Biota Neotropica 16(2): e20150112, 2016
www.scielo.br/bn

biotaneotropica
ISSN 1676-0611 (online edition)
inventory

Arctiinae (Lepidoptera: Erebidae) in the state of Rio de Janeiro, Brazil

Milena de Sousa Nascimento[1,3], *Viviane Gianluppi Ferro*[2] & *Ricardo Ferreira Monteiro*[1]

[1]*Universidade Federal do Rio de Janeiro, Instituto de Biologia, Departamento de Ecologia, Laboratório de Ecologia de Insetos, CP 68020, 21941-590, Rio de Janeiro, RJ, Brazil.*
[2]*Universidade Federal de Goiás, Instituto de Ciências Biológicas, Departamento de Ecologia, 74690-900, Goiânia, GO, Brazil.*
[3]*Corresponding author: Milena de Sousa Nascimento, e-mail: milenasnascimento@gmail.com*

NASCIMENTO, M.S., FERRO, V.G., MONTEIRO, R.F. **Arctiinae (Lepidoptera: Erebidae) in the state of Rio de Janeiro, Brazil.** Biota Neotropica. 16(2): e20150112. http://dx.doi.org/10.1590/1676-0611-BN-2015-0112

Abstract: This study describes the composition and distribution of the Arctiinae species (Lepidoptera: Erebidae) in Rio de Janeiro, generating the first list of Arctiinae species in the state. We assessed the variations in species composition and the different vegetation types in the municipalities of Rio de Janeiro. Data were collected primarily through surveys of museums and publication lists of species. We also conducted field sampling in March and September 2010. Of the 2,077 records covering 28 municipalities, 679 Arctiinae species were found in Rio de Janeiro state and were divided into two tribes and 220 genera. The location with the highest number of species recorded was Itatiaia, with 362 species, followed by Petrópolis and Angra dos Reis, with 320 and 306 species, respectively. Thirty-four percent (n = 230) of the species recorded were exclusive, i.e., occurred in only one location. The lowest dissimilarity values were observed between neighboring municipalities with the same type of plant formation, such as Petrópolis and Teresópolis (19%) or Itatiaia and Resende (24%). Some municipalities slightly further apart geographically, but with the same type of plant formation, also showed low levels of dissimilarity, for example, Petropolis and Resende (29%). However, most locations showed intermediate dissimilarity values of 40–60%, and in some cases, this figure rose to 96%. In the state of Rio de Janeiro, irrespective of its small geographical size and the predominance of a unique ecosystem, the Atlantic Forest shows a wide variation in relief, which may explain the high beta diversity values. Despite the large number of Arctiinae species recorded in Rio de Janeiro, few species were identified in areas with important forest remnants, such as Guapimirim, Nova Iguaçu, and Campos dos Goitacazes. Some regions of the northwestern part of the state were also subsampled. It is likely that new records of Arctiinae still exist in these locations, further increasing the list of Arctiinae species in Rio de Janeiro.
Keywords: *Beta diversity of moths, List of species, Atlantic Forest.*

NASCIMENTO, M.S., FERRO, V.G., MONTEIRO, R.F. **Arctiinae (Lepidoptera: Erebidae) no estado do Rio de Janeiro, Brasil.** Biota Neotropica. 16(2): e20150112. http://dx.doi.org/10.1590/1676-0611-BN-2015-0112

Resumo: Arctiinae (Lepidoptera: Erebidae) no estado do Rio de Janeiro, Brasil. O presente trabalho teve como objetivo descrever a composição e distribuição de espécies de Arctiinae (Lepidoptera: Erebidae) no estado do Rio de Janeiro, gerando a primeira lista de espécies de Arctiinae para o estado. Avaliou-se também a variação na composição de espécies nos municípios e nas diferentes formações vegetais do estado. Os dados foram obtidos através de levantamentos em museus e de publicações de listas de espécies. Foram também realizadas coletas de campo nos meses de março e setembro de 2010. De um total de 2.077 registros, abrangendo 28 municípios, encontrou-se 679 espécies de Arctiinae para o estado do Rio de Janeiro, distribuídas em duas tribos e 220 gêneros. O município com o maior número de espécies foi Itatiaia, com 362 espécies, seguido de Petrópolis e Angra dos Reis, com 320 e 306 espécies, respectivamente. Trinta e quatro por cento (n = 230) das espécies de Arctiinae registradas tiveram distribuição exclusiva, ou seja, ocorreram em apenas uma localidade. Os menores valores de dissimilaridade foram observados entre municípios próximos e localizados sob o mesmo tipo de formação vegetal, como Petrópolis e Teresópolis (19%) ou Itatiaia e Resende (24%). Alguns municípios mais afastados geograficamente, mas ainda localizados sob o mesmo tipo de formação vegetal, apresentaram também baixos valores de dissimilaridade, como Petrópolis e Resende (29%), por exemplo. Entretanto, a maior parte dos municípios apresentou valores intermediários de dissimilaridade, entre 40 e 60%, e em alguns casos esse valor chegou até a 96%. O estado do Rio de Janeiro, mesmo com sua pequena dimensão geográfica e predomínio de um único ecossistema, a Mata Atlântica, apresenta uma grande variação no seu relevo, o que pode explicar alguns valores altos de diversidade beta. Apesar da

grande quantidade de espécies de Arctiinae registrada para o estado do Rio de Janeiro, foram identificadas algumas localidades com remanescentes florestais importantes, como Guapimirim, Nova Iguaçu e Campos dos Goitacazes, e também algumas regiões do noroeste do estado ainda subamostradas. É bem provável que nessas localidades sejam encontrados novos registros de Arctiinae, aumentando ainda mais a lista de espécies de Arctiinae do estado do Rio de Janeiro.

Palavras-chave: *Diversidade Beta de mariposas, Lista de espécies, Mata Atlântica.*

Introduction

The Atlantic Forest biome is the second most biodiverse forest complex in Brazil, behind only the Amazon Forest (Ab'Sáber 2005). Originally, the Atlantic Forest covered more than 1 million km^2 (SOS Mata Atlântica & INPE 2015). Today, the biome covers only about 8% of its original area, representing approximately 1% of the national territory (SOS Mata Atlântica & INPE 2015). Due to the extensive habitat loss and the high degree of endemism, the Atlantic Forest is considered a hotspot of biodiversity (Myers et al. 2000, Galindo-Leal & Câmara 2005) and is one of the most threatened forests in the world (Oliveira-Filho & Fontes 2000). The state of Rio de Janeiro, which had 100% of its area inside the Atlantic Forest, has only about 20% of its area covered by remnants of this biome today (SOS Mata Atlântica & INPE 2015). The Atlantic Forest in the state of Rio de Janeiro includes different vegetation types and can be divided into major floristic blocks, such as dense rainforest (lowland, hillside, and altitude forests), semi-deciduous forest (forests inland plateaus), and associated ecosystems (salt marshes and mangroves) (SOS Mata Atlântica & INPE 2015).

The Atlantic Forest is considered one of the most studied forests among Brazilian biomes, probably because of its proximity to major research centers. However, many gaps still exist, particularly in very diverse groups, such as insects (Lewinsohn & Prado 2004). The order Lepidoptera is among the major groups of invertebrates in terms of published inventories, but much of the work has focused on butterflies (Lewinsohn & Prado 2004). In the state of Rio de Janeiro, even with a high concentration of research centers and a large area of preserved Atlantic Forest, relatively few studies have been conducted on Lepidoptera fauna, except for the publications by Zikán & Zikán (1968), Monteiro et al. (2004) and the lists of Pieridae species in Monteiro et al. (2009) and of Lycaenidae in Duarte et al. (2009).

The Arctiinae subfamily, as well as other moth and butterfly families, has been the subject of many studies, as they are suitable for studies on environmental impact and change models, are easy to collect and identify, and have a short lifecycle (Lewinsohn et al. 2005). About 11,000 Arctiinae species exist in the world (Jacobson & Weller 2002), of which approximately 6,000 species occur in the Neotropics and 1,400 in Brazil (Ferro & Diniz 2010). In a recent study, Vincent & Laguerre (2014) published a catalog of the Neotropical Arctiini (except Ctenuchina and Euchromiina) in which presents an updated list of neotropical tiger moths, with 2,404 species of Arctiini. In Brazil, there are several studies about tiger moths, in different biomas like Savanas (Ferro & Diniz 2007, Ferro& Diniz 2010, Moreno et al. 2015), the Amazon Forest (Teston & Delfina 2010, Delfina & Teston 2013, Teston & Correa, 2015) and even in the Atlantic Forest (Ferro & Teston 2009, Ferro & Melo 2011, Ferro & Romanowski, 2012, Zenker et al. 2015). In general, these works address the richness, diversity and species composition of Arctiinae in certain areas, but there are few studies that compile lists of species for Brazilian states. Therefore, there have been no reviews that have summarized the existing knowledge about this family in the state of Rio de Janeiro. Thus, we generated a list of Arctiinae species for the state of Rio de Janeiro and investigated the richness, composition, and species similarity in the different plant formations of the state.

Materials and Methods

Arctiinae records for the state of Rio de Janeiro (i.e., the presence of a species in a given locality/municipality) were obtained predominantly from specimens deposited in the following Brazilian collections: (1) Entomological Collection of Instituto Oswaldo Cruz; (2) Museu Nacional, Universidade Federal do Rio de Janeiro; (3) Entomological Collection of Laboratório de Ecologia de Insetos, Universidade Federal do Rio de Janeiro; (4) Entomological Collection Padre Jesus Santiago Moure, Universidade Federal do Paraná; (5) Museu de Zoologia, Universidade de São Paulo; (6) Museu Paraense Emilio Goeldi; and (7) Vitor Becker's collection. Specimens with dubious provenance and identification were not considered. The collection labels of many specimens did not have the geographic coordinates and altitudes of the localities. In such cases, we obtained this information through the "Splink" information system, developed by the Reference Center on Environmental Information (http://splink.cria.org.br/geoloc?criaLANG = pt).

We also used data from published lists of Arctiinae species (Zikán & Zikán 1968, Monteiro et al. 2004) and samplings. The moths were sampled in protected areas in the municipalities of Casimiro de Abreu (Reserva Biológica União), Nova Iguaçu (Reserva Biológica Tinguá), and Teresópolis (Parque Nacional da Serra dos Órgãos). Samplings were conducted during the end of the rainy season (March 2010) and the late dry season (September 2010). These samplings were made during new-moon nights, using a 2-m-wide × 1.5-m-high white sheet and a 250 W mixed light lamp. The lamp was lit one hour after sunset and was connected to a power generator for two hours. The moths were identified through the literature (Watson & Goodger 1986, Piñas Rubio et al. 2000, Piñas Rubio & Manzano 2003) and by a comparison with the digital images of deposited species in the Becker's collection, whose identifications were confirmed by a comparison of the types.

The second order Jackknife and Chao 2 non-parametric estimators were used for estimating Arctiinae richness in the state of Rio de Janeiro. Moreover, the variation in species composition of these moths between different vegetation types was assessed using the Simpson's beta diversity index. This index was selected because it is less influenced by differences in species richness between samples (Koleff et al. 2003). Municipalities with Arctiinae records were categorized according to their predominant vegetation type, following the classification of SOS Mata Atlântica & INPE (2015). The vegetation types considered were: (1) altitude forests: formations of dense rainforests located at elevations above 200 m; (2) lowland forests: formations of dense rainforests located at low altitudes (up to 200 m), including salt marshes and floodplain forests, which are predominantly coastal

 http://dx.doi.org/10.1590/1676-0611-BN-2015-0112

vegetation on sandy soil; and (3) mixed formations: municipalities that have both lowland forests and altitude forests. Statistical analyses were performed using R software (R Development Core Team 2009).

Results

We obtained 2,077 Arctiinae records for the state of Rio de Janeiro, including 28 (30%) municipalities in the state. In total, 679 Arctiinae species were recorded for the state of Rio de Janeiro, which were divided into two tribes and 220 genera. The list of Arctiinae species in each municipality of the state of Rio de Janeiro is presented in Appendix 1. The estimations of second order Jackknife richness and Chao 2 show the existence of 916 and 1,037 Arctiinae species in the state, respectively. Therefore, according to the Chao 2 estimate, which is the most conservative index, our species list represented 74% of the expected Arctiinae fauna.

The location with the highest number of recorded species was Itatiaia, with 362 species (Table 1). The municipalities of Petrópolis, Angra dos Reis, Rio de Janeiro, and Teresópolis also showed high species richness of Arctiinae (320, 306, 239, and 207, respectively) (Table 1). The distribution of Arctiinae species in the municipalities of Rio de Janeiro was quite heterogeneous, as the three richest municipalities accounted for 86% of all Arctiinae species in the state. Of the 28 municipalities in the state with Arctiinae records, 46% (n = 13) had less than 15 species and only 21% (n = 6) had more than 100 species (Figure 1).

Aclytia heber (Cramer 1780) had the highest number of records throughout the study, occurring in 14 municipalities. *Ilipa tengyra* (Walker 1854) (12 municipalities), *Pionia lycoides* (Walker 1854) (11 municipalities), and *Dycladia lucetius* (Cramer 1782) (11 municipalities) were also very common in the state. Thirty-four percent (n = 230) of the Arctiinae species occurred in only one location. Itatiaia had the highest number of exclusive species (n = 96 or 26.5%).

Comparing the species composition of Arctiinae in different vegetation types in the state of Rio de Janeiro, the largest number of recorded species was observed in the altitude forests formations (574 species), followed by mixed formations (418 species), whereas lowland forests formations only presented 139 species. The dissimilarity of species was low within the three types of plant formations evaluated (Table 3). The smallest difference between the Arctiinae compositions was observed between the altitude forests and the mixed formations (Table 2).

Table 1. Arctiinae species richness in the municipalities of the state of Rio de Janeiro which had records of these moths and the percentage of exclusive species for each locality. Coordinates (in decimal degrees; datum SAD69), altitudes and vegetation types of each locality are also presented.

Municipality	Coordinates		Altitude (m)	Vegetation type	Richness	Exclusive species (%)
	LAT	LONG				
Angra dos Reis	-23,0067	-44,3181	6	Mixed formation	306	9.8
Armação dos Búzios	-22,7469	-41,8817	3	Lowland forest	4	0
Arraial do Cabo	-22,9661	-42,0278	8	Lowland forest	11	0
Barra Mansa	-22,5442	-44,1714	381	Altitude forest	1	0
Cachoeiras de Macacu	-22,4625	-42,6531	60	Mixed formation	91	9.9
Campos dos Goytacazes	-21,7542	-41,3244	13	Lowland forest	1	0
Carapebus	-22,1872	-41,6611	15	Lowland forest	32	0
Casimiro de Abreu	-22,4806	-42,2042	17	Lowland forest	8	12.5
Duque de Caxias	-22,7856	-43,3117	19	Lowland forest	1	0
Guapimirim	-22,5372	-42,9819	48	Altitude forest	5	0
Itatiaia	-22,4961	-44,5633	600	Altitude forest	362	26.5
Macaé	-22,3708	-41,7869	2	Lowland forest	32	0
Magé	-22,6528	-43,0406	5	Lowland forest	33	6.1
Mangaratiba	-22,9597	-44,0406	18	Mixed formation	47	4.3
Maricá	-22,9194	-42,8186	5	Lowland forest	41	7.3
Niterói	-22,8833	-43,1036	5	Lowland forest	3	0
Nova Friburgo	-22,2819	-42,5311	846	Altitude forest	171	8.2
Nova Iguaçu	-22.7592	-43.4511	25	Lowland forest	5	40.0
Petrópolis	-22,5050	-43,1786	809	Altitude forest	320	9.1
Resende	-22,4689	-44,4467	407	Altitude forest	55	5.5
Rio de Janeiro	-22,9028	-43,2075	2	Mixed formation	239	9.6
Santo Antônio de Pádua	-21,5394	-42,1803	86	Mixed formation	3	33.3
São João do Meriti	-22,4814	-43,222	19	Lowland forest	2	0
Silva Jardim	-22.6508	-42.3917	35	Lowland forest	51	21.6
Tanguá	-22,7303	-42,7142	20	Lowland forest	3	0
Teresópolis	-22,4122	-42,9656	871	Altitude forest	207	2.0
Três Rios	-22,1167	-43,2092	269	Altitude forest	41	0
Vassouras	-22,4039	-43,6625	434	Altitude forest	2	0
Total					679	33.9

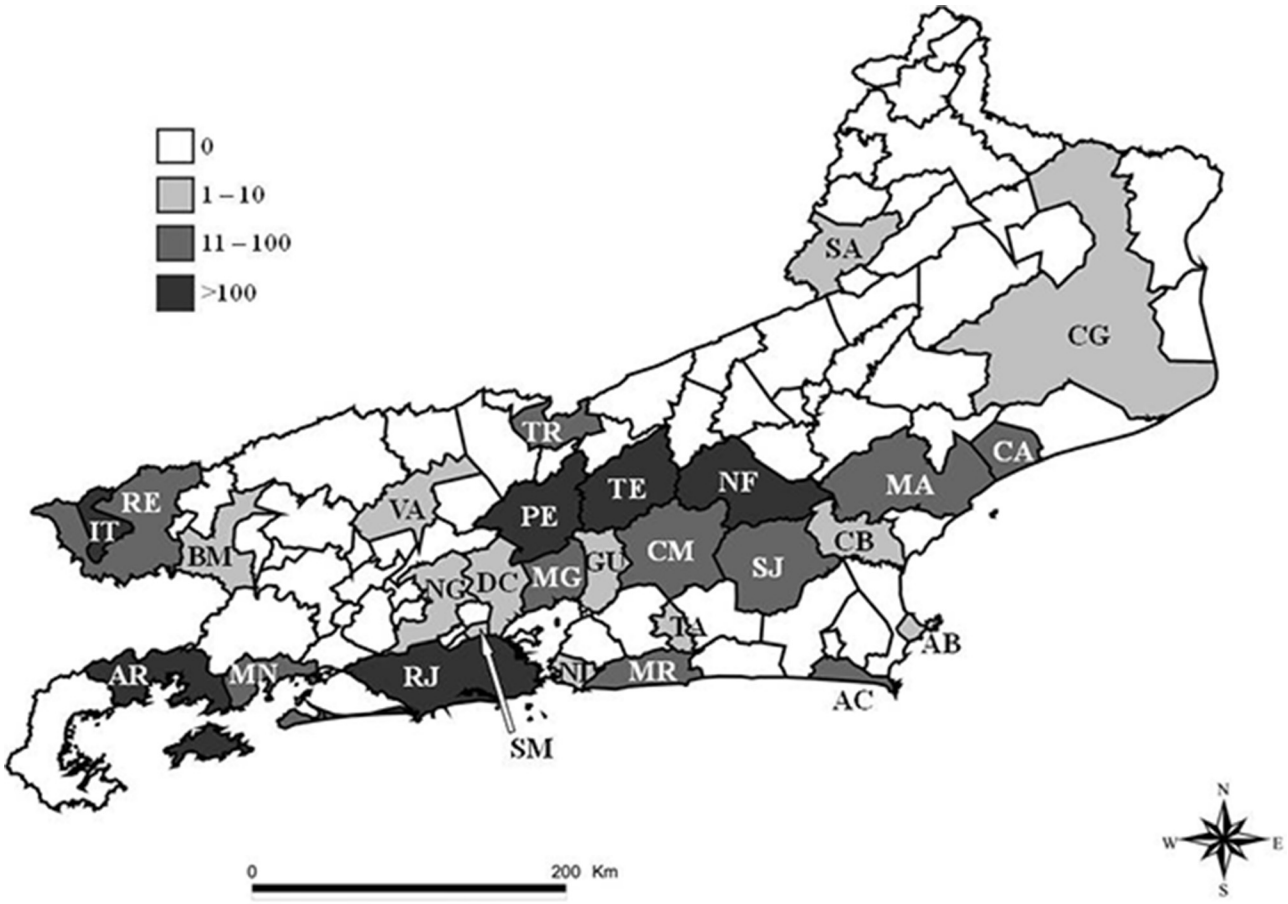

Figure 1. Map of the state of Rio de Janeiro, indicating the number of records of Arctiinae species in each municipality. AR: Angra dos Reis; AB: Armação dos Búzios; AC: Arraial do Cabo; BM: Barra Mansa; CM: Cachoeiras de Macacu; CG: Campos dos Goytacazes; CA: Carapebus; CB: Casimiro de Abreu; DC: Duque de Caxias; GU: Guapimirim; IT: Itatiaia; MA: Macaé; MG: Magé; MN: Mangaratiba; MR: Maricá; NI: Niterói; NF: Nova Friburgo; NG: Nova Iguaçu; PE: Petrópolis; RE: Resende; RJ: Rio de Janeiro; SA: Santo Antônio de Pádua; SM: São João de Meriti; SJ: Silva Jardim; TA: Tanguá; TE: Teresópolis; TR: Três Rios; VA: Vassouras. Cities without records of Arctiinae species are not indicated by abbreviations on the map.

Table 2. Matrix of dissimilarity between vegetation types in the state of Rio de Janeiro using Simpson's beta diversity index.

	Altitude forest	Mixed formation
Mixed formation	0.22	-
Lowland forest	0.30	0.36

Discussion

The Arctiinae fauna of the state of Rio de Janeiro compiled in this study represents 11% of the Arctiinae registered for the Neotropics (Jacobson & Weller 2002) and about 50% of the recorded fauna for Brazil (Ferro & Diniz 2010). There are few lists of Arctiinae species for Brazilian states (e.g., Ferro & Teston 2009), but the richness of these moths in the state of Rio de Janeiro is the largest ever recorded for a Brazilian state, with more than twice that observed in the state of Rio Grande do Sul (Ferro & Teston 2009) and 1.4 times greater than that of Santa Catarina (Ferro et al. 2012). The richness of the Arctiinae species in the state of Rio de Janeiro presented here is quite close to that for the state of São Paulo's estimated richness (Brown Jr. & Freitas 1999), although the latter has approximately six times the area of the Rio de Janeiro (IBGE 2013). Indeed, the state of Rio de Janeiro has still areas well preserved from the Atlantic Forest and also has several research centers, these two facts can support this great diversity of Acrtiinae found in the state.

The three municipalities with the highest level of Arctiinae species richness in this study (Itatiaia, Petrópolis, and Angra dos Reis) showed the highest richness values for Arctiinae ever recorded at a single site collection from Brazil (Ferro & Diniz 2007). According the Atlas of Forest Remnants of the Atlantic Forest (SOS Mata Atlântica & INPE 2015), these three municipalities are located in areas that have the largest remaining forest in this biome; thus, they are municipalities with large areas of preserved Atlantic Forest. Besides being well preserved, these locations are very well sampled, which probably explains the richness of Arctiinae in these locations,

 http://dx.doi.org/10.1590/1676-0611-BN-2015-0112

especially Itatiaia, because of the insects that Zikán & Zikán (1968) collected for 36 years in the Parque Nacional do Itatiaia area and its surroundings. Previous surveys of butterfly families, such as Lycaenidae (Duarte et al. 2009) and Pieridae (Monteiro et al. 2009), also highlight Itatiaia as a municipality with the highest number of recorded species of these insects. The small number of records in Nova Iguaçu and Guapimirim can be explained by the lack of Lepidoptera surveys in these regions, as there are still well-preserved forest remnants in these municipalities, such as Reserva Biológica Tinguá and the lowest part of the of Parque Nacional da Serra dos Órgãos, respectively. Municipalities without Arctiinae records match those where no survey of Lepidoptera has been conducted, and most have little or no forested areas, as in several municipalities north and west of the state (SOS Mata Atlântica & INPE 2015).

In a study conducted with Arctiinae in the Atlantic Forest of southern Brazil, Ferro & Teston (2009) found that 33% of the species occurred in only one municipality, almost identical to the percentage observed in this study. The large number of species recorded exclusively in Itatiaia (26.5%) may reflect the extensive survey of Lepidoptera species (Zikán & Zikán 1968) or the high degree of endemism in the region.

The altitude forest had the highest number of Arctiinae records because it encompassed nine municipalities, including the best-sampled ones (Itatiaia and Petrópolis). Moreover, we must also consider the conservation status of these formations within the state, as the altitude forests represent the best preserved formation in the state of Rio de Janeiro, where the largest conservation areas in the state are concentrated (Itatiaia National Park and Serra dos Órgãos National Park). The mixed formation also encompassed municipalities that were well sampled, such as Angra dos Reis and Rio de Janeiro, which have areas in good condition within the state, such as Serra da Bocaina National Park and Tijuca National Park, respectively, which are protected. Moreover, lowland forests, including the sandbank formations, is one of the most degraded vegetation formations in the state, as it occurs in regions of high population density, high real estate value, accelerated deforestation, and forest fragmentation. In general, the remnants of sandbank formations in the state of Rio de Janeiro are located in patches of vegetation surrounded by urban or rural areas. The one large remaining sandbank conservation area in the state is the Restinga de Jurubatiba National Park.

After compiling existing records for Arctiinae moths in the State of Rio de Janeiro from Brazilian museum collections, data from the literature, and samplings, we obtained a list of 679 species. This species number was larger than any previously published list of Arctiinae in a Brazilian state. Although, several subsampled locations in the state lack surveys, such as Guapimirim, Nova Iguaçu, and Campos dos Goytacazes, which still have representative areas of Atlantic Forest vegetation. Our results indicate a wide variation in the Arctiinae dissimilarity values among the municipalities of the state of Rio de Janeiro. This pattern may reflect the low host specificity of the caterpillars and the small geographical size, although there is a large variation existing in relief of the state. If the results for the Arctiinae species represent a standard for other groups of Lepidoptera, or for insects as a whole, it is clear that host specificity is an issue that remains to be investigated.

Appendix I. List of Arctiinae species in the state of Rio de Janeiro. AR: Angra dos Reis; AB: Armação dos Búzios; AC: Arraial do Cabo; BM: Barra Mansa; CM: Cachoeiras de Macacu; CG: Campos dos Goytacazes; CA: Carapebus; CB: Casimiro de Abreu; DC: Duque de Caxias; GU: Guapimirim; IT: Itatiaia; MA: Macaé; MG: Magé, MN: Mangaratiba; MR: Maricá; NI: Niterói; NF: Nova Friburgo; NG: Nova Iguaçu; PE: Petrópolis; RE: Resende; RJ: Rio de Janeiro; SA: Santo Antônio de Pádua; SM: São João de Meriti; SJ: Silva Jardim; TA: Tanguá; TE: Teresópolis; TR: Três Rios; VA: Vassouras.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Aclytia flavigutta (Walker, 1854)	X			X							X											X	X					
Aclytia gynamorpha Hampson, 1898											X						X											
Aclytia heber (Cramer, 1780)	X		X		X		X				X	X			X		X	X	X		X			X		X	X	
Aclytia jonesi Rothschild, 1912																		X										
Aclytia punctata Butler 1876																				X								
Aclytia reducta Rothschild, 1912											X							X										
Aclytia taeniata Draudt, 1915											X										X					X		
Aclytia terra Schaus, 1896	X										X										X							
Aemilia pagana (Schaus, 1894)											X																	
Aethria analis Schaus, 1901	X																				X							
Aethria andromacha (Fabricius, 1775)	X																											
Aethria gracilis (Möschler, 1877)	X																		X	X		X						
Aethria haemorrhoidalis (Stoll, 1790)	X						X						X				X				X			X			X	
Aethria melanobasis (Druce, 1897)												X									X							
Aethria paula Schaus, 1894	X				X							X						X	X		X					X		

Continued on next page

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Aethria paulista Draudt, 1915																	X											
Agaraea longicornis Herrich-Schäffer, [1855]																	X											
Agaraea minuta Schaus, 1892	X										X								X		X			X				
Agaraea semivitrea Rothschild, 1909	X		X				X				X	X			X				X					X		X		
Agaraea uniformis (Hampson, 1898)											X						X											
Agerocha eone Hübner, 1827					X						X								X		X						X	
Agylla argentea (Felder, 1874)	X										X								X		X					X		
Agylla argentifera (Walker, 1866)																			X							X		
Agylla corcovada (Schaus, 1894)											X																	
Agylla marcata (Schaus, 1894)	X										X								X									
Agylla nivea (Walker, 1856)											X																	
Agylla polysemata Schaus, 1899														X					X		X					X		
Agylla separata Schaus, 1894											X																	
Agylla sericea (Druce, 1885)											X																	
Agyrta albisparsa Hampson, 1898	X																		X									
Agyrta dux (Walker, 1854)	X								X												X				X			
Agyrta micilia (Cramer, 1780)	X										X																	
Amastus ramona (Schaus, 1927)											X																	
Amaxia apyga Hampson, 1901																			X									
Amaxia chaon (Druce, 1883)	X																									X		
Amaxia collaris Jones, 1912	X										X						X		X							X		
Amaxia consistens Schaus, 1905																	X											
Amaxia corata Schaus, 1921					X														X									
Amaxia dyuna Schaus, 1896							X				X	X																
Amaxia egaensis (Seitz, 1921)	X																											
Amaxia flavipuncta Hampson, 1904																			X									
Amaxia hebe Schaus, 1892	X																X		X		X					X		
Amaxia kennedyi (Rothschild, 1909)																			X	X								
Amaxia punctata (Rothschild, 1909)																			X									
Amaxia pyga Schaus, 1892	X																		X									
Amaxia theon Durce, 1900																			X		X							
Ammalo helops (Cramer, 1775)	X										X						X		X		X					X		
Ammalo travassosi Rego-Barros, 1974	X										X						X				X							
Antichloris caca Hübner, 1827											X																	
Antichloris eriphia (Fabricius, 1777)	X										X								X	X	X					X	X	
Antona diffinis (Walker 1864)																								X				
Antona subluna Walker, 1854											X										X							
Aphra nycthemeroides (Walker, 1869)																					X							
Aphra trivittata (Walker, 1854)							X					X			X				X							X		
Aphyle cuneata Hampson, 1905											X																	
Apiconoma opposita (Walker, 1876)																			X							X		
Apistosia judas Hübner, 1818											X						X				X							

Continued on next page

http://dx.doi.org/10.1590/1676-0611-BN-2015-0112

http://www.scielo.br/bn

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Areva subfulgens (Schaus, 1896)	X				X						X			X			X		X		X					X	X	
Areva trigemmis Hübner, 1827																	X											
Argyroeides braco (Herrich-Schäffer, 1855)																					X							
Argyroeides ophion (Walker, 1854)	X																				X							
Argyroeides sanguinea Schaus, 1896											X								X									
Argyroeides variegata Kaye, 1911																			X									
Aristodaema hanga (Herrich-Schäffer, 1854)	X										X						X		X		X					X		
Atyphopsis roseiceps Druce, 1898	X																				X							
Baritius acuminata (Walker, 1856)	X												X	X			X		X	X	X							
Barsinella mirabilis Butler, 1878																								X				
Belemnia eryx (Fabricius, 1775)	X										X								X									
Belemnia inaurata (Sulzer, 1776)	X							X		X																		
Belemnia ochriplaga Hampson, 1901	X																		X									
Bernathonomus minuta Fragoso, 1953											X																	
Bernathonomus piperita (Herrich-Schäffer, 1855)											X						X		X		X					X		
Bernathonomus punktata (Reich, 1933)											X																	
Bertholdia albipuncta Schaus, 1896	X										X								X		X			X		X		
Bertholdia almeidai Travassos, 1950											X						X									X		
Bertholdia grisescens Rothschild, 1909											X																	
Bertholdia myosticta Druce, 1897	X																											
Bertholdia pseudofumida Travassos, 1950	X													X												X		
Bertholdia soror Dyar, 1901											X																	
Bertholdia specularis (Herrich-Schäffer, 1853)	X																		X							X		
Brycea itatiayae Zerny, 1924											X																	
Callisthenia plicata (Butler, 1877)																								X				
Callopepla emarginata (Walker, 1854)	X										X																	
Callopepla flammula (Hübner, 1832)	X										X										X						X	
Callopepla inachia (Schaus, 1892)											X						X		X		X							
Callopepla similis (Heylaerts, 1890)																					X							
Calodesma amica (Stoll, 1781)											X										X							
Calodesma collaris (Drury, 1782)	X																				X							
Calodesma contracta (Walker, 1854)											X										X							
Calodesma itaitubae Hering, 1925											X																	
Calodesma quadrimaculata Hering, 1925	X										X										X							
Calonotos fenestratus (Klages, 1906)	X						X				X	X			X		X		X		X							
Calonotos phlegmon (Cramer, [1775])																					X							
Carales astur (Cramer, 1777)											X						X	X	X		X					X		
Carales maculicollis Walker, 1855					X												X		X							X		
Carathis byblis (Schaus, 1892)	X																		X		X							
Castrica phalaenoides (Drury, 1773)	X				X									X							X					X		
Centronia melanitis Hübner, 1827								X																				
Ceramidia chloroplegia Druce 1905	X										X																	

Continued on next page

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Cercopimorpha dolens (Schaus, 1905)													X				X		X							X		
Cercopimorpha hoffmanni Zerny, 1931											X																	
Cercopimorpha postflavia Rothschild, 1912	X																		X							X		
Chetone isse (Hübner, 1831)	X																				X			X			X	
Chionosia apicalis (Zeller, 1874)											X																	
Chrysostola dycladioides (Heylaerts, 1890)																	X		X									
Chrysostola discoplaga Schaus, 1905															X													
Chrysozana croesus Hampson, 1900														X														
Cissura decora Walker, 1854	X																		X							X		
Cisthene dives Schaus, 1896			X								X		X	X			X		X									
Cisthene endoxantha (Hampson, 1903)											X															X		
Cisthene fasciata Schaus, 1896					X						X						X		X							X		
Cisthene rosacea Schaus, 1905					X						X		X				X		X		X							
Cisthene ruficollis (Hübner, 1824)											X																	
Cisthene triplaga Hampson, 1905													X						X							X		
Clemensia panthera (Schaus, 1896)											X						X											
Clemensia quinqueferana (Walker, 1893)							X					X																
Cloesia digna Schaus, 1911					X								X															
Coreura fida Hübner, 1827	X										X								X		X						X	
Coreura phoenicides (Druce, 1884)	X																											
Correbidia assimilis Rothschild, 1912	X																		X									
Correbidia calopteridia (Butler, 1878)	X																											
Correbidia joinvillea Schaus, 1921	X																X		X	X	X					X		
Cosmosoma achemon (Fabricius, 1781)					X																							
Cosmosoma auge (Linnaeus, 1767)	X	X	X								X				X		X		X		X					X		
Cosmosoma brinkley Rothchild, 1911																										X		
Cosmosoma centralis (Walker, 1854)	X							X			X				X		X		X	X	X					X		
Cosmosoma chrysis (Hübner, 1827)	X							X													X			X				
Cosmosoma cingla (Schaus, 1894)	X																											
Cosmosoma durca Schaus, 1896											X								X							X		
Cosmosoma elegans Butler, 1876	X				X						X						X		X	X	X					X		
Cosmosoma festivum (Walker, 1854)											X																	
Cosmosoma leuconotum Hampson, 1898	X										X						X			X	X					X		
Cosmosoma pheres (Cramer, 1782)																					X							
Cosmosoma plutona Schaus, 1894																	X		X									
Cosmosoma rasera (Jones, 1914)	X										X								X									
Cosmosoma regia (Schaus, 1894)							X					X			X									X				
Cosmosoma remotum (Walker, 1854)	X	X	X								X				X				X		X					X	X	
Cosmosoma restrictum Butler, 1876	X										X								X		X			X				
Cosmosoma subflamma (Walker, 1854)	X																X		X		X					X		
Cosmosoma telephus (Walker, 1854)	X				X		X				X	X							X		X			X		X	X	
Cosmosoma teuthras (Walker, 1854)	X																			X	X					X		

Continued on next page

http://dx.doi.org/10.1590/1676-0611-BN-2015-0112

http://dx.doi.org/10.1590/1676-0611-BN-2015-0112

http://www.scielo.br/bn

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Cratoplastis catherinae (Rothschild, 1916)	X													X					X					X		X		
Cresera annulata Schaus, 1894	X				X									X					X	X	X					X		
Cresera ilus (Cramer, 1776)	X										X						X											
Cresera optimus (Butler, 1877)																			X									
Cresera silvestrii Travassos, 1956	X																		X		X							
Ctenucha braganza (Schaus, 1892)	X																				X							
Ctenucha jonesi Rothschild, 1912	X										X								X		X							
Ctenucha mortia Schaus, 1901	X										X						X				X					X		
Ctenucha palmeira Schaus, 1892	X																											
Cyanopepla fastuosa (Walker, 1854)	X										X						X		X		X						X	
Cyanopepla jucunda (Walker, 1854)	X										X						X		X	X	X					X		
Cyanopepla julia (Druce, 1883)																			X						X			
Cyanopepla orbona (Druce, 1893)	X																											
Dasysphinx torquata (Druce, 1883)																			X							X		
Delphyre albiventus (Druce, 1898)	X																				X							
Delphyre arpi Schaus, 1894	X										X			X			X		X		X					X		
Delphyre brunnea (Druce, 1898)	X				X						X			X			X		X		X					X		
Delphyre dizona Druce, 1898			X												X						X						X	
Delphyre flaviceps (Druce, 1905)																		X										
Delphyre flaviventralis Hampson, 1901							X	X				X			X									X				
Delphyre hampsoni Rothschild, 1912							X					X			X													
Delphyre pusilla (Butler, 1878)	X				X												X				X					X		
Delphyre pyroperas Hampson, 1911	X				X						X						X		X		X					X	X	
Delphyre testacea Druce, 1884	X																											
Demolis albicostata Hampson, 1901											X																	
Demolis albitegula (Rothschild, 1935)	X				X												X		X		X					X		
Demolis flavithorax Rothschild, 1909											X																	
Desmidocnemis hypochryseis Hampson, 1898											X										X							
Diarhabdosia mandana Dyar, 1907	X										X		X	X												X	X	
Dinia eagrus (Cramer, 1779)	X				X	X					X			X					X	X	X						X	
Dinia mena (Hübner, 1827)	X										X										X							
Diptilon doeri Schaus, 1892											X																	
Dixophlebia holophaea Hampson, 1909					X																							
Dixophlebia quadristrigata (Walker, 1864)	X																											
Dycladia correbioides Felder, 1874																					X							
Dycladia lucetius (Cramer, 1782)	X	X			X		X	X			X	X			X					X	X			X				
Dycladia melaena Hampson, 1898											X										X							
Dysschema amphissa (Geyer, 1832)	X				X		X				X	X		X					X	X	X				X	X		
Dysschema boisduvalii (van der Hoeven e de Vriese, 1840)	X										X		X						X		X							
Dysschema fantasma (Butler, 1873)											X								X		X							
Dysschema hilarina Weymer, 1914											X									X								
Dysschema hypoxantha Hübner 1818	X				X								X			X			X		X			X		X		

Continued on next page

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Dysschema indecisa (Walker, 1854)																								X				
Dysschema lucifer (Butler, 1873)	X				X						X		X	X				X	X		X			X		X		
Dysschema luctuosa Dognin 1919	X										X									X								
Dysschema marginata (Guérin-Méneville, 1844)	X																X		X							X		
Dysschema neda (Klug, 1836)	X										X						X		X	X						X		
Dysschema picta (Guérin-Méneville, 1844)	X													X					X		X					X	X	
Dysschema sacrifica (Hübner, 1831)	X										X								X	X	X					X		
Dysschema subapicalis (Walker, 1854)	X				X						X			X					X	X	X					X	X	
Dysschema trapeziata Walker 1865											X								X	X								
Echeta divisa (Herrich-Schäffer, 1855)											X						X		X									
Echeta juno (Schaus, 1892)											X						X		X									
Echeta minerva (Schaus, 1915)											X								X									
Echeta rubrireta Dognin, 1906																			X							X		
Elysius chimaera (Druce, 1893)											X										X							
Elysius cingulata (Walker, 1856)	X										X						X		X	X						X		
Elysius conjunctus Rothschild, 1910	X										X								X		X					X		
Elysius conspersus Walker, 1855	X									X	X								X		X					X		
Elysius discoplaga (Walker, 1856)	X																											
Elysius itaunensis Rego Barros, 1971																								X				
Elysius meridionalis Rothschild, 1917	X																		X							X		
Elysius ordinária (Schaus, 1894)											X						X		X									
Elysius pyrosticta Hampson, 1905	X				X						X						X		X	X	X					X		
Elysius sebrus (Druce, 1899)											X										X							
Emurena fernandezi Watson, 1975																	X											
Emurena lurida (Felder, 1874)																			X							X		
Emurena luridoides (Rothschild, 1910)	X				X						X						X			X								
Epeiromulona hamata Field, 1952											X			X					X									
Ephestris melaxantha (Hübner, [1809])														X					X		X					X		
Epidesma crameri Travassos 1938	X																		X					X		X	X	
Epidesma josioides Zerny, 1931	X																											
Epidesma obliqua (Schaus, 1898)	X																											
Epidesma ursula Cramer 1782	X										X		X															
Episcea extravagans Warren, 1901											X						X											
Episcepsis capyscoides Dognin, 1911	X																		X									
Episcepsis endodasia Hampson, 1898	X				X						X						X		X									
Episcepsis flavipuncta Zerny, 1931											X																	
Episcepsis gnoma (Butler, 1877)					X																							
Episcepsis lenaeus (Cramer, 1780)	X																				X						X	
Episcepsis thetis (Linnaeus, 1771)	X		X								X				X				X		X							
Ernassa cruenta (Rothschild, 1909)																					X							
Ernassa gabriellae Travassos, 1954	X																									X		
Ernassa sanguinolenta (Cramer, 1779)	X													X														

Continued on next page

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Euagra azurea (Walker, 1854)	X										X																X	
Eucereon aeolum Hampson, 1898																										X		
Eucereon albidia Rothschild, 1912	X																											
Eucereon aoris Möschler 1877	X																											
Eucereon apicalis (Walker, 1856)	X										X						X		X		X					X		
Eucereon aroa Schaus, 1894	X																				X							
Eucereon atrigutta Druce, 1905	X																											
Eucereon chalcodon Druce, 1893	X				X						X						X		X		X					X		
Eucereon confinis (Herrich-Schäffer, 1855)											X																	
Eucereon costinotatum Dognin, 1900											X						X											
Eucereon discolor Walker, 1856	X										X						X		X									
Eucereon dorsipuncta Hampson, 1905											X								X		X					X		
Eucereon formosum Dognin 1905											X								X									
Eucereon ladas Schaus, 1892											X						X		X							X		
Eucereon latifascia Walker, 1856					X		X				X	X			X		X				X			X				
Eucereon leucophaeum (Walker, 1855)	X										X						X		X									
Eucereon lithosioides Rothschild, 1912																								X				
Eucereon lychnis Zerny, 1931											X																	
Eucereon maja Druce, 1884											X						X				X							
Eucereon marcatum Schaus, 1901											X																	
Eucereon metoidesis Hampson, 1905																			X									
Eucereon nebulosum Dognin, 1891											X																	
Eucereon nubilosa Rothschild, 1912	X																X											
Eucereon obscurum (Möschler 1872)											X															X		
Eucereon pallescens Rothschild, 1912														X			X		X									
Eucereon perplicatum Draudt, 1917											X																	
Eucereon pilatii (Walker, 1854)					X																							
Eucereon plumbicollum Hampson, 1898	X										X								X		X							
Eucereon pometinum Druce, 1894					X												X											
Eucereon pseudarchias Hampson, 1898	X										X						X		X									
Eucereon punctatum (Guérin, 1844)																			X		X			X				
Eucereon quadricolor (Walker 1855)	X				X						X						X		X		X			X		X		
Eucereon rosa (Walker, 1854)					X												X		X									
Eucereon scyton (Cramer, 1777)											X																	
Eucereon setosum Sepp, 1848	X										X			X	X		X		X		X					X	X	
Eucereon striatum Druce, 1889											X						X		X	X								
Eucereon sylvius (Stoll, 1780)																					X							
Eucereon taperinhae Dognin, 1923	X																				X							
Eucereon tarona Hampson, 1898	X				X						X		X				X		X		X					X		
Eucereon theophanes Schaus, 1924																			X							X		
Eucereon velutinum Schaus, 1896					X						X																	
Eucereon vestalis (Schaus, 1892)																	X											

Continued on next page

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Eucereon xanthura Schaus, 1910	X										X								X	X	X					X	
Eucereon zamorae Dognin, 1894											X																	
Euceriodes wernickei Draudt, 1917	X				X						X		X				X		X									
Euchaetes rizoma (Schaus, 1896)											X																	
Euchlaenidia neglecta Rothschild, 1910											X																	
Euchlaenidia transcisa (Walker, 1854)	X										X						X		X							X		
Euclera diversipennis (Walker, 1854)											X			X	X				X	X	X							
Euclera meones (Cramer, 1780)	X																				X					X		
Eudesmia ruficollis (Donovan, 1798)											X																	
Eugonosia angulifer Schaus, 1899											X								X									
Eupseudosoma aberrans Schaus, 1905	X																				X							
Eupseudosoma grandis Rothschild, 1909	X										X																	
Eupseudosoma involuta (Sepp, 1855)	X										X				X		X		X		X							
Eupseudosoma larissa (Druce, 1890)																								X		X		
Eurota hermione (Burmeister, 1878)											X																	
Eurota herrichi Butler, 1876											X																	
Eurota tisamena Dognin, 1902											X																	
Euryptidia basivitta (Walker, 1854)											X								X		X							
Euryptidia univitta Hampson, 1900											X								X		X							
Euthyone purpurea (Jones, 1914)																	X											
Euthyone simplex (Walker, 1854)											X																	
Evius hippia (Stoll, 1790)	X																		X		X			X		X		
Galethalea pica (Walker, 1855)	X										X						X		X		X					X		
Gangamela saturata Walker, 1864																					X							
Gorgonidia garleppi (Druce, 1898)	X												X						X									
Graphea marmorea Schaus, 1894											X																	
Gymnelia laennus (Walker, 1854)	X									X			X								X							
Gymnelia xanthogastra (Perty, 1834)	X										X								X		X					X		
Haemanota rubriceps Hampson, 1901											X																	
Haemaphlebiella strigata (Jones, 1914)	X				X						X						X		X		X					X		
Halysidota cinctipes Grote, [1866]																			X									
Halysidota cyclozonata Hampson, 1901																			X							X		
Halysidota interlineata Walker, 1855	X										X						X		X		X					X		
Halysidota interstriata Hampson, 1901			X								X																	
Halysidota pearsoni Watson, 1980																			X									
Halysidota schausi Rothschild, 1909	X																		X								X	
Halysidota tessellaris (Smith, 1797)	X									X									X		X							
Halysidota underwoodi Rothschild, 1909	X										X										X							
Heliactinidia nigrilinea (Walker, 1856)	X										X								X									
Heliura hecale (Schaus, 1892)	X				X						X									X	X							
Heliura kennedyi Rothschild, 1912																	X											
Heliura phaeosoma Druce, 1905																					X							

Continued on next page

http://dx.doi.org/10.1590/1676-0611-BN-2015-0112

http://www.scielo.br/bn

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Heliura rhodophila (Walker, 1856)																			X									
Heliura subplena (Walker, 1854)	X				X						X						X		X					X		X	X	
Heliura suffusa Lathy 1899	X				X						X								X		X					X		
Heliura tetragramma (Walker, 1854)																					X							
Heliura zonata Druce, 1905																					X							
Hemihyalea diminuta (Walker, 1855)											X								X							X		
Herea metaxanthus (Walker, 1854)					X																							
Homoeocera acuminata (Walker, 1856)																				X								
Horama castrensis Jones, 1908	X																											
Hyalarctia sericea Schaus, 1901																	X		X							X		
Hyaleucerea costinotatum Dognin, 1900											X																	
Hyaleucerea lemoulti Schaus 1905																		X										
Hyaleucerea morosa Schaus, 1910	X																											
Hyaleucerea mundula (Berg, 1882)											X																	
Hyaleucerea sororia Schaus, 1910																			X									
Hyalurga fenestra (Linnaeus, 1758)											X													X				
Hyalurga fenestrata (Walker, 1855)	X										X		X	X	X				X		X					X		
Hyalurga leucophaea (Walker, 1854)																			X									
Hyalurga peritta Hering, 1925											X																	
Hyalurga sora (Boisduval, 1870)	X																											
Hyalurga subnormalis Dyar, 1914	X										X																	
Hyalurga syma (Walker, 1854)	X		X								X										X							
Hyda basilutea (Walker, 1854)							X					X																
Hyperandra appendiculata (Henrich-Schäffer, [1856])	X						X					X							X		X	X				X		
Hypercompe abdominalis (Walker, [1865])											X																	
Hypercompe brasiliensis (Oberthür, 1881)	X										X						X		X		X							
Hypercompe cunigunda (Stoll, 1781)	X				X						X		X	X			X		X	X	X					X		
Hypercompe heterogena Oberthür, 1881											X																	
Hypercompe jaguarina (Schaus, 1921)																			X									
Hypercompe kennedyi (Rothschild, 1910)											X																	
Hypercompe kinkelini (Burmeister, 1880)																					X							
Hypercompe laeta (Walker, 1855)											X										X							
Hypercompe magdalenae (Oberthür, 1881)	X										X								X		X							
Hypercompe mus (Oberthür, 1881)											X						X		X		X					X		
Hyperthaema albipuncta Schaus, 1901											X																	
Hyperthaema caroei Jörgensen, 1935																			X									
Hyperthaema hoffmannsi Rothschild, 1909																			X									
Hyperthaema signatus (Walker, 1862)																			X									
Hypidalia enervis Schaus, 1894											X						X		X							X		
Hypocladia elongata Druce, 1905															X													
Hypocrisias jonesi Schaus 1894					X														X		X							
Hypocrita bicolora (Sulzer, 1776)																			X		X						X	

Continued on next page

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Hyponerita pinon (Druce, 1911)	X				X									X					X							X		
Hyponerita tipolis (Druce, 1896)	X																		X							X		
Ichoria chalcomedusa Druce, 1893											X								X		X							
Ichoria tricincta (Herrich-Schäffer, 1855)	X				X						X						X		X	X	X					X		
Idalus admirabilis (Cramer, 1777)											X				X				X							X		
Idalus agastus Dyar, 1910																			X							X		
Idalus albescens (Rothschild, 1909)	X																											
Idalus aleteria (Schaus, 1905)																	X		X									
Idalus carinosa (Schaus, 1905)	X				X												X		X		X					X		
Idalus citrina Druce, 1890											X																	
Idalus dares Druce 1894	X																		X									
Idalus felderi (Rothschild, 1909)	X													X					X		X					X		
Idalus flavicostalis (Rothschild, 1935)	X																X		X							X		
Idalus herois Schaus, 1889	X																		X									
Idalus idalia (Hampson, 1901)	X																X		X		X					X		
Idalus lineosus Walker, 1869	X																X		X		X					X		
Idalus metacrinis (Rothschild, 1909)	X																											
Idalus noiva Jones 1914											X																	
Idalus tybris (Cramer, [1776])											X																	
Idalus vitrea (Cramer 1780)	X																				X			X		X		
Ilipa tengyra (Walker, 1854)	X		X		X		X				X	X	X		X		X		X		X					X		
Illice batialis Walker, 1859					X						X																	
Illice blanda Jones 1914					X						X						X									X		
Illice cryptopyra Hampson 1903											X																	
Illice ditrigona Schaus 1899											X																	
Illice orbonella Hampson 1900											X																	
Illice persimilis Hampson 1903											X																	
Illice petrovna Schaus 1892											X								X									
Illice sp.											X																	
Isanthrene incendiaria (Hübner, 1827)											X				X				X		X							
Isanthrene melas Cramer 1775																					X							
Isanthrene pertexta Draudt, 1917											X								X									
Isanthrene ustrina Hübner, 1827	X										X															X		
Ischnocampa lithosioides (Rothschild, 1912)																	X											
Ischnocampa lugubris (Schaus, 1892)	X										X								X		X					X		
Ischnocampa styx Jones, 1914					X						X						X		X							X		
Ischnocampa tristis Schaus, 1889											X																	
Ischnognatha semiopalina Felder, 1874																			X		X							
Isia alcumena Berg, 1882																			X									
Isia intricata Walker, 1856	X										X								X	X								
Ixylasia semivitreata Hampson, 1905																	X		X									
Ixylasia trogonoides (Walker, 1864)					X												X		X									

Continued on next page

http://dx.doi.org/10.1590/1676-0611-BN-2015-0112

http://www.scielo.br/bn

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Lamprostola pascuala (Schaus, 1896)					X						X						X											
Lamprostola unisfascia (Rothschild, 1913)							X					X																
Lampruna rosea Schaus, 1894																			X									
Lepidokirbyia vittipes (Walker, 1855)	X																		X									
Lepidoneiva erubescens (Butler, 1876)	X				X						X		X				X		X		X					X	X	X
Lepidozikania cinerascens (Walker, 1855)	X										X								X		X					X		
Lepidozikania similis Travassos, 1949	X																		X		X					X	X	
Leucanopsis acuta (Hampson, 1901)											X								X									
Leucanopsis ahysa (Schaus, 1933)	X																											
Leucanopsis athor (Schaus, 1933)	X										X						X		X							X		
Leucanopsis bactris Sepp, 1852																	X											
Leucanopsis biedala (Schaus, 1941)					X												X											
Leucanopsis cedon (Druce, 1897)											X																	
Leucanopsis coniota (Hampson, 1901)											X																	
Leucanopsis dallipa (Jones, 1908)											X																	
Leucanopsis fuscosa (Jones, 1908)	X																X		X									
Leucanopsis leucanina (Felder & Rogenhofer, 1874)											X						X		X									
Leucanopsis mandus (Herrich-Schäffer, [1855])					X						X						X		X							X		
Leucanopsis oruba (Schaus, 1892)	X										X						X		X									
Leucanopsis perirrorata (Reich, 1935)	X																		X							X		
Leucanopsis pseudomanda (Rothschild, 1910)											X						X											
Leucanopsis pulverea (Schaus, 1896)																	X									X		
Leucanopsis rhomboidea (Sepp, [1852])							X				X	X																
Leucanopsis sablona (Schaus, 1896)											X						X											
Leucanopsis squalida (Herrich-Schäffer, [1855])											X																	
Leucanopsis strigulosa (Walker, 1855)																	X											
Leucanopsis terola (Schaus, 1941)					X									X					X							X		
Leucanopsis umbrosa (Hampson, 1901)											X																	
Leucanopsis valentina Schaus 1924																			X									
Leucotmemis nexa (Herrich-Schäffer, [1854])	X														X						X		X					
Lomuna nigripuncta (Hampson, 1900)																			X									
Lophocampa annulosa (Walker, 1855)																			X									
Lophocampa atrimaculata (Hampson, 1901)														X			X		X									
Lophocampa catenulata Hübner 1812											X																	
Lophocampa citrina (Sepp, [1852])	X				X						X			X							X							
Lophocampa modesta (Kirby, 1892)	X				X								X															
Lophocampa romoloa (Schaus, 1933)											X						X		X	X						X		
Lophocampa ronda (Jones, 1908)											X																	
Lophocampa texta Herrich-Schäffer 1855											X																	
Loxophlebia brasiliensis Rothschild, 1911	X														X				X							X		
Loxophlebia flavinigra Jones, 1908											X																	
Loxophlebia pyrgion (Druce, 1884)							X					X	X		X									X		X		

Continued on next page

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Lycomorphodes aracia Jones 1914											X																	
Lycomorphodes dichroa Dognin, 1912											X																	
Lycomorphodes epatra Schaus, 1905											X																	
Lycomorphodes strigosa (Butler, 1877)	X				X						X																	
Lycomorphodes suspecta (Felder, 1875)	X																										X	
Machadoia xanthosticta (Hampson, 1901)	X										X			X					X		X					X		
Macrocneme aurifera Hampson 1914											X																	
Macrocneme cyanea Butler 1876											X																	
Macrocneme indistincta Butler, 1876	X														X													
Macrocneme lades (Cramer, 1776)	X										X																	
Macrocneme pelotas Dietz, 1994	X																											
Macrocneme sura Schaus, 1901											X																	
Mallodeta clavata (Walker, 1854)	X				X						X			X			X		X	X	X			X		X		
Mallodeta consors (Walker, 1854)	X										X										X							
Mallodeta sortita Walker 1854	X				X														X		X					X		
Mazaeras conferta Walker, 1855	X										X						X		X							X		
Mazaeras francki Schaus, 1896	X										X						X		X		X					X		
Mazaeras janeira (Schaus, 1892)	X										X								X	X	X	X				X		
Mazaeras melanopyga (Walker, 1869)	X														X				X		X							
Melese asana Druce, 1884											X													X		X		
Melese amastris Druce 1884	X																X		X	X						X		
Melese babosa (Dognin, 1894)											X						X		X	X								
Melese castrena Schaus, 1905	X																		X							X		
Melese dorothea (Stoll, 1782)	X							X			X								X		X			X		X		
Melese hebetis Rothschild, 1909	X																			X	X					X		
Melese incertus Walker 1855	X																		X									
Melese ocellata Hampson, 1901	X																									X		
Melese peruviana Rothschild, 1909	X																									X		
Mellamastus nero (Weymer, 1907)											X									X								
Mesothen desperata (Walker, 1856)																					X							
Mesothen inconspicuata (Kaye, 1911)											X										X							
Mesothen pyrrhina Jones, 1914					X																							
Mesothen rogenhoferi Schaus 1892											X																	
Metallosia chrysotis Hampson, 1900													X															
Metalobosia cúprea (Schaus, 1896)					X						X						X									X		
Metalobosia varda (Schaus, 1896)											X															X		
Metamya aenetus (Schaus, 1896)	X				X						X						X			X								
Metaxanthia threnodes Druce 1905																			X									
Metaxanthia vespiformis Druce 1899																			X							X		
Mirandisca harpalyce (Schaus, 1892)	X										X						X		X	X						X		
Munona iridescens Schaus 1894																			X							X		
Napata albiplaga (Walker, 1854)																					X							

Continued on next page

http://dx.doi.org/10.1590/1676-0611-BN-2015-0112

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Napata atricincta Hampson, 1901																								X				
Napata jynx (Hübner, 1832)	X																				X						X	
Napata leucotela Butler, 1876	X																											
Napata quadrimaculata (Möschler, 1872)											X																	
Napata splendida (Herrich-Schäffer, [1854])											X								X							X		
Napata terminalis (Walker, 1854)																				X	X							
Napata walkeri (Druce, 1889)																					X							
Neidalia orientalis Rothschild, 1933											X						X		X		X							
Neonerita dorsipuncta Hampson 1901	X				X														X		X					X		
Neotrichura nigripes Heylaerts 1890	X				X						X		X				X		X	X	X					X		
Neozatrephes schausi (Rothschild, 1909)											X																	
Neozatrephes telessila Druce, 1893																								X				
Nepe coelestina (Cramer, 1782)	X																											
Neritos leucoplaga Hampson 1905	X																		X									
Neritos onytes (Cramer, 1777)							X					X																
Neritos psamas (Cramer, 1779)							X					X																
Neritos repanda Walker, 1855					X												X		X					X	X			
Nodozana coresa Schaus 1896	X										X																	
Nodozana jucunda Jones, 1914							X				X	X			X													
Nodozana rhodosticta (Butler, 1878)											X				X													
Notophyson heliconides Swainson 1833	X																				X							
Notophyson tiresias Cramer 1776	X																				X						X	
Nyridela acroxantha Perty 1834	X										X								X	X	X					X		
Odozana cocciniceps Jones 1908											X																	
Odozana domina Schaus 1896											X																	
Odozana obscura (Schaus, 1896)											X		X				X		X							X		
Opharus basalis Walker 1856	X										X						X		X									
Opharus bimaculata (Dewitz 1877)	X																		X		X							
Opharus intermedia Rothschild 1909																	X											
Opharus flavimaculata Hampson 1901					X																							
Opharus notata (Schaus 1892)											X						X		X							X		
Opharus procroides Walker, 1855	X										X						X		X									
Opharus rema (Dognin, 1891)	X										X		X				X		X		X					X		
Ordishia rutilus Stoll, 1782															X				X									
Ormetica chrysomelas (Walker, 1856)	X										X								X							X		
Ormetica fulgurata (Butler, 1876)	X										X			X					X							X		
Ormetica neira (Schaus, 1905)	X																		X		X					X		
Ormetica ochreomarginata (Joicey & Talbot, 1918)							X					X																
Ormetica taniala Schaus 1910																										X		
Ormetica xanthia Hampson 1901																				X								
Pachydota affinis Rothschild, 1909											X																	
Pachydota albiceps (Walker, 1856)	X												X				X							X		X	X	

Continued on next page

http://www.scielo.br/bn

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Pachydota ducasa Schaus, 1905	X													X			X		X									
Pachydota punctata Rothschild 1909	X																		X									
Pachydota saduca (Druce, 1895)	X										X																	
Paracles affinis (Rothschild, 1910)											X								X							X		
Paracles alonia Schaus 1933											X																	
Paracles bilinea (Schaus, 1901)											X						X				X							
Paracles brunnea (Hübner, [1831])											X										X							
Paracles costata (Burmeister, 1878)																			X		X							
Paracles fusca (Walker, 1856)	X																									X		
Paracles variegata (Schaus, 1896)											X															X		
Paraethria triseriata (Herrich-Schäffer, [1855])											X								X									
Parathyris cedonulli (Stoll 1781)	X										X								X	X	X							
Paranerita inequalis Rothschild, 1909	X										X				X		X		X		X			X				X
Pareuchaetes aurata (Butler, 1875)	X										X																	
Pareuchaetes insulata (Walker, 1855)																								X				
Parevia sisenna Druce 1899																						X						
Parevia vulmaria Schaus, 1924	X																X		X							X		
Pelochyta arontes (Stoll 1782)											X								X									
Pelochyta cinerea (Walker, 1855)	X										X						X		X		X					X		
Pelochyta pallida (Schaus, 1901)											X						X		X							X		
Phaegoptera albescens Travassos 1955											X																	
Phaegoptera albimacula (Jones, 1908)					X						X						X		X		X					X		
Phaegoptera chorima Schaus, 1896																			X									
Phaegoptera depicta Herrich-Schäffer, [1855]											X						X		X	X						X		
Phaegoptera flavopunctata Herrich-Schäffer, [1855]											X						X		X		X					X		
Phaegoptera granifera Schaus, 1892	X										X						X		X		X					X	X	
Phaegoptera histrionica Herrich-Schäffer, [1853]	X										X						X		X		X					X		
Phaegoptera nexa (Herrich-Schäffer, 1855)											X						X		X									
Phaegoptera pseudocatenata Travassos, 1955											X								X									
Phaegoptera punctularis Herrich-Schäffer, [1855]											X															X		
Phaegoptera schaefferi Herrich-Schäffer, [1855]											X								X									
Phaegoptera superba (Druce, 1911)	X										X						X		X							X		
Phaeomolis lineatus Druce 1884	X																		X		X							
Phaeomolis polystria Schaus 1905																			X									
Phaloe cruenta (Hübner, 1823)	X										X								X	X								
Pheia albisigna (Walker, 1854)																	X											
Pheia catherina (Schaus, 1892)	X																											
Pheia crocata (Herrich-Schäffer, 1854)	X																		X		X							
Pheia elegans (Druce, 1884)																										X		
Pheia picta (Walker, 1854)	X				X								X				X							X				
Philoros colombina Draudt 1915											X																	
Philoros rubriceps (Walker, 1854)	X										X				X		X		X		X					X		

Continued on next page

http://dx.doi.org/10.1590/1676-0611-BN-2015-0112

http://www.scielo.br/bn

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Phoenicoprocta analis Schrottky, 1909																				X								
Phoenicoprocta haemorrhoidalis (Fabricius, 1775)					X									X						X								
Phoenicoprocta steinbachi Rothschild 1911	X																				X							
Phoenicoprocta teda (Walker, 1854)	X	X									X																	
Phoenicoprocta vacillans (Walker, 1856)	X										X								X		X				X			
Pilopleura sanguipuncta Hampson, 1898							X					X																
Pionia elongata (Dognin, 1890)	X										X								X		X				X	X		
Pionia lycoides (Walker, 1854)	X							X			X		X	X			X		X	X	X				X	X		
Poliopastea ockendeni Rothschild, 1909											X																	
Pronola magniplaga Schaus, 1899					X						X		X				X		X		X				X			
Pseudaclytia pseudodelphire Rothschild 1912																								X				
Pseudapistosia umber Cramer 1775																			X		X				X			
Pseudohyaleucerea vulnerata (Butler, 1875)	X				X						X						X		X		X			X	X			
Pseudomya tipulina (Hübner, 1812)	X				X						X										X							
Pseudophaloe tellina (Weymer, 1895)											X																	
Pseudopompilia mimica Druce 1898	X																											
Pseudosphex fulvisphex (Druce, 1898)															X													
Pseudosphex ichneumonea Herrich-Schäffer (1854)	X										X																	
Pseudosphex jonesi Kaye 1911											X																	
Pseudosphex melanogen Dyar 1910											X																	
Pseudosphex rubripalpus Hampson 1901	X										X								X	X	X				X			
Pseudotessellarctia brunneitincta (Hampson, 1901)	X																X		X						X			
Pseudotessellarctia ursina Schaus 1892	X																		X		X							
Psilopleura pentheri Zerny 1912							X					X																
Psilopleura sanguipuncta Hampson 1898	X						X					X																
Psychophasma erosa (Herrich-Schäffer, (1858))	X										X								X		X				X	X		
Ptychotrichos elongatus Schaus, 1905	X				X						X			X			X		X		X							
Ptychotrichos zeus Schaus, 1894	X																		X		X				X			
Purius pilumnia (Stoll, 1780)	X		X								X			X	X													
Rezia cardinale (Hampson, 1898)	X				X						X		X	X					X		X				X			
Rezia erythrarchos (Walker, 1854)					X								X				X		X						X			
Rhipha flavoplagiata Rothschild 1911	X													X														
Rhipha persimilis Rothschild 1909																			X	X								
Rhipha strigosa (Walker, 1854)							X					X							X									
Rhipha subflammans (Rothschild, 1909)					X						X						X		X		X				X			
Rhodographa phaeoplaga Schaus, 1899											X						X											
Rhynchopyga meisteri (Berg, 1883)	X										X						X		X						X			
Rhynchopyga subflamma Druce 1884													X															
Robinsonia dewitzi Gundlach, 1881	X														X						X							
Robinsonia lefaivrei Schaus 1895																			X									
Robinsonia spitzi Rothschild 1933																	X		X						X			
Roeselia bifiliferata Walker 1862											X																	

Continued on next page

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Roeselia nepheloleuca Hampson											X																	
Roeselia perangulata Hampson 1900											X																	
Roeselia polyodonta Schaus 1905											X																	
Romualdia elongata (Felder, 1874)	X										X															X		
Romualdia opharina (Schaus, 1921)											X						X		X		X					X		
Sarosa pompilina Butler 1876	X																				X							
Saurita attenuata Hampson, 1905	X																				X						X	
Saurita carmania Druce, 1833											X																	
Saurita cassandra (Linnaeus, 1758)	X				X														X		X			X				
Saurita erythrogyia Hampson, 1898	X										X										X							
Saurita intricata (Walker, 1854)	X				X									X							X						X	
Saurita melanifera Kaye, 1911											X																	
Saurita nigripalpia (Hampson, 1898)																					X							
Saurita pellucida (Schaus, 1892)											X																	
Saurita phoenicosticta Hampson 1898																					X							
Saurita sericea (Herrich-Schäffer, [1854])	X										X						X			X	X		X				X	
Saurita triangulifera (Druce, 1898)														X														
Scaptius pseudoprumala (Rothschild, 1935)	X																		X							X		
Scaptius sanguistrigata (Dognin, 1910)																			X							X		
Sciopsyche tropica Walker 1854	X										X						X		X	X	X					X	X	
Selenarctia elissa (Schaus, 1892)	X						X					X							X									
Selenarctia flavidorsata Watson, 1975	X																		X									
Sermyla transversa (Walker, 1854)	X																X		X							X		
Sphecosoma abdominalis Schaus 1905	X																											
Sphecosoma besasa Schaus 1924																					X							
Sphecosoma melissa Schaus, 1896	X										X										X							
Sthenognatha gentilis Felder, 1874	X										X			X			X		X		X					X		
Sutonocrea lobifer (Herrich-Schäffer, [1855])	X																											
Sutonocrea reducta (Walker, 1856)	X						X					X		X					X		X					X		
Sychesia dryas (Cramer, 1775)	X										X															X		
Sychesia erubescens Jordan, 1916	X										X								X		X					X		
Symphlebia abdominalis (Herrich-Schäffer, [1855])	X										X								X		X						X	
Symphlebia catenata (Schaus, 1905)	X										X								X							X		
Symphlebia distincta (Rothschild, 1933)																			X									
Symphlebia doncasteri Rothschild 1910											X																	
Symphlebia indistincta (Rothschild, 1909)																			X							X		
Symphlebia lophocampoides Felder, 1874	X				X						X						X		X	X	X					X		
Symphlebia muscosa (Schaus, 1910)																								X				
Symphlebia neja Schaus 1905	X									X									X							X		
Symphlebia perflua (Walker, 1869)	X				X						X		X				X		X		X							
Symphlebia suanus (Druce, 1902)																	X											
Syntomeida austera Dognin 1902	X										X					X			X		X							

Continued on next page

http://dx.doi.org/10.1590/1676-0611-BN-2015-0112

http://www.scielo.br/bn

Appendix I. Continued.

Species	AR	AB	AC	BM	CM	CG	CA	CB	DC	GU	IT	MA	MG	MN	MR	NI	NF	NG	PE	RE	RJ	SA	SM	SJ	TA	TE	TR	VA
Syntomeida melanthus Cramer 1780																X			X		X							
Talara barema Schaus, 1896					X																							
Talara ditis (Butler, 1878)											X				X													
Talara niveata Butler, 1878							X				X	X		X	X													
Tessela sertata (Berg, 1882)	X				X						X				X		X		X		X							
Tessellarctia semivaria (Walker, 1856)											X								X									
Theages pseuscanturum Schaus, 1910																					X							
Thysanoprymna haemorrhoides (Schaus, 1905)	X																							X				
Thysanoprymna pyrrhopyga (Walker, 1865)	X				X														X							X		
Timalus clavipennis Druce 1897	X																		X		X					X		
Tipulodes ima Boisduval, 1832	X										X										X							
Trichomelia celenna Schaus, 1892											X				X													
Trichura cerberus (Pallas, 1772)	X																							X				
Trichura coarctata Drury 1773	X																											
Trichura cyanea Schaus, 1892											X																	
Trichura dixanthia Hampson, 1898	X										X										X						X	
Trichura fulvicaudata Lathry 1899																					X							
Tricypha nigrescens Rothschild, 1909																			X									
Tricypha ochrea Hampson 1901											X																	
Utetheisa ornatrix (Linnaeus, 1758)	X		X				X				X	X			X		X		X		X					X		
Virbia brevilinea (Walker, 1854)											X			X														
Virbia divisa (Walker, 1864)					X									X					X		X							
Virbia fasciata Rothschild 1910					X																							
Virbia punctata Druce 1911																			X									
Virbia zonata Felder 1874																			X									
Viviennea euricosilvai Travassos 1954											X																	
Viviennea flavicincta (Herrich-Schäffer, [1855])											X						X		X	X						X		
Viviennea moma (Schaus, 1905)	X										X								X					X		X		
Viviennea salma (Druce 1896)											X								X					X				
Viviennea superba Druce 1883											X																	
Viviennea zonana (Schaus, 1905)																			X		X							
Wanderbiltia wanderbilti Rego Barros 1958											X																	
Xantholopha purpurascens Schaus, 1899					X						X						X		X									
Xanthophaeina levis (Druce, 1899)	X										X								X		X					X		

Acknowledgments

We would like to offer our sincere thanks to CAPES and to Programa de Pós-graduação em Ecologia (PPGE/UFRJ) for Milena S. Nascimento's doctoral scholarship and support. We also acknowledge CNPq for Ricardo F. Monteiro's scholarship research productivity. Finally, we thank INCT Hympar Sudeste (CNPq/FAPESP/CAPES) for financing this research and ICMBio for the research permits in the União Biological Reserve, in Tinguá Biological Reserve and in Serra dos Órgãos National Park. RedeLep-CNPq (grant #563332/2010-7) funded the Viviane Ferro work.

References

AB'SÁBER, A.N. 2005. Os Domínios de Natureza no Brasil: Potencialidades Paisagísticas. 3 ed. Ateliê Editorial, São Paulo.

BROWN JR, K.S. & FREITAS, A.V.L. 1999. Lepidoptera. In Biodiversidade do Estado de São Paulo: Síntese do conhecimento ao final do século XX (C.R.F. Brandão & E.M. Cancello, eds.). Fapesp, São Paulo, v. 5, p. 225–243.

DELFINA, M.C. & TESTON, J.A. 2013. Arctiinae (Lepidoptera, Arctiidae) ocorrentes em uma área de pastagem na Amazônia Oriental em Altamira, Pará, Brasil. Acta Amazon. 43(1): 81–90, http://dx.doi.org/10.1590/S0044-59672013000100010

DUARTE, M., ROBBINS, R.K., FREITAS, A.V.L., BROWN, JR K.S., MONTEIRO, R.F., CASAGRANDE, M.M., MIELKE, O.H.H., NASCIMENTO, M.S. & ALVES, T.G. 2009. Borboletas da Mata Atlântica do Estado do Rio de Janeiro: Lycaenidae (Lepidoptera). Arq. Mus. Nac. 67(3–4): 291–302.

FERRO, V.G. & DINIZ, I.R. 2007. Arctiidae (Insecta: Lepidoptera) da Estação Biológica de Boracéia (Salesópolis, São Paulo, Brasil). Biota Neotrop. 7(3): 331–338 http://www.biotaneotropica.org.br/v7n3/pt/abstract?article+bn02207032007 (last accessed 10/05/2013), http://dx.doi.org/10.1590/S1676-06032007000300033

FERRO, V.G. & DINIZ, I.R. 2010. Riqueza e composição das mariposas Arctiidae (Lepidoptera) no Cerrado. In Cerrado: conhecimento quantitativo como subsídio para as ações de conservação (I.R. Diniz, J. Marinho-Filho, R.B. Machado & R. Cavalcanti, eds.). Editora Thesaurus, Brasília, p. 255–313.

FERRO, V.G. & MELO, A.S. 2011. Diversity of tiger moths in a Neotropical hotspot: determinants of species composition and identification of biogeographic units. J. Insect Conserv. 15:643–651, http://dx.doi.org/10.1007/s10841-010-9363-6

FERRO, V.G. & TESTON, J.A. 2009. Composição de espécies de Arctiidae (Lepidoptera) no sul do Brasil: Relação entre tipos de vegetação e entre a configuração espacial do hábitat. Rev. Bras. Entomol. 53(2): 278–286, http://dx.doi.org/10.1590/S0085-56262009000200010

FERRO, V.G., RESENDE, I.M.H. & DUARTE, M. 2012. Mariposas Arctiinae (Lepidoptera: Erebidae) do estado de Santa Catarina, Brasil. Biota Neotrop. 12(4): 000–000 http://www.biotaneotropica.org.br/v12n4/pt/abstract?article+bn01312042012 (last accessed 10/05/2013)., http://dx.doi.org/10.1590/S1676-06032012000400018

FERRO, V.G. & ROMANOWSKI, H.P. 2012. Diversity and composition of tiger moths (Lepidoptera: Arctiidae) in an area of Atlantic Forest in southern Brazil: is the fauna more diverse in the grassland or in the forest? Zoologia 29(1): 7–18, http://dx.doi.org/10.1590/S1984-46702012000100002

GALINDO-LEAL, C. & CÂMARA, I.G. 2005. Status do hotspot Mata Atlântica: Uma síntese. In Mata Atlântica: Biodiversidade, Ameaças e Perspectivas (C. Galindo-Leal & I.G. Câmara, orgs.). Fundação SOS Mata Atlântica e Conservação Internacional, São Paulo, p. 3–11.

IBGE. 2013. Resolução N°1 do Instituto Brasileiro de Geografia e Estatística, de 15 de Janeiro de 2013 – Área Territorial Oficial. Diário Oficial da União, Brasília, DF.

JACOBSON, N.L. & WELLER, S.J. 2002. A cladistic study of the Arctiidae (Lepidoptera) by using characters of immatures and adults. Thom. Say P: monographs. Lanham, pp 97.

KOLEFF, P., GASTON, K.J. & LENNON, J.J. 2003. Measuring beta diversity for presence-absence data. J. Anim. Ecol. 72(3): 367–382, http://dx.doi.org/10.1046/j.1365-2656.2003.00710.x

LEWINSOHN, T.M. & PRADO, P.I. 2004. Biodiversidade Brasileira: Síntese do Estado Atual do Conhecimento. 2 ed. Editora Contexto, São Paulo.

LEWINSOHN, T.M., FREITAS, A.V.L. & PRADO, P.I. 2005. Conservação de invertebrados terrestres e seus habitats no Brasil. Megadiv. 1(1): 62–69.

MONTEIRO, R.F., ESPERANÇO, A.P., BECKER, V.O., OTERO, L.S., HERKENHOFF, E.V. & SOARES, A. 2004. Mariposas e borboletas na Restinga de Jurubatiba. In Pesquisas de Longa Duração na Restinga de Jurubatiba – Ecologia, História Natural e Conservação (C.F.D. Rocha, F.A. Esteves & F.R. Scarano, eds.). Rima Editora, São Carlos. p. 143–164.

MONTEIRO, R.F., FREITAS, A.V.L., COSTA FILHO, M.A.F, NASCIMENTO, M.S., ALVES, T.G., BROWN, JR K.S., MIELKE, O.H.H., CASAGRANDE, M.M. & DUARTE, M. 2009. Borboletas da Mata Atlântica do Estado do Rio de Janeiro: Pieridae (Lepidoptera). Arq. Mus. Nac. 67(3–4): 283–289.

MORENO, C., MAGALHÃES, F.C., REZENDE, L.H.G., NEVES, K. & FERRO, V.G. 2015. Riqueza e composição de Arctiinae (Lepidoptera, Erebidae) em cinco Unidades de Conservação do Cerrado. Iheringia Ser. Zool. 105(3):297–306, http://dx.doi.org/10.1590/1678-476620151053297306

MYERS, N., MITTERMEIER, R.A., MITTERMEIER, C.G., FONSECA, G.A.B. & KENT, J. 2000. Biodiversity hotspots for conservation priorities. Nature 403: 853–858, http://dx.doi.org/10.1038/35002501

OLIVEIRA-FILHO, A.T. & FONTES, M.A.L. 2000. Patterns of floristic differentiation among Atlantic forests in southeastern Brazil and the influence of climate. Biotropica 32(4): 793–810, doi: http://dx.doi.org/10.1646/0006-3606(2000)032[0793:POFDAA]2.0.CO;2

PIÑAS-RUBIO, F. & MANZANO, P.I. 2003. Mariposas del Ecuador, Arctiidae, Subfamília: Ctenuchinae. Conpañia de Jesús, Quito., http://dx.doi.org/10.1007/s10841-010-9363-6

PIÑAS-RUBIO, F., RAB-GREEN, S., ONORE, G. & MANZANO, P.I. 2000. Mariposas Del Ecuador. Arctiidae, Subfamilias: Arctiinae y Pericopinae. Pontificia Universidad Católica del Ecuador, Quito.

R DEVELOPMENT CORE TEAM. 2009. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna. http://www.R-project.org (last accessed 30/08/2011).

SOS MATA ATLÂNTICA & INPE. 2015. Atlas dos Remanescentes Florestais da Mata Atlântica Período 2013–2014, Fundação SOS Mata Atlântica e Instituto Nacional de Pesquisas Espaciais. Disponível em http://mapas.sosma.org.br/dados/ (last accessed 18/02/2016).

TESTON, J.A. & CORREA, D.C.V. 2015. The Arctiini (Lepidoptera, Erebidae, Arctiinae) fauna of the Serra do Pardo National Park, Pará, Brazil. Check List 11(2): 1613, http://dx.doi.org/10.15560/11.2.1613

TESTON, J.A. & DELFINA, M.C. 2010. Diversidade de Arctiinae (Lepidoptera, Arctiidae) em área alterada em Altamira, Amazônia Oriental, Pará, Brasil. Acta Amazon. 40(2): 387–396, http://dx.doi.org/10.1590/S0044-59672010000200017

VINCENT, B. & LAGUERRE, M. 2014. Catalogue of the Neotropical Arctiini Leach, [1815] (except Ctenuchina Kirby, 1837 and Euchromiina Butler, 1876) (Insecta, Lepidoptera, Erebidae, Arctiinae). ZOOSYSTEMA 36(2): 137–533, http://dx.doi.org/10.5252/z2014n2a1

WATSON, A. & GOODGER, D.T. 1986. Catalogue of the Neotropical tiger-moths. Occas. Pap. Syst. Entomol. 1: 1–70.

ZENKER, M.M., DEVRIES, P.J., PENZ, C.M., TESTON, J.A., FREITAS, A.V.L. & PIE, M.R. 2015. Diversity and composition of Arctiinae moth assemblages along elevational and spatial dimensions in Brazilian Atlantic Forest. J. Insect Conserv. 19:129–140, http://dx.doi.org/10.1007/s10841-015-9753-x

ZIKÁN, J.F. & ZIKÁN, W. 1968. Inseto-fauna do Itatiaia e da Mantiqueira 3: Lepidoptera. Pesqui. Agropecu. Bras. 3: 45–109.

Received 23/09/2015
Revised 19/02/2016
Accepted 16/05/2016