}*, Santarém {Taperinha} (Zerny 1931)
80.	*Homoeocera stictosoma* Druce, 1898	PA, Almeirim {Jari} (Hawes et al. 2009)
81.	*Hyda basilutea* (Walker, 1854)	AM, Santa Isabel do Rio Negro*; AP, Mazagão*; MT (Zerny 1931), Sinop*; PA, Belém*, Igarapé Açú*, Ourém*, Prainha (Butler 1878), Santarém {Taperinha} (Zerny 1931), Tucuruí*
82.	*Hypatia delecta* (Butler, 1876)	PA, [Belém] (Butler 1876)
83.	*Hypatia melaleuca* (Walker, 1854)	PA, [Belém] (Walker 1854a); RO, Cacaulândia*
84.	*Hypocharis albicincta* Cerda, 2008	PA, Belterra {National Forest of Tapajós} (Freitas 2014)
85.	*Hypocharis clusia* (Druce, 1897)	AM, São Paulo de Olivença*; PA (Hagmann 1938)
86.	*Isanthrene aterrima* (Walker, [1865])	AM, Parintins*, Tefé {Ega} (Walker [1865]); AP, Serra do Navio*; RO, Cacaulândia*
87.	*Isanthrene melas* (Cramer, [1775])	AM, Benjamin Constant*, [Eirunepé] {Juruá river, Matto Pyri} (Zerny 1931), Parintins {Villa Nova} (Hampson 1898), São Paulo de Olivença*; PA, [Belém] (Walker 1854a), Óbidos (Zerny 1931), Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
88.	*Isanthrene notipennis* (Butler, 1876)	AM, Parintins {Villa Nova} (Butler 1876); MA, Açailândia*; PA, Óbidos*, Santarém*
89.	*Isanthrene porphyria* (Walker, 1854)	AM, Benjamin Constant*, [Eirunepé] {Juruá river, São Felipe and Matto Pyri} (Zerny 1931), Manicoré*, Parintins {Villa Nova} (Hampson 1898), São Paulo de Olivença*, Tefé {Ega} (Hampson 1898); AP, Serra do Navio*; MA, Açailândia*; PA, Altamira {Serra do Pardo National Park} (Teston & Correa 2015), [Belém] (Hampson 1898), Paragominas*, Santarém*, São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Cacaulândia*, Jarú*
90.	*Isanthrene profusa* Hampson, 1898	AM, Benjamin Constant*, Tefé {Ega} (Hampson 1898); PA, Altamira {Monte Santo} (Teston & Delfina 2010) and {51°BIS} (Teston et al. 2012) and {Serra do Pardo National Park} (Teston & Correa 2015), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
91.	*Isanthrene varia* (Walker, 1854)	AM, São Paulo de Olivença*; MT, Sinop*; PA, Altamira {Serra do Pardo National Park} (Teston & Correa 2015), [Belém] (Walker 1854a), Santarém {Mojú and Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Porto Velho*
92.	*Isanthrene vespiformes* (Butler, 1876)	AM, Parintins {Villa Nova} (Butler 1876); PA, Itaituba*, Óbidos (Zerny 1931), Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
93.	*Lepidoneiva erubescens* (Butler, 1876)	AM (Bryk 1953); MT, Sinop*; PA, Novo Progresso {Cachimbo}*
94.	*Leucotmemis climacina* (Butler, 1876) NEW	MA, Açailândia*; RO, Cacaulândia*
95.	*Leucotmemis dorsalis* (Walker, 1854)	AM, Manaus (Bryk 1953); MA, Açailândia*; PA, Santarém (Walker 1854a); RO, Cacaulândia*
96.	*Leucotmemis emergens* (Walker, [1865])	AM, Manaus (Bryk 1953), Tefé {Ega} (Walker [1865])
97.	*Leucotmemis felderi* (Rothschild, 1911)	AM, Amazon river (Rothschild 1911)
98.	*Leucotmemis flavidior* Gaede, 1926	PA, [Belém] (Gaede 1926)

Continuation Table 1.

	Species	Record
99.	*Leucotmemis intersecta* (Walker, [1865])	AM, Tefé {Ega} (Walker [1865]); PA (Hagmann 1938)
100.	*Leucotmemis margariphera* (Butler, 1876)	PA, [Belém] (Butler 1876), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
101.	*Leucotmemis nexa* (Herrich-Schäffer, [1854])	AM, Parintins {Villa Nova} (Butler 1876); AP, Serra do Navio*; MT, Sinop*; PA, Altamira {Serra do Pardo National Park} (Teston & Correa 2015), Belterra {National Forest of Tapajós} (Freitas 2014), Óbidos (Zerny 1931), Santarém (Herrich-Schäffer [1854]) {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Cacaulândia*
102.	*Leucotmemis ornatula* (Walker, 1854)	PA, [Belém] (Walker 1854a)
103.	*Leucotmemis tenthredoides* (Walker, 1856)	AM, Rio Juruá (Butler 1878), Santa Isabel do Rio Negro*, Tefé {Ega} (Butler 1876), Tonantins (Bryk 1953), Valley of the Amazons [river] (Walker 1856); PA, Belém*, Belterra {National Forest of Tapajós} (Freitas 2014), Santarém {Taperinha} (Zerny 1931); RO, Porto Velho*
104.	*Leucotmemis torrida* (Walker, 1854)	PA, Altamira {Monte Santo} (Teston & Delfina 2010), Belterra {National Forest of Tapajós} (Freitas 2014), Santarém {Taperinha} (Zerny 1931), Tapajós [river] (Walker 1854a)
105.	*Leucotmemis varipes* (Walker, 1854)	AM, Manaus (Butler 1878); PA, [Belém] (Walker 1854a), Belterra {National Forest of Tapajós} (Freitas 2014), Santarém {Taperinha} (Zerny 1931); RO, Cacaulândia*
106.	*Loxophlebia cinctata* Hampson, 1905	AM, Barcelos {Moura and Tomar}*, Manaus*; MT, Sinop*; PA, Santarém {Taperinha} (Zerny 1931); RO, Cacaulândia*
107.	*Loxophlebia crocata* (Herrich-Schäffer, [1854]) [AMZ]	MA, Açailândia*; PA, Capitão Poço*
108.	*Loxophlebia crusmatica* Dognin, 1911	PA (Hagmann 1938)
109.	*Loxophlebia diaphana* (Sepp, [1848])	PA, [Belém] (Walker 1854a), Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
110.	*Loxophlebia imitata* (Druce, 1884) [AMZ]	MA, Açailândia*
111.	*Loxophlebia picta* (Walker, 1854)	AM, Santa Isabel do Rio Negro*; MA, Açailândia*; PA, [Belém] (Walker 1854a), Capitão Poço*, Novo Progresso {Cachimbo}*, Santarém (Walker 1854a) {Taperinha} (Zerny 1931); RO, Cacaulândia*, Porto Velho*
112.	*Loxophlebia postflavia* Druce, 1898	PA, Santarém {Taperinha} (Zerny 1931)
113.	*Loxophlebia pyrgion* (Druce, 1884)	PA, Altamira {Serra do Pardo National Park} (Teston & Correa 2015), Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
114.	*Loxophlebia roseipectus* Rothschild, 1931	AM, [Itacoatiara] {Lower Amazons, junction with Rio Madeira} (Rothschild 1931)
115.	*Loxophlebia semiaurantia* Rothschild, 1931	PA, [Belém] (Rothschild 1931)
116.	*Loxophlebia triangulifera* (R. Felder, 1874)	[AM], Amazons (Hampson 1898); PA, São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
117.	*Macrocneme adonis* Druce, 1884	AM, Barcelos {Moura}*, Borba*, Manaus*, São Paulo de Olivença*; PA (Hagmann 1938), Belém*, Belterra {National Forest of Tapajós} (Freitas 2014), Santarém (Valente et al. 2018), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
118.	*Macrocneme chrysitis* (Guérin-Méneville, [1844])	AM, Rio Purus (Bryk 1953); PA, Santarém {Taperinha} (Zerny 1931)
119.	*Macrocneme lades* (Cramer, [1775])	AM, Manicoré*; PA, Altamira {Monte Santo} (Teston & Delfina 2010) and {Serra do Pardo National Park} (Teston & Correa 2015), [Belém] (Hampson 1898), Belterra {National Forest of Tapajós} (Freitas 2014), Capitão Poço*, Santarém (Valente et al. 2018), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
120.	*Macrocneme leucostigma* (Perty, 1834)	PA, Santarém {Taperinha} (Zerny 1931)
121.	*Macrocneme maja* (Fabricius, 1787)	AM, Rio Negro (Zerny 1931); PA, [Belém] (Hampson 1898), Santarém {Taperinha} (Zerny 1931)

Continuation Table 1.

	Species	Record
122.	*Macrocneme thyra* Möschler, 1883	AM, São Paulo de Olivença*, Tefé (Bryk 1953); PA, [Belém] (Hampson 1898), Belterra {National Forest of Tapajós} (Freitas 2014)
123.	*Macrocneme thyridia* Hampson, 1898	AM (Travassos Filho 1940); PA, Santarém (Valente et al. 2018)
124.	*Macrocneme verdivittata* (Klages, 1906) [AMZ]	AM, Barcelos {Moura}*; PA, Novo Progresso {Cachimbo}*, Parauapebas {Serra Norte, Carajás}*
125.	*Macrocneme vidua* (Bryk, 1953)	[RR], [Caracaraí] {Rio B[r]anco} (Bryk 1953)
126.	*Macrocneme zongonata* Dietz, 1994	PA, Santarém (Valente et al. 2018)
127.	*Mesothen desperata* (Walker, 1856)	AM, Valley of [river] Amazon (Walker 1856); PA (Hagmann 1938), Altamira {Serra do Pardo National Park} (Teston & Correa 2015), Belterra {National Forest of Tapajós} (Freitas 2014), Santarém*, São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
128.	*Mesothen endoleuca* Druce, 1905	PA, Santarém {Taperinha} (Zerny 1931)
129.	*Mesothen inconspicuata* (Kaye, 1911) [AMZ]	RO, Cacaulândia*; PA, Capitão Poço*
130.	*Mesothen pyrrha* Schaus, 1889	PA, Santarém {Taperinha} (Zerny 1931)
131.	*Metaloba argante* (Druce, 1897)	MA, Açailândia*; PA, Altamira {Monte Santo} (Teston & Delfina 2010) and {Serra do Pardo National Park} (Teston & Correa 2015), Belterra {National Forest of Tapajós} (Freitas 2014), Novo Progresso {Cachimbo}*, Parauapebas {Serra Norte, Carajás}*, São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Cacaulândia*
132.	*Metamya chrysonota* (Hampson, 1898)	PA, Itaituba (Hampson 1898)
133.	*Metamya intersecta* (Hampson, 1898)	PA, [Belém] (Hampson 1898)
134.	*Metamya picta* (Druce, 1898) [AMZ]	AM, Manicoré*; PA, Santarém*
135.	*Methysia notabilis* (Walker, 1854)	PA, [Belém] (Walker 1854a), Santarém*
136.	*Micragyrta diminuta* (Walker, 1854)	AM, Borba*, Tefé {Ega} (Walker [1865]); PA, [Belém] (Walker 1854b), Santarém {Taperinha} (Zerny 1931)
137.	*Mimagyrta abdominalis* (Rothschild, 1912)	AM, Humaitá (Rothschild 1912); PA, [Belém] (Zerny 1931)
138.	*Mimagyrta pampa* (Druce, 1893)	AM, Tefé (Hampson 1898)
139.	*Mystrocneme atavia* Hampson, 1898	AM, Fonte Boa (Hampson 1898)
140.	*Mystrocneme varipes* (Walker, 1854)	AM, Santa Isabel do Rio Negro*, Tefé*; PA, Anajás*, [Belém] (Walker 1854a), Breves*, Cametá (Zerny 1931)
141.	*Nyridela chalciope* (Hübner, 1827)	AM, Manaus*; PA, Altamira {Serra do Pardo National Park} (Teston & Correa 2015), Belém*, Capitão Poço*, Novo Progresso {Cachimbo}*, Óbidos*, Parauapebas {Serra Norte, Carajás}*, Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Cacaulândia*
142.	*Orcynia calcarata* (Walker, 1854)	AM, Manaus*, Novo Aripuanã*, Tefé*; AP, Serra do Navio*; MA, Açailândia*; PA, Almeirim {Jari} (Hawes et al. 2009), Belém {Utinga} (Pereira 1958), Marabá*, Novo Progresso {Cachimbo} (Pereira 1958), Parauapebas {Serra Norte, Carajás}*, Santarém (Walker 1854a) {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Cacaulândia*, Jarú*
143.	*Pezaptera sordida* (Walker, 1856)	AM, Manaus (Zerny 1931), Parintins {Villa Nova} (Hampson 1898), Tefé {Ega} (Walker [1865]); PA, Santarém (Walker 1856)
144.	*Phaeosphecia opaca* (Walker, 1856)	MA, Açailândia*; PA, [Belém] {Pará, Valley of the Amazon [river]} (Walker 1856), Santarém*
145.	*Pheia admirabilis* Bryk, 1953	AM, [São Gabriel da Cachoeira] {Taracuá} (Bryk, 1953)
146.	*Pheia albisigna* (Walker, 1854)	AM, Tefé (Hampson 1898); MT, Sinop*; PA, Novo Progresso {Cachimbo}*, Parauapebas {Serra Norte, Carajás}*, Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Cacaulândia*, Porto Velho*; [RR], [Caracaraí] {Rio Branco} (Bryk 1953)
147.	*Pheia elegans* (Druce, 1884) [AMZ]	PA, Novo Progresso {Cachimbo}*

Continuation Table 1.

	Species	Record
148.	*Pheia gaudens* (Walker, 1856)	PA, [Belém] (Walker 1856), Belterra {National Forest of Tapajós} (Freitas 2014), Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Cacaulândia*
149.	*Pheia haemapleura* Hampson, 1914	PA (Hagmann 1938)
150.	*Pheia haematosticta* Jones, 1908 [AMZ]	PA, Novo Progresso {Cachimbo}*, Santarém*; RO, Cacaulândia*
151.	*Pheia serpensis* Kaye, 1918	AM, Itacoatiara {Serpa} (Kaye 1918); PA, Santarém {Taperinha} (Zerny 1931)
152.	*Pheia sperans* (Walker, 1856)	[AM], Valley of the Amazon [river] (Walker 1856)
153.	*Pheia taperinhae* Dognin, 1923	PA, Santarém {Taperinha} (Dognin 1923)
154.	*Pheia utica* (Druce, 1889)	PA, Santarém (Valente et al. 2018)
155.	*Phoenicoprocta corvica* (Dognin, 1910)	PA, Altamira {Serra do Pardo National Park} (Teston & Correa 2015), Belterra {National Forest of Tapajós} (Freitas 2014), Santarém (Valente et al. 2018), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
156.	*Phoenicoprocta haemorrhoidalis* (Fabricius, 1775) [AMZ]	MA, Açailândia*; PA, Capitão Poço*
157.	*Phoenicoprocta insperata* (Walker, 1856)	AM, [Atalaia do Norte] {Braga on Rio Javary} (Butler 1877), Santa Isabel do Rio Negro*, São Paulo de Olivença*; PA, [Belém] (Walker 1856), Santarém {Taperinha} (Zerny 1931)
158.	*Phoenicoprocta sanguinea* (Walker, 1854) [NEW]	AM, Manaus*, São Paulo de Olivença*; AP, Serra do Navio*; PA, Belém*, Santarém*
159.	*Phoenicoprocta vacillans* (Walker, 1856)	AM, Benjamin Constant*, Manaus*, [São Gabriel da Cachoeira] {Taracuá} (Bryk, 1953), São Paulo de Olivença*, Tefé*; AP, Serra do Navio*; PA, Altamira {Monte Santo} (Teston & Delfina 2010), Belterra {National Forest of Tapajós} (Freitas 2014), Santarém {Taperinha and Moju} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Porto Velho*
160.	*Pleurosoma angustata* (Moeschler, 1878)	PA, Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
161.	*Poecilosoma chrysis* Hübner, 1823	AM, Tefé {Ega} (Walker [1865]); PA, Belém*, Breves (Zerny 1931), Marabá*, Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Cacaulândia*
162.	*Poecilosoma eone* (Hübner, 1827)	AM, [Eirunepé] {Juruá river, São Felipe} (Zerny 1931), Itacoatiara (Zerny 1931), Manaus (Zerny 1931), Tefé {Ega} (Walker 1854a); PA, Altamira {51°BIS} (Teston et al. 2012) and {Serra do Pardo National Park} (Teston & Correa 2015), Santarém (Walker 1854a) {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
163.	*Poecilosoma marginatum* (Walker, 1856)	AM, Valley of the Amazon [river] (Walker 1856)
164.	*Poecilosoma nigerrima* (Walker, [1865])	AM, Tefé {Ega} (Walker [1865])
165.	*Poliopastea anthracina* (Klages, 1906)	PA, Altamira {Monte Santo} (Delfina & Teston 2013), Belém*, Belterra {National Forest of Tapajós} (Freitas 2014), Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
166.	*Poliopastea coelebs* Bryk, 1953	AM, Amazonas [river] (Bryk 1953)
167.	*Poliopastea errans* (Hübner, [1819])	PA, [Belém] (Butler 1876)
168.	*Poliopastea esmeralda* (Butler, 1876)	AM, Tefé {Ega} (Butler 1876)
169.	*Poliopastea indistincta* (Butler, 1876)	AM, Alto Amazonas (Hagmann 1938); PA, [Belém] (Butler 1876); RO, Cacaulândia*
170.	*Poliopastea plumbea* Hampson, 1898	AM, Parintins (Hampson 1898), Tabatinga (Hampson 1898); PA, Altamira {Monte Santo} (Teston & Delfina 2010) and {Serra do Pardo National Park} (Teston & Correa 2015), Belém*, Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
171.	*Poliopastea vittata* (Walker, 1854)	PA, [Belém] (Walker 1854a), Santarém {Taperinha and Moju} (Zerny 1931)
172.	*Pompiliodes aliena* (Walker, 1854)	AM, Manaus (Hampson 1898), Tefé {Ega} (Hampson 1898); MA, Açailândia*; PA, [Belém] (Walker 1854a), Santarém {Taperinha} (Zerny 1931); RO, Cacaulândia*
173.	*Pompiliodes postica* (Walker, 1856)	PA, Santarém (Walker 1856) {Taperinha} (Zerny 1931)

Continuation Table 1.

	Species	Record
174.	*Pompiliodes tenebrosa* (Walker, 1854)	PA, [Belém] (Walker 1854a)
175.	*Pompilopsis tarsalis* (Walker, 1854)	AM, Manicoré {Rio Madeira} (Zerny 1931); PA, [Belém] (Walker 1854a), Santarém {Taperinha} (Zerny 1931)
176.	*Pseudomya picta* Schaus, 1894	PA, São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
177.	*Psoloptera leucosticta* (Hubner, 1827)	MA, Açailândia*; PA, Altamira {Serra do Pardo National Park} (Teston & Correa 2015), [Belém] (Hampson 1898), Maraba*, Santarém (Hampson 1898), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Cacaulândia*, Jarú*
178.	*Psoloptera leucotmemica* Bryk, 1953	AM, [Autazes] {Rio Autaz, Curur[ú]} (Bryk 1953)
179.	*Psoloptera melini* Bryk, 1953	AM, Manaus (Bryk 1953)
180.	*Psoloptera thoracica* (Walker, 1854)	AM, Benjamin Constant*, Borba*, São Paulo de Olivença*, Tefé {Ega} (Walker 1854a); RO, Porto Velho*
181.	*Rhynchopyga discalba* Kaye, 1918	PA, Santarém (Valente et al. 2018)
182.	*Rhynchopyga meisteri* (Berg, 1883)	PA, Tapajós [river] (Hampson 1898)
183.	*Rhynchopyga pimpinella* Bryk, 1953	AM, Manaus (Bryk 1953)
184.	*Sarosa acutior* (R. Felder, 1869)	AM, Amazonas [river] (R. Felder 1869), Benjamin Constant*; MA, Açailândia*; PA, Belterra {National Forest of Tapajós} (Freitas 2014), Capitão Poço*, Marabá*, Novo Progresso {Cachimbo}*, Santarém {Taperinha and Moju} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); RO, Cacaulândia*, Jarú*, Porto Velho*
185.	*Sarosa ignicornis* Hampson, 1914	PA, Santarém {Taperinha} (Zerny 1931)
186.	*Sarosa mora* Schaus, 1911 NEW	AP, Porto Grande*, Serra do Navio*
187.	*Sarosa pompilina* Butler, 1876 AMZ	AM, Benjamin Constant*; PA, Novo Progresso {Cachimbo}*
188.	*Saurita attenuata* Hampson, 1905	PA, Altamira {Serra do Pardo National Park} (Teston & Correa 2015), [Oriximiná] {Rio Trombetas, Rapid of Porteira} (Butler 1877), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)
189.	*Saurita biradiata* (R. Felder, 1869)	AM, Amazonas [river] (R. Felder 1869)
190.	*Saurita cassandra* (Linnaeus, 1758)	AM, Benjamin Constant*, Fonte Boa*; PA, Altamira {Monte Santo} (Teston & Delfina 2010), [Belém] (Zerny 1931), Belterra {National Forest of Tapajós} (Freitas 2014), Benevides*, Breves*, Capitão Poço*, Gurupá*, Marabá*, Ourém*, Santarém (Valente et al. 2018), Tucuruí*; RO, Porto Velho*
191.	*Saurita concisa* (Walker, 1854)	PA, [Belém] (Walker 1854a), Belterra {National Forest of Tapajós} (Freitas 2014), Santarém (Valente et al. 2018)
192.	*Saurita concisina* Bryk, 1953	AM, Rio Purús (Bryk 1953)
193.	*Saurita cryptoleuca* (Walker, 1854)	PA, [Belém] (Walker 1854a)
194.	*Saurita fumosa* (Schaus, 1912) NEW	AM, Benjamin Constant*
195.	*Saurita fusca* Dognin, 1923	PA, [Vitória do Xingu] {Ponte Nova, Rio Xingu} (Dognin 1923)
196.	*Saurita intricata* (Walker, 1854) NEW	RO, Cacaulândia*
197.	*Saurita lacteata* (Butler, 1877)	AM, Rio Jutaí (Butler 1877); PA, Santarém {Taperinha} (Zerny 1931)
198.	*Saurita lasiphlebia* Dognin, 1906	AP, Serra do Navio*; PA, Bragança (Oberthür 1912)
199.	*Saurita melanifera* Kaye, 1911	AM, Rio Purús (Bryk 1953)
200.	*Saurita pebasa* (Kaye, 1918)	PA, Belterra {National Forest of Tapajós} (Freitas 2014)
201.	*Saurita sericea* (Herrich-Schäffer, [1854]) AMZ	MA, Açailândia*
202.	*Saurita temenus* (Stoll, [1781])	AM, Manaus (Bryk 1953), Rio Purús (Bryk 1953), São Gabriel [da Cachoeira] (Bryk 1953); PA, Altamira {Monte Santo} (Teston & Delfina 2010), [Belém] (Walker 1854a), Santarém {Taperinha} (Zerny 1931), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015); [RR], [Caracaraí] {Rio B[r]anco} (Bryk 1953)
203.	*Saurita tipulina* (Hübner, [1812])	PA, Altamira {51°BIS} (Teston et al. 2012) {Monte Santo} (Delfina & Teston 2013), [Belém] (Walker 1854a), Belterra {National Forest of Tapajós} (Freitas 2014), São Félix do Xingu {Serra do Pardo National Park} (Teston & Correa 2015)

Continuation Table 1.

	Species	Record
204.	*Saurita triangulifera* (Druce, 1898)	[AM], Amazons (Druce 1898a)
205.	*Saurita tristissima* (Perty, 1834)	AM, [Boa Vista do Ramos] {Massauari} (Zerny 1931); PA, [Belém] (Walker 1854a)
206.	*Saurita vindonissa* (Druce, 1883) [AMZ]	RO, Cacaulândia*, Jarú*
207.	*Sauritinia dubiosa* Schaus, 1905	PA, [Belém] (Hampson 1914)
208.	*Sphecops artacta* (Walker, [1865])	AM, Tefé {Ega} (Walker [1865])
209.	*Sphecosoma adominalis* Schaus, 1905	MA, Açailândia*; PA (Hagmann 1938), Belém*, Santarém*; RO, Cacaulândia*
210.	*Sphecosoma albipalpe* Draudt, 1915	AM, Amazonas (Draudt 1915)
211.	*Sphecosoma cognata* (Walker, 1856)	AM, Valley of the Amazon [river] (Walker 1856)
212.	*Sphecosoma mathani* Rothschild, 1911	AM, Tefé (Rothschild 1911)
213.	*Sphecosoma melissa* Schaus, 1896 [AMZ]	PA, Santarém*
214.	*Sphecosoma nigriceps* Hampson, 1903 [NEW]	AM, Manaus*; PA, Capitão Poço*
215.	*Sphecosoma rufipes* Rothschild, 1911 [NEW]	AM, Manaus*; PA, Belém*; RO, Cacaulândia*
216.	*Sphecosoma testacea* (Walker, 1854)	AM, Itacoatiara*, Santa Isabel do Rio Negro*; PA, [Belém] (Hampson 1898), Santarém*
217.	*Syntomeida austera* Dognin, 1902 [NEW]	PA, Belém*, Oriximiná {Cuminá river}*; RO, Cacaulândia*
218.	*Syntomeida melanthus* (Cramer, [1779])	PA (Hagmann 1938), Belém*
219.	*Syntomeida sintomoides* (Boisduval, 1836)	PA, [Igarapé-Miri] {estuary of Tocantins [river]} (Zerny 1931)

[AMZ] Species recorded for states within the Amazon biome by Ferro and Diniz (2010), but without precise location and biome information, and Amazon biome by Ferro and Diniz (2007). So these species are new records for the municipalities. [NEW] New record for the Brazilian Amazon.

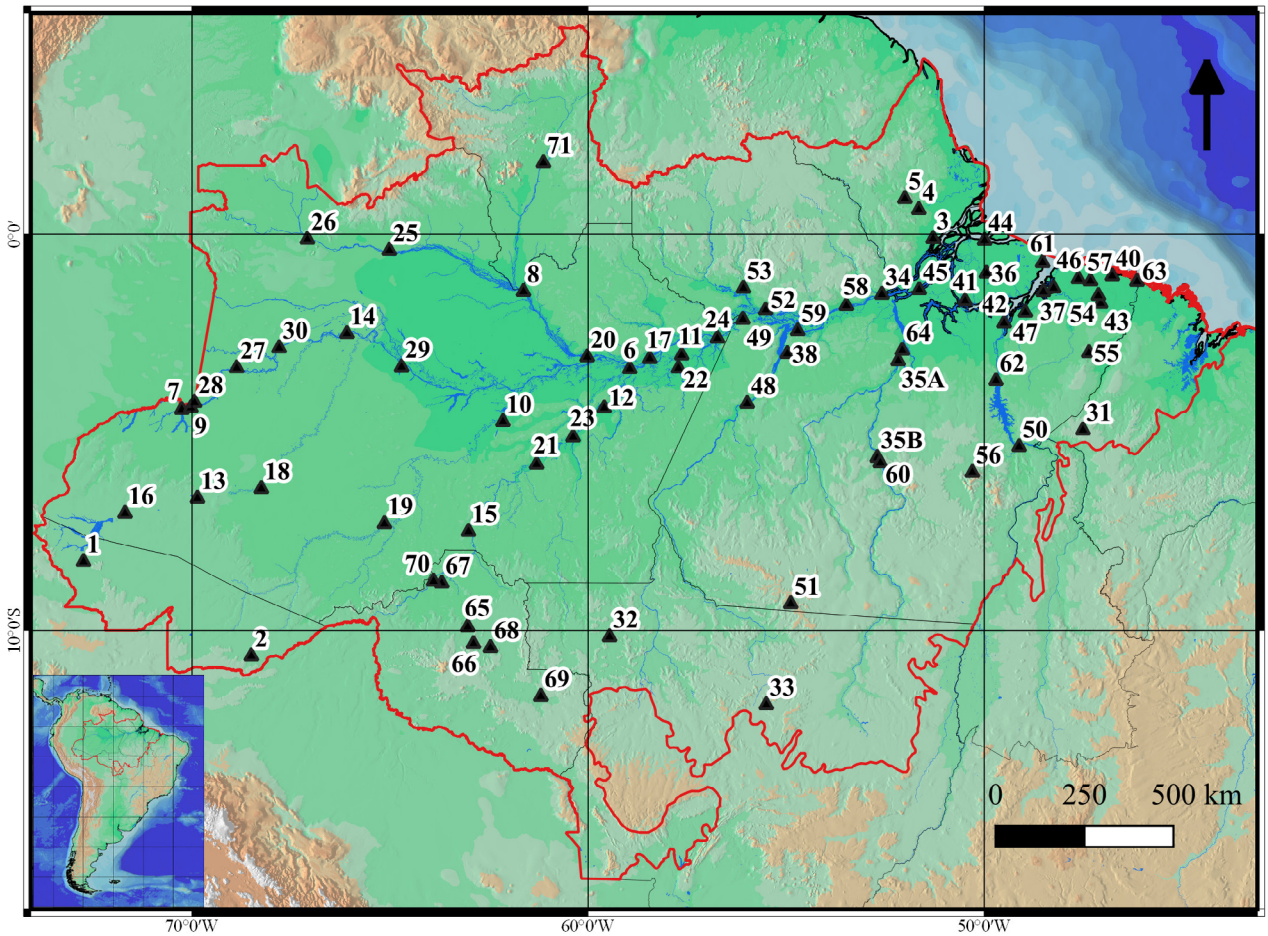

Figure 1. Geographic distribution of Euchromiina species records in the Brazillian Amazon. The numbers refer to the municipalities of Table 2.

Table 2. Geographic coordinates of municipalities and richness of the Euchromiina species (Erebidae, Arctiinae, Arctini) in the Brazillian Amazon Biome.

Nº	State	Municipality	Richness	Latitude	Longitude
1	AC	Porto Walter	1	08°16'07"S	72°44'37"W
2	AC	Xapuri	1	10°39'06"S	68°30'15"W
3	AP	Mazagão	1	00°06'55"S	51°17'21"W
4	AP	Porto Grande	1	00°37'01"N	51°38'60"W
5	AP	Serra do Navio	16	00°53'45"N	52°00'07"W
6	AM	Autazes	3	03°24'02"S	58°57'00"W
7	AM	Atalaia do Norte	1	04°25'46"S	70°15'41"W
8	AM	Barcelos	4	01°27'01"S	61°37'59"W
9	AM	Benjamin Constant	19	04°22'60"S	70°01'52"W
10	AM	Beruri	1	04°44'09"S	62°09'01"W
11	AM	Boa Vista do Ramos	3	03°03'19"S	57°38'20"W
12	AM	Borba	5	04°23'17"S	59°35'37"W
13	AM	Eirunepé	7	06°40'01"S	69°52'00"W
14	AM	Fonte Boa	6	02°30'51"S	66°05'30"W
15	AM	Humaitá	4	07°30'23"S	63°01'14"W
16	AM	Ipixuna	1	07°03'03"S	71°41'41"W
17	AM	Itacoatiara	5	03°08'36"S	58°26'39"W
18	AM	Itamarati	1	06°25'31"S	68°15'12"W
19	AM	Lábrea	1	07°18'51"S	65°08'40"W
20	AM	Manaus	28	03°06'07"S	60°01'30"W
21	AM	Manicoré	9	05°48'34"S	61°18'00"W
22	AM	Maués	4	03°23'01"S	57°43'07"W
23	AM	Novo Aripuanã	1	05°07'15"S	60°22'47"W
24	AM	Parintins	12	02°37'42"S	56°44'08"W
25	AM	Santa Isabel do Rio Negro	7	00°24'51"S	65°01'08"W
26	AM	São Gabriel da Cachoeira	5	00°07'50"S	67°05'20"W
27	AM	São Paulo de Olivença	20	03°22'42"S	68°52'20"W
28	AM	Tabatinga	2	04°15'10"S	69°56'17"W
29	AM	Tefé	39	03°21'16"S	64°42'40"W
30	AM	Tonantins	1	02°52'24"S	67°48'08"W
31	MA	Açailândia	33	04°56'49"S	47°30'17"W
32	MT	Aripuanã	6	10°10'01"S	59°27'33"W
33	MT	Sinop	9	11°52'51"S	55°30'08"W
34	PA	Almeirim	3	01º31'24"S	52º34'54"W
35A	PA	Altamira†	29	03º11'55"S	52º10'15"W
35B	PA	Altamira {Serra do Pardo National Park}†	13	05°38'21"S	52º41'52"W
36	PA	Anajás	1	00°59'13"S	49°56'23"W
37	PA	Belém	74	01°27'21"S	48°30'15"W
38	PA	Belterra {National Forest of Tapajós}†	28	03°01'05"S	54°58'10"W
39	PA	Benevides	1	01°21'42"S	48°14'40"W
40	PA	Bragança	2	01°03'13"S	46°45'56"W
41	PA	Breves	3	01°40'56"S	50°28'49"W
42	PA	Cametá	1	02°14'40"S	49°29'45"W
43	PA	Capitão Poço	11	01°44'48"S	47°03'33"W
44	PA	Chaves	1	00°09'36"S	49°59'18"W

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Continuation Table 2.

Nº	State	Municipality	Richness	Latitude	Longitude
45	PA	Gurupá	1	01°24'18"S	51°38'23"W
46	PA	Igarapé Açú	1	01°07'45"S	47°37'11"W
47	PA	Igarapé-Miri	1	01°58'31"S	48°57'34"W
48	PA	Itaituba	5	04°16'35"S	55°59'01"W
49	PA	Juruti	1	02°09'08"S	56°05'31"W
50	PA	Marabá	9	05°22'07"S	49°07'04"W
51	PA	Novo Progresso {Cachimbo}	17	09°19'60"S	54°52'59"W
52	PA	Óbidos	15	01°55'04"S	55°31'04"W
53	PA	Oriximiná	5	01°21'60"S	56°04'44"W
54	PA	Ourém	2	01°33'07"S	47°06'52"W
55	PA	Paragominas	1	02°59'45"S	47°21'10"W
56	PA	Parauapebas	14	06°00'56"S	50°17'51"W
57	PA	Peixe Boi	1	01°10'60"S	47°18'59"W
58	PA	Prainha	4	01°47'60"S	53°28'47"W
59	PA	Santarém	96	02°26'36"S	54°42'29"W
60	PA	São Félix do Xingu {Serra do Pardo National Park}†	47	05°46'26"S	52°37'13"W
61	PA	Soure	1	00°43'01"S	48°31'24"W
62	PA	Tucuruí	2	03°42'01"S	49°42'00"W
63	PA	Viseu	2	01°11'49"S	46°08'23"W
64	PA	Vitória do Xingu	1	02°55'60"S	52°03'59" W
65	RO	Ariquemes	1	09°54'48"S	63°02'26"W
66	RO	Cacaulândia	39	10°20'21"S	62°53'43"W
67	RO	Candeias do Jamari	2	08°48'35"S	63°41'44"W
68	RO	Jarú	6	10°26'20"S	62°27'58"W
69	RO	Pimenta Bueno	1	11°40'21"S	61°11'37"W
70	RO	Porto Velho	15	08°45'43"S	63°54'13"W
71	RR	Caracaraí	4	01°47'60"N	61°07'50"W

Geographic coordinates of municipality marked with † are the citations referred, other obtained by Google Earth or Geo Loc tool (see Materials and Methods).

The Euchromiina richness of Santarém and Belém were the largest recorded in Brazilian sites. For example, in Salesópolis was recorded 47 Euchromiina species (Ferro & Diniz 2007) and in Joinville 42 species (Ferro et al. 2012). These two last sites were located in the Atlantic Forest biome and were intensively sampled. In the Cerrado sites, were recorded a much lower number of Euchromiina species, ranging from 11 (Scherrer et al. 2013) to 30 (Moreno & Ferro 2016). Moreover, the number of Euchromiina species of a single Amazon site (Santarém, 96) was higher than the entire Cerrado Euchromiina fauna (Ferro et al. 2010). It may indicate that this taxon is more diverse in rain-forest than in xeric environments. Studies with Arctiini in the Altamira (Pará Brazilian State) showed that there are 2 times more Euchromiina species in Amazonian forest sites (64, Teston & Correa 2015) than in Cerrado sites (32, Valente et al. 2018) and 4 times more Euchromiina species in Amazonian forest sites than altered sites (pasture and orchard) (16, Delfina & Teston 2013). Martins et al. (2017) also obtained 2.5 times more butterfly species in sites of Amazonian forest than in Cerrado sites in the Maranhão Brazilian State.

Teston et al. (2019) have reported 847 Arctiinae species in the Brazilian Amazon. Due to the new records obtained in our study (13), there was an increase in richness for the biome, generating a total of 860 tiger moth Amazon species. As observed for the subtribes Phaegopterina (Teston & Ferro 2016a), Pericopina (Teston & Ferro 2016b) and Ctenuchina (Teston et al. 2019), the number of Amazonian Euchromiina species is underestimated because the fauna was never sampled in the vast majority of the biome (less than 10% of the municipalities were sampled). Even the sites already sampled need to be studied in the long-term (at least 1 year of sampling) because it is known that tiger moths respond to climate/seasonal changes (Kitching et al. 2000, Hilt et al. 2007, Scherrer et al. 2013, Ferro et al. 2014) and that Lepidoptera richness is higher in long-term surveys than in short-term surveys (Ferro & Diniz 2007, Moreno & Ferro 2016, Martins et al. 2017). Moreover, studies that sample Amazonian Lepidoptera in different types and strata of vegetation are rare. However, it is known that tiger moths respond to vegetation changes (Kitching et al. 2000, Ferro & Diniz 2007, Ferro & Romanowski 2012) and some genera of Euchromiina (*Macrocneme*

and *Poliopastea*) are canopy flyers (Brehm 2009). In order to suggest efficient conservation policies for the Amazon Arctiinae fauna, it is urgent to intensify the sampling effort in this biome, both spatially and temporally. Finally, in addition to reduce species distribution gaps, it is also necessary to invest in studies on the taxonomy of Euchromiina in order to decrease the bias of the Linnean shortfall (Whittaker et al. 2005) on diversity patterns since the taxonomy of this taxon is still complicated: there are many descriptions based on only one individual, many species to be described, and many synonyms to elucidate.

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Author Contributions

José Augusto Teston: Substantial contribution in the concept and design of the study.

Viviane Gianluppi Ferro; Substantial contribution in the concept and design of the study.

Conflicts of interest

The authors declare that they have no conflict of interest related to the publication of this manuscript.

Data availability

The data are deposited in the respective collections mentioned in the Material and Methods.

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