

ARTÍCULO:

A contribution to the knowledge of the spider fauna (Arachnida: Araneae) of the floodplain forests of the main Amazon River channel

Felipe N. A. A. Rego

Pós-Graduação em Ecologia, Universidade de Brasília, 70919-970, Brasília, DF, Brazil. regofelipe@yahoo.com

Eduardo M. Venticinque

Wildlife Conser. Soc., Rua dos Jatobás, 274, Coroado 3, 69085-000 and INPA, 69011-970, C.P. 478, Manaus, AM, Brazil. eventicinque@wcs.org

A. D. Brescovit, Cristina A. Rheims

Laboratório de Artrópodes Peçonhentos, Ins. Butantan, Av. Vital Brasil, 1500, São Paulo, SP, 05503-900, Brazil. anyphaenidae@butantan.gov.br cris.rheims@butantan.gov.br

Ana L. K. M. Albernaz

Museu Paraense Emílio Goeldi, Coordenação de Ciências da Terra e Ecologia, Av. Perimetral, 1901, Terra Firme, 66077-530, C.P. 399, Belém, PA, Brazil. anakma@museu-goeldi.br

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Avda. Radio Juventud, 37
50012 Zaragoza (ESPAÑA)

Tef. 976 324415

Fax. 976 535697

C-elect.: amelic@telefonica.net

Director: Carles Ribera
C-elect.: cribera@ub.edu

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ARTÍCULO:

A contribution to the knowledge of the spider fauna (Arachnida: Araneae) of the floodplain forests of the main Amazon River channel

Felipe N. A. A. Rego, Eduardo M. Venticinque, Antonio D. Brescovit, Cristina A. Rheims & Ana L. K. M. Albernaz

Abstract:

We collected spiders during an expedition along 3000 km of the floodplains of the Brazilian part of the main channel of the Amazon River and identified them to family, genus and species / morphospecies level whenever possible. More than half of the collected species represented new records. The percentage of singletons (35.6%) and doubletons (17.4%), the lack of overlapping between the data obtained in this study and that of the literature, and the under sampling emphasizes the need for more inventories in the Amazon River floodplain and a more complete set of sampling methods, such as canopy fogging and pitfall trapping. Therefore, knowledge on the fauna of the Amazon floodplains will remain an enormous challenge, regarding the still superficial collecting efforts, the lack of long-term samplings, taxonomic knowledge and capacity.

Key words: Arachnida, Araneae, spiders, inventory, Amazon River, várzea, Amazonia.

Contribución al conocimiento de la aracnofauna (Arachnida: Araneae) de las planicies aluviales del canal principal del Río Amazonas

Resumen:

Colectamos arañas durante una expedición a planicies aluviales a lo largo de 3000 km de la parte brasileña del canal principal del Río Amazonas, e identificamos estas hasta el nivel de familia, género y morfoespecie cuando fue posible. Más de la mitad de las especies colectadas fueron nuevos registros. El porcentaje de *singletons* (35%), *doubletons* (17.4%), la escasa superposición de estos datos con la literatura, y el submuestreo obtenido enfatizan la necesidad de más inventarios en las planicies aluviales del Río Amazonas y de un sistema más completo de metodologías de muestreo, como fumigaciones en las copas de los árboles o trampas pitfall. Así, el conocimiento de la fauna de la planicie amazónica permanece como un enorme desafío, considerando los esfuerzos de colecta aún superficiales, la falta de muestreos de largo plazo, el conocimiento y la capacidad taxonómica.

Palabras clave: Arachnida, Araneae, arañas, inventario, Río Amazonas, planicies aluviales, Amazonia

Introduction

The spider fauna in floodplain forests is apparently only superficially studied as, so far, there are only six publications that treat the species inhabiting flooded forests in the Brazilian Amazon (Adis *et al.*, 1984; Höfer 1990, 1997; Martius *et al* 1994, Borges & Brescovit 1996; Brescovit *et al.*, 2003). Only two surveys were conducted exclusively in the Amazon River main channel floodplains, one at the Mamirauá Sustainable Development Reserve, in the Mid-Solimões Region (Borges & Brescovit 1996) and another in the Marchantaria Island (Höfer 1997). The latter considered the longest study (1-year) carried out in the Amazonian floodplains. Short term collecting of spiders has also been carried out in the Amazon River floodplain and in those of the Branco, Negro, Madeira, and Tapajós rivers about 10 years ago (see Brescovit *et al* 2003). Other studies in flooded forests were concentrated

close to the city of Manaus (Adis *et al* 1984; Höfer 1990, 1997), in the “igapo” (black-water flooded forest) of the Negro River affluent Tarumã-Mirim. It should be stressed that “várzea” (white-water floodplain forest) and “igapó” (black-water) are distinct faunistic and floral environments, since they are flooded by rivers with different physical and chemical characteristics (mineral and organic concentrations, pH, transparency) (Junk 1983; Sioli 1984; Ayres 1995; Mertes *et al.*, 1996; Furch & Junk 1997; Irion *et al.*, 1997).

In this paper, we present and discuss a list of spider species collected during an expedition spanning the entire Brazilian portion of the Amazon River.

Material and Methods

STUDY AREA

The floodplain forests of the Amazon in a strict sense (“várzeas”) are flooded yearly by white-water rivers, from headwaters originating in the Western portion of the Amazon basin (Solimões, Amazon, Madeira, Juruá, Purus, and others). The great quantity of sediments brought from the Andes and the pre-Andean region causes the milky appearance of the water (Mertes *et al* 1995). The Amazon River originates in the Andean Region of Peru, being called Apurímac and Ucayali and, in Brazil, Solimões, where, after its convergence with the Negro River, it receives the name Amazon until it flows into the Atlantic. In this paper, we refer to the floodplains of the Solimões and Amazon rivers. They extend for more than 3,000 km from West to East, within Brazil (Junk 1997) and yearly inundate from 19,000 to 91,000 km² of forest (Sippel *et al* 1998). The Amazon’s water level is controlled mainly by thawing in the Andean Mountains (Junk 1983). The maximum flood-line in the floodplain and main channel of the river is reached in July, and the lowest level is attained around November, when the water depth may fall by 15 m (Irion *et al* 1997).

Spider samplings were carried out in 26 locations or sites spread along the main channel part of the Brazilian Amazon River, starting from the town of Tabatinga (4°01'S; 69° 46'W) in the western part of the Amazon basin, near the triple frontier between Brazil, Peru, and Colombia, to Mazagão (3°15'S; 59°32' W), close to the Atlantic Ocean in the east (Fig. 1). Collection sites comprised 20 municipalities distributed throughout three states (Amapá, Pará and Amazonas), always in areas subject to flooding. The greatest distance between sampling sites was approximately 3,000 km, the maximum distance between adjacent points was 195 km and the smallest, 39 km. Collecting sites were located on both banks of the river, islands and floodplains, choosing primary forest with little or no disturbance (logging, grazing, and burning). The sites sampled are detailed following the following format: STATE: Site number, municipality, community (latitude, longitude). AMAZONAS: Site 1, São Paulo de Olivença, Palmares (-4.014, -69.464); Site 2, São Paulo de Olivença, Bonsu-

cesso (-3.433, -68.856), Site 3, Santo Antônio do Içá, Presidente Vargas (-3.118, -67.966); Site 4, Jutai, São Raimundo (-2.72, -66.916); Site 5, Juruá, Tamaniquá (-2.615, -65.766); Site 6, Tefé, São Francisco do Capivara (-3.278, -64.626); Site 7, Tefé, São João do Catuá (-3.689, -64.154); Site 8, Coari, São Francisco do Laranjal (-3.892, -63.429); Site 9, Coari, Trocaris (-3.89, -62.842); Site 10, Codajás, Urucurizinho (-3.946, -61.957); Site 11, Anamã, Nova Esperança (-3.663, -61.505); Site 12, Manacapuru, Vila do Jacaré (-3.575, -60.817); Site 13, Itacoatiara, Nossa Senhora do Perpétuo Socorro (-3.149, -59.343); Site 14, Itacoatiara, São José (-3.32, -58.743); Site 15, Urucurituba, Nossa Senhora de Fátima (-2.423, -57.517); Site 16, Urucará, Lírio do Vale (-2.545, -56.523); Site 17, Parintins, Menino Deus (-2.065, -55.963). PARÁ: Site 18, Juruti, Recreio (-2.479, -54.311); Site 19, Óbidos, Januária (-2.113, -55.256); Site 20, Santarém, Santana (-2.382, -54.076); Site 21, Prainha, Curuauna (-1.86, -53.712); Site 22, Prainha, Fazenda JK (-1.746, -53.22); Site 23, Almeirim, Paranaquara (-1.486, -52.48); Site 24, Almeirim, Arumanduba (-1.164, -51.8); Site 25, Gurupá, São José (-1.204, -51.783). AMAPÁ: Site 26, Mazagão, Maranata (-0.521, -51.565) (Fig 1). The communities represent the locations along which the boat was docked during the collection of samples and throughout the expedition.

SPIDERS SAMPLING

Spiders were collected between September and November 2003. At each sampling site (N = 26) eight to fourteen 150 m² plots were set up to capture spiders (30 x 5 m), of which two were visited day and night (Table I). In the morning, beating of 20 shrubs was carried out with a 1 m² beating tray. At night, spiders were captured by hand during 1 h, by means of tweezers, plastic containers, and headlights. Twenty nocturnal and 15 diurnal non-quantitative (space or time) samples were additionally obtained from different floodplain environments, such as ravines, beaches, and macrophyte rafts (*Paspalum* sp.: Poaceae).

The spiders collected were maintained in ethyl alcohol (92%) for three months and transferred to vials with ethyl alcohol (80%). Adult spiders were all identified to genus, but many could not be assigned to described species and thus were sorted to morphospecies. The specimens were deposited at the Brazilian collections of the Instituto Nacional de Pesquisas da Amazônia, Manaus (INPA, curator: A. L. Henriques), Museu Emilio Goeldi, Belém (MPEG, curator: A. B. Bonaldo), and Instituto Butantan, São Paulo (IBSP, curator: A. D. Brescovit).

Results

We collected 10,901 spiders in total, 4,142 of which were adults, and discriminated 384 species belonging to 154 genera and 34 families (Table I, II). However, 73.4% (282) of the species are morphospecies which may represent new species or need further research for

identification or taxonomic review (Coddington & Levi 1991) (Table II). The number of adult spiders collected at one site ranged from 56 (site 11) to 322 (site 17) with an average number of 159 ± 65 (Table I). More adult females were collected but we did not find any discrepancy in sex ratio (2:3). The amplitude of the spider richness observed in one site ranged from 23 (site 11) to 81 (site 5) with an average of 51 ± 14 species (Table I). We observed a tendency towards the decrease in species richness from East to West along the Amazon River main channel (Venticinque *et al* 2007). The abundance average per sample was 16.8 ± 6.1 individuals and the amplitude among sites was 266 spiders (sites 11 and 17) (Table I).

Pisauridae was the most abundant family (795 specimens), and spiders of this family were sampled at almost all sampling sites (except for sites 7, 11, and 26). The second and third most abundant families are Salticidae (679) and Araneidae (592), specimens of which were caught at all sites. Other abundant families were Pholcidae (500), Theridiidae (240), Tetragnathidae (197), Mimetidae (194), Ctenidae (171), Trechaleidae (163), Thomisidae (132) and Lycosidae (109). The total number of individuals for these 11 families was 3,772 (91% of the total catch of adults). Two families, Hersiliidae and Selenopidae, were recorded for the very first time in the Amazon River floodplain. For 16 families no species identifications could be made: Anyphaenidae, Caponiidae, Clubionidae, Corinnidae, Deinopidae, Dictynidae, Gnaphosidae, Lycosidae, Mimetidae, Nesticidae, Oonopidae, Philodromidae, Pisauridae, Senoculidae, Synottidae and Theridiosomatidae (Table II).

The relationship between the number of species and the abundance indicated that the spider assemblage of the white-water floodplain forests consists of a few predominant species, such as *Thaumasia* sp.1 (752 individuals), *Mesabolivar aurantiacus* Mello-Leitão, 1930 (205), *Metagonia* sp.1 (173), *Scopocira* sp.1 (131), and *Ero* sp.1 (128) (Fig. 2). Most species (70.5%) were represented in the samples by 5 or less individuals, the few remaining species being captured with intermediate numbers (Fig. 2). The percentage of singletons (35.6%) and doubletons (17.4%) (Table I) and the low overlap between these data and the literature (25 species or 19%) (Table II) emphasizes the need for more inventories in the Amazon River floodplain and a more complete set of sampling methods, like canopy fogging and pitfalls (Adis *et al*, 1984; Höfer 1997).

Discussion

The number of unidentified species observed is an indication of the lack of knowledge with regard to the spider fauna of the Amazon floodplains and that of tropical spiders in general. For this reason, more taxonomic studies are crucial and a compilation of the data on spider species collected in the “várzea” from databases of previous studies (such as Adis *et al* 1984; Höfer 1990, 1997; Martius *et al* 1994; Borges & Brescovit 1996; Brescovit *et al* 2003) is required to increase the knowl-

edge on the spider fauna of the Amazonian floodplain forests. The occurrence of species represented in the samples by a single individual is similar to that observed in six arthropod surveys (32%) (Coddington *et al* 2009) and also to the standards of richness and abundance in tropical forests (Fisher *et al* 1943, Preston 1948, Hubbell 1997).

The lower richness and abundance of species observed in site 11 were caused by the absence of nocturnal samplings. This reflects the need of using different sampling methods at different times (day/night) in order to capture species from different habitats and guilds and consequently, increase the knowledge on the diversity of the spider fauna (Green 1999).

The comparison of similarity in species collected by Adis *et al.*, (1984), Martius *et al.*, (1994), Borges & Brescovit (1996), Brescovit *et al.*, (2003) and Höfer (1997) was not possible due to the fact that many of the species could not be identified or were unknown to science. In our samplings, 77 spiders, identified to species level (59%), represented new records for the floodplain forests of the Amazon River. Nevertheless, if the number of singletons and new records are considered, it becomes evident that the great number of genera represented by only one species is due to the sample scarcity in a vast region.

Further collections are necessary in the sites already sampled, as well as new surveys in other flooded areas using further sampling methods, for the study and deeper knowledge of the spiderfauna in Amazon River floodplains and in the Amazon region (Coddington & Levi 1991, Höfer 1997). Finally, this study also sought to broaden the knowledge of the Brazilian Amazon spider fauna on more locations, which has been mostly concentrated near Manaus (Adis *et al* 1984, Höfer 1990, 1997, Martius *et al* 1994, Borges & Brescovit 1996, Brescovit *et al* 2003).

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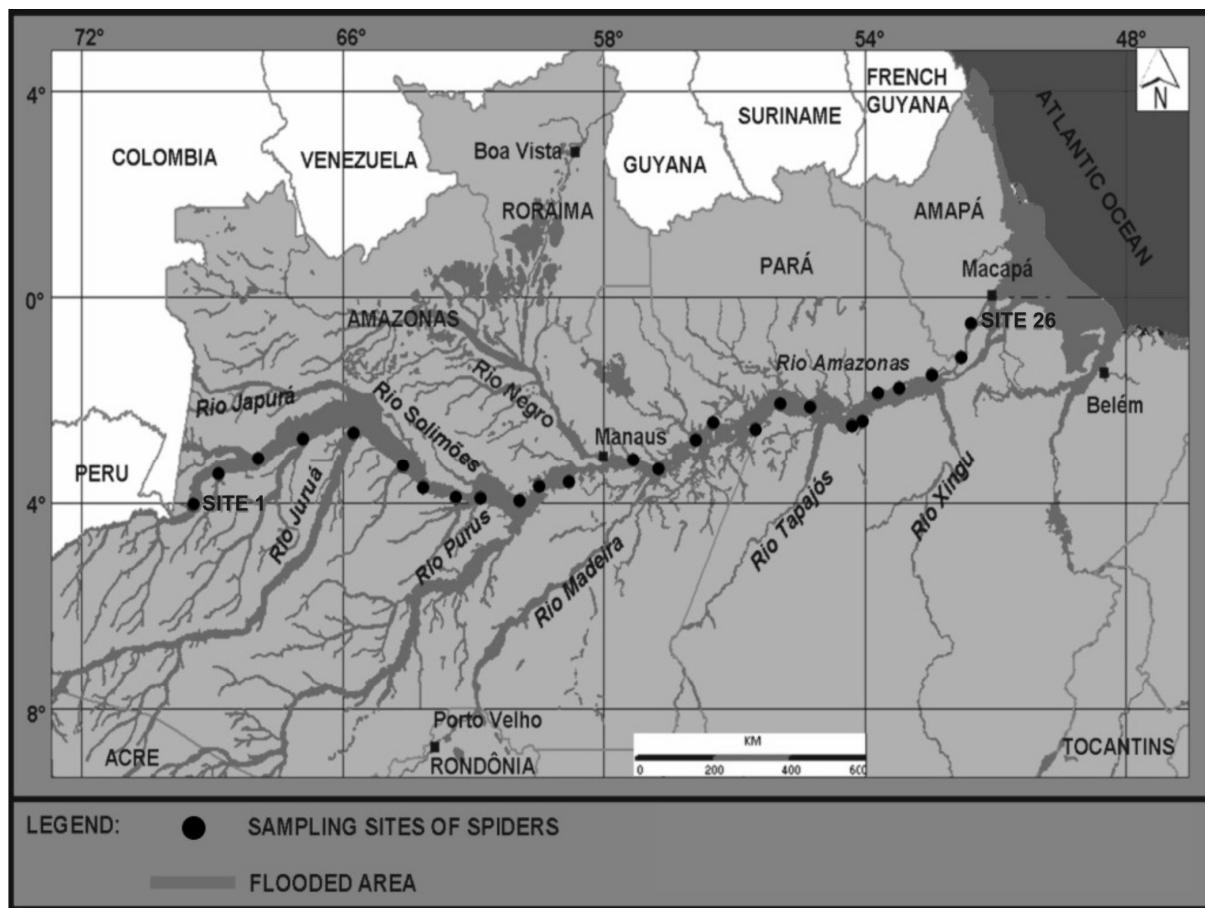


Figure 1. Twenty-six spider sampling sites on the floodplains of the Amazon River. This map illustrates the flooded areas along the main rivers of the Brazilian Amazon. SITE 1: São Paulo de Olivença; SITE 26: Mazagão.

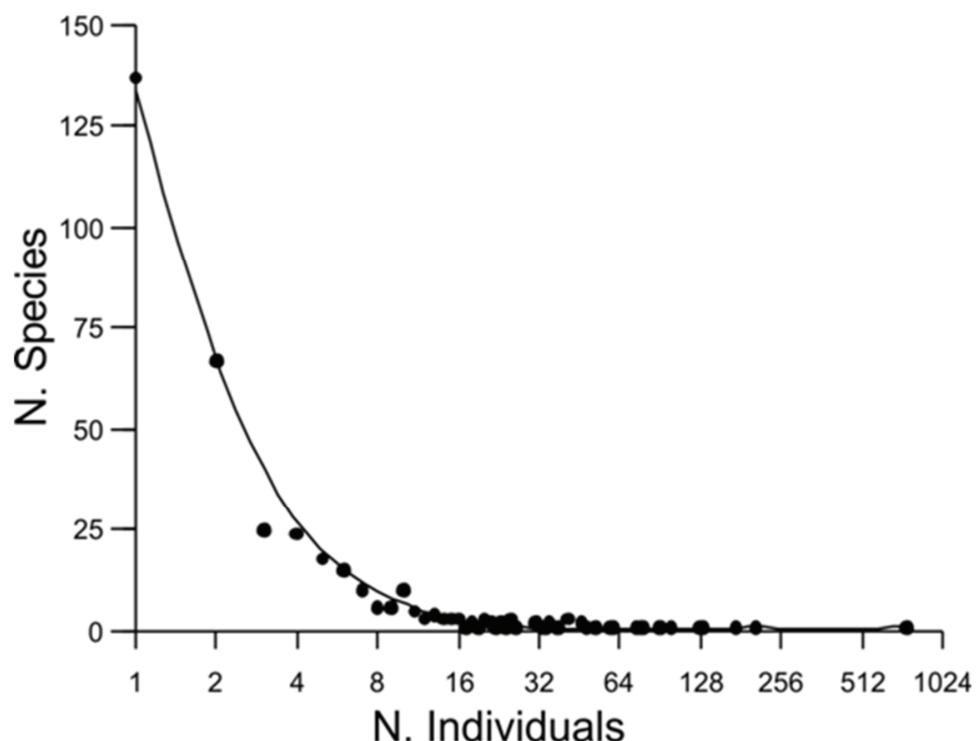


Figure 2. Number of individuals per species collected in this study. The line was adjusted by the least square-adjusted smoother and the x-axis numbers are categories of spider's abundance.

Table I. Spider samples by sites in the Amazon River floodplains (“várzeas”) along the main channel of the Amazon River. In each site, at least two plots were visited both during the day and at night (except site 11). Collections with no space or time standardization were excluded from the list. *Adults only.

Site	Number of Samples by Sampling Methods			Spiders Sampled			
	Beating		Hand	Total of	N. Species	N. Individuals*	N.
	tray (day)	searching (night)	Samples	(Richness)	(Abundance)	Singletons	Doubletons
1	6	2	8	75	194	10	16
2	6	2	8	64	139	8	7
3	6	2	8	47	108	4	2
4	6	2	8	71	136	12	8
5	8	2	10	81	223	14	14
6	6	2	8	65	173	2	4
7	6	2	8	57	121	4	4
8	8	2	10	55	141	6	5
9	8	2	10	53	110	7	4
10	6	2	8	68	165	8	2
11	6	0	6	23	56	1	1
12	6	2	8	46	140	4	1
13	8	2	10	32	108	2	3
14	8	2	10	53	284	7	3
15	8	2	10	51	169	5	3
16	10	2	12	49	225	3	2
17	8	2	10	52	322	2	3
18	8	2	10	43	183	3	4
19	12	2	14	57	221	3	3
20	8	2	10	43	190	4	6
21	8	2	10	53	249	5	3
22	8	2	10	31	99	2	1
23	8	2	10	41	103	6	3
24	8	2	10	45	137	4	2
25	8	2	10	42	72	4	5
26	6	2	8	27	74	7	2
Total	194	50	244		4142	137	

Table II. List of spider species and number of individuals collected in the floodplains along the main channel of the Amazon River, Brazil. *Subfamilies. ¹Species reported in previous literature (Borges & Brescovit 1996; Hubert, 1997; Brescovit *et al.* 2003; INPA 2008; SMNK 2008) and collected during the expedition.

Family\Genera or Species	Male	Female	Total	N. Sites
Anyphaenidae				
<i>Anyphaeninae*</i> (1 morphospecie)	2	9	11	7
<i>Anyphaenoides</i> sp.	1		1	1
<i>Hibana</i> sp.		2	2	2
<i>Otoniela</i> sp.		1	1	1
<i>Patrera</i> (7 morphospecies)	8	21	29	14
<i>Teudis</i> sp.	1		1	1
<i>Wulfila</i> (2 morphospecies)		6	6	4
Araneidae				
<i>Actinosoma pentacanthum</i> ¹ (Walckenaer, 1842)		2	2	2
<i>Aculepeira machu</i> Levi, 1991		3	3	3
<i>Aculepeira travassosi</i> ¹ (Soares & Camargo, 1948)	11	24	35	8
<i>Aculepeira vittata</i> (Gerschman & Schiapelli, 1948)	6	1	7	6
<i>Aculepeira</i> (3 morphospecies)	8	11	19	8
<i>Alpaida bicornuta</i> ¹ (Taczanowski, 1878)	4	8	12	3
<i>Alpaida delicata</i> ¹ (Keyserling, 1892)	9	7	16	5
<i>Alpaida tayos</i> Levi, 1988		2	2	1
<i>Alpaida truncata</i> (Keyserling, 1865)		1	1	1
<i>Alpaida veniliae</i> ¹ (Keyserling, 1865)	5	19	24	10
<i>Alpaida</i> (4 morphospecies)	2	16	18	8
<i>Argiope argentata</i> (Fabricius, 1775)		1	1	1
<i>Chaetacis abrahami</i> Mello-Leitão, 1948		1	1	1
<i>Chaetacis cornuta</i> (Taczanowski, 1873)	1		1	1
<i>Chaetacis necopinata</i> ¹ (Chickering, 1960)		10	10	5
<i>Chaetacis</i> (1 morphospecie)	4	14	18	11
<i>Cyclosa fililineata</i> Hingston, 1932	2	1	3	3
<i>Cyclosa tapetifaciens</i> Hingston, 1932	2	5	7	4
<i>Enacosoma anomalum</i> (Taczanowski, 1873)	1	1	2	2
<i>Eustala</i> (12 morphospecies)	59	140	199	25
<i>Gasteracantha cancriformis</i> (Linnaeus, 1758)		1	1	1
<i>Hingstepeira</i> sp.	1		1	1
<i>Hypognatha ica</i> Levi, 1996		1	1	1
<i>Hypognatha nasuta</i> O.P.-Cambridge, 1896	1	18	19	9
<i>Hypognatha scutata</i> (Perty, 1833)		1	1	1
<i>Hypognatha</i> (4 morphospecies)	10	4	14	10
<i>Mangora chacobo</i> Levi, 2007	5	8	13	8
<i>Mangora insperata</i> Soares & Camargo, 1948	5	16	21	8
<i>Mangora</i> (1 morphospecie)		2	2	2
<i>Metazygia enabla</i> Levi, 1995	1	6	7	6
<i>Metazygia ituari</i> Levi, 1995		1	1	1

<i>Metazygia pastaza</i> Levi, 1995		2	2	1
<i>Metazygia yobena</i> Levi, 1995	4	9	13	5
<i>Metazygia</i> (3 morphospecies)	1	3	4	3
<i>Micrathena acuta</i> ¹ (Walckenaer, 1842)	4	4	8	5
<i>Micrathena flaveola</i> (Perty, 1839)		11	11	6
<i>Micrathena plana</i> ¹ (C.L.Koch, 1836)	2	3	5	3
<i>Micrathena saccata</i> (C.L.Koch, 1836)	3	2	5	4
<i>Micrathena schreibersi</i> (Perty, 1833)		1	1	1
<i>Micrathena ucayali</i> Levi, 1985	3	7	10	8
<i>Ocrepeira covillei</i> Levi, 1993	2	4	6	6
<i>Parawixia divisoria</i> Levi, 1992		1	1	1
<i>Parawixia kochi</i> (Taczanowski, 1873)	9	11	20	6
<i>Scoloderus cordatus</i> (Taczanowski, 1879)	6	7	13	5
<i>Spilasma baptistai</i> Levi, 1995	1	1	2	2
<i>Testudinaria</i> sp.	1		1	1
<i>Wagneriana jacaza</i> ¹ Levi, 1991	7	14	21	10
<i>Wagneriana silvae</i> Levi, 1991	3	3	6	4
<i>Xylethrus</i> sp.		1	1	1
Caponiidae				
<i>Nops</i> sp.		2	2	2
Clubionidae				
<i>Elaver</i> sp.	2	2	4	3
Corinnidae				
<i>Castianeira</i> (2 morphospecies)		5	5	5
<i>Corinna</i> (7 morphospecies)	2	10	12	9
<i>Myrmecium</i> (2 morphospecies)	2	8	10	5
<i>Myrmecotypus</i> (3 morphospecies)	7	7	14	11
<i>Parachemmis</i> (2 morphospecies)		2	2	2
<i>Simonestus</i> sp.	1	2	3	3
<i>Sphecotipus</i> sp.	3		3	2
<i>Trachelas</i> (5 morphospecies)	5	7	12	10
<i>Xeropigo</i> sp.	1	1	2	2
Ctenidae				
<i>Acanthoceteninae</i> * (1 morphospecie)	1		1	1
<i>Ancylometes hewitsoni</i> ¹ (F.O.P.-Cambridge, 1897)	1	6	7	5
<i>Ancylometes jau</i> Höfer & Brescovit, 2000		1	1	1
<i>Ancylometes riparius</i> ¹ Höfer & Brescovit, 2000		10	10	5
<i>Ancylometes rufus</i> (Walckenaer, 1837)	2	7	9	7
<i>Centroctenus miriuma</i> Brescovit, 1996		1	1	1
<i>Ctenus inaja</i> ¹ Höfer, Brescovit & Gasnier, 1994	6	4	10	4
<i>Ctenus maculisternis</i> Strand, 1909	2	2	4	2
<i>Ctenus villasboasi</i> ¹ Mello-Leitão, 1949		2	2	2
<i>Ctenus</i> (2 morphospecies)	42	52	94	17
<i>Enoploctenus</i> sp.	1		1	1

<i>Gephyroctenus</i> sp.	1		1	1
<i>Nothroctenus</i> (2 morphospecies)	2	7	9	5
<i>Phoneutria boliviensis</i> (F.O.P.-Cambridge, 1897)	13	5	18	9
<i>Phoneutria reidyi</i> (F.O.P.-Cambridge, 1897)	3		3	2
Deinopidae				
<i>Deinopis</i> sp.	2	18	20	8
Dictynidae				
<i>Dictyna</i> (2 morphospecies)		3	3	3
Dipluridae				
<i>Ischnotele guianensis</i> ¹ (Walckenaer, 1837)		3	3	3
Gnaphosidae				
<i>Cesonia</i> sp.		1	1	1
<i>Eilica</i> sp.	1		1	1
Hersiliidae				
<i>Neotama mexicana</i> (O.P.-Cambridge, 1893)		2	2	1
<i>Ypipuera crucifera</i> (Vellard, 1924)	1		1	1
Lycosidae				
<i>Hogna</i> sp.	2	10	12	5
Lycosidae (7 morphospecies)	33	64	97	14
Mimetidae				
<i>Arocha</i> sp.	4	1	5	4
<i>Ero</i> (2 morphospecies)	71	69	140	23
<i>Gelanor</i> (3 morphospecies)	11	38	49	20
Miturgidae				
<i>Cheiracanthium inclusum</i> ¹ (Hentz, 1847)	2	2	4	3
Nephilidae				
<i>Nephila clavipes</i> (Linnaeus, 1767)	1		1	1
Nesticidae				
<i>Nesticidae</i> sp.	1		1	1
Oonopidae				
Gamasomorphinae* (4 morphospecies)	7	15	22	10
Oxyopidae				
<i>Hamataliwa</i> (9 morphospecies)	17	14	31	14
<i>Oxyopes constrictus</i> Keyserling, 1891		1	1	1
<i>Oxyopes incertus</i> Mello-Leitão, 1929	2	2	4	3
<i>Schaenicoscelis</i> (2 morphospecies)	4	11	15	6
<i>Tapinillus longipes</i> (Taczanowski, 1872)		1	1	1
Philodromidae				
<i>Gephyrellula</i> sp.		1	1	1
Pholcidae				
<i>Carapoia paraguaensis</i> González-Sponga, 1998	42	57	99	13
<i>Mesabolivar aurantiacus</i> ¹ (Mello-Leitão, 1930)	106	99	205	24
<i>Metagonia</i> (2 morphospecies)	78	111	189	24
Pholcidae (3 morphospecies)	1	6	7	5

Pisauridae

<i>Thaumasia</i> (3 morphospecies)	324	471	795	24
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Salticidae

<i>Amycinae*</i> (11 morphospecies)	1	16	17	10
<i>Amicus</i> (2 morphospecies)	3	2	5	4
<i>Asaracus</i> sp.	11	20	31	8
<i>Beata aenea</i> (Mello-Leitão, 1945)	1	1	2	1
<i>Breda</i> sp.	1		1	1
<i>Bryantella</i> (2 morphospecies)	7	13	20	9
<i>Chira spinipes</i> (Taczanowski, 1871)	3	1	4	2
<i>Chira</i> (2 morphospecies)		2	2	2
<i>Chirothecia</i> sp.	1		1	1
<i>Corythalia</i> sp.		1	1	1
<i>Cotinusa</i> (2 morphospecies)	55	26	81	16
<i>Cystistella</i> sp.		1	1	1
<i>Dendryphantinae*</i> (2 morphospecies)		3	3	2
<i>Erica</i> sp.	3	2	5	3
<i>Euophrydinae*</i> (7 morphospecies)	6	17	23	13
<i>Freya perelegans</i> Simon, 1902	1		1	1
<i>Freya</i> sp.	6	9	15	7
<i>Gastromicans</i> sp.	1	1	2	2
<i>Helvetia</i> sp.	4		4	3
<i>Hyetussa</i> sp.	2	5	7	3
<i>Hypaeus</i> (5 morphospecies)	5	3	8	7
<i>Itata</i> sp.	11	14	25	16
<i>Kalcerytus merretti</i> Galiano, 2000	1		1	1
<i>Lyssomanes aff. robustus</i> (Taczanowski, 1878)	4		4	3
<i>Lyssomanes aff. unicolor</i> (Taczanowski, 1871)	13	7	20	8
<i>Lyssomanes ipanemae</i> Galiano, 1980		14	14	9
<i>Lyssomanes longipes</i> ¹ (Taczanowski, 1871)		1	1	1
<i>Lyssomanes nigropictus</i> Peckham & Wheeler, 1889		1	1	1
<i>Lyssomanes tapirapensis</i> Galiano, 1996	1		1	1
<i>Lyssomanes vinocurae</i> Galiano, 1996	3	2	5	4
<i>Lyssomanes</i> (2 morphospecies)	1	1	2	2
<i>Mago aff. acutidens</i> Simon, 1900	15	10	25	9
<i>Mago aff. vicanus</i> Simon, 1900	4		4	4
<i>Noegus</i> (4 morphospecies)	43	35	78	19
<i>Parnaenus</i> sp.		1	1	1
<i>Salticidae</i> gen.1 (9 morphospecies)	35	69	104	18
<i>Salticidae</i> gen.2 (1 morphospecies)	1		1	1
<i>Sarinda</i> (4 morphospecies)	9	9	18	7
<i>Scopocira</i> sp.	58	73	131	16
<i>Tariona</i> sp.	3		3	3
<i>Tullgrenella</i> sp.	1		1	1

<i>Tylogenius</i> sp.	1		1	1
<i>Uspachus</i> (2 morphospecies)	2	2	4	3
Scytodidae				
<i>Scytodes lineatipes</i> ¹ Taczanowski, 1874	20	11	31	11
<i>Scytodes</i> (1 morphospecie)	2	1	3	3
Selenopidae				
<i>Selenops para</i> Corronca, 1996	2	2	4	4
Senoculidae				
<i>Senoculus</i> (3 morphospecies)	2	5	7	5
Sparassidae				
<i>Olios antiguensis</i> (Keyserling, 1880)	2		2	2
<i>Olios orchiticus</i> Mello-Leitão, 1930		1	1	1
<i>Sampaioisia</i> sp.	1	1	2	1
<i>Stasina</i> sp.	2	1	3	3
Sparassidae (6 morphospecies)	10	6	16	10
Synotaxidae				
<i>Synotaxus</i> sp.		1	1	1
Tetragnathidae				
<i>Azilia histrio</i> Simon, 1895		1	1	1
<i>Dolichognatha maturaca</i> ¹ Lise, 1993	1		1	1
<i>Leucauge gr. argyra</i> (Walckenaer, 1842)	1	2	3	1
<i>Leucauge</i> (3 morphospecies)	5	36	41	13
<i>Tetragnatha</i> (4 morphospecies)	43	108	151	17
Theraphosidae				
<i>Acanthoscuria ferina</i> Simon, 1892		1	1	1
<i>Avicularia</i> (4 morphospecies)	1	4	5	4
<i>Cyriocosmos</i> sp.		2	2	1
Theridiidae				
<i>Achaearanea bellula</i> (Keyserling, 1891)	1	1	2	2
<i>Achaearanea trapezoidalis</i> (Taczanowski, 1873)	1	13	14	8
<i>Anelosimus eximius</i> ¹ (Keyserling, 1884)		5	5	1
<i>Argyrodes</i> (2 morphospecies)	2	9	11	4
<i>Ariamnes attenuatus</i> O.P.-Cambridge, 1881	19	7	26	13
<i>Audifia</i> sp.	1	1	2	1
<i>Cryptachaea hirta</i> (Taczanowski, 1873)		1	1	1
<i>Chrysso</i> sp.		2	2	2
<i>Dipoena kuyuwini</i> Levi, 1963	2		2	2
<i>Dipoena rubella</i> ¹ (Keyserling, 1884)		1	1	1
<i>Dipoena</i> (5 morphospecies)	13	7	20	13
<i>Episinus erythrophthalmus</i> (Simon, 1894)	2	5	7	6
<i>Episinus gr. cognatus</i> O.P.-Cambridge, 1893		1	1	1
<i>Episinus</i> (3 morphospecies)		7	7	5
<i>Euryopis</i> sp.	1	4	5	4
<i>Faiditus altus</i> (Keyserling, 1891)	1		1	1

<i>Faiditus americanus</i> (Taczanowski, 1874)	3	1	4	2
<i>Faiditus chickeringi</i> (Exline & Levi, 1962)	37	15	52	15
<i>Helvibis longistyla</i> (F.O.P.-Cambridge, 1902)	17	29	46	9
<i>Rhomphaea metaltissima</i> Soares & Camargo, 1948		4	4	4
<i>Spintharus</i> sp.		1	1	1
<i>Theridion gr. trapezoidalis</i>		1	1	1
<i>Theridion</i> (4 morphospecies)	3	18	21	13
<i>Thwaitesia bracteata</i> ¹ (Exline, 1950)	3		3	2
<i>Thymoites</i> sp.		1	1	1
Theridiosomatidae				
<i>Chthnos</i> sp.		1	1	1
Thomisidae				
<i>Acentroscelus</i> (2 morphospecies)	5	1	6	5
<i>Aphanthochilus rogersi</i> ¹ O.P.-Cambridge, 1870	1	1	2	2
<i>Bucranium taurifrons</i> O.P.-Cambridge, 1881	6	2	8	3
<i>Deltoclita</i> (4 morphospecies)	3	3	6	5
<i>Epicadus</i> sp.	5		5	5
<i>Onoculus pentagonus</i> (Keyserling, 1880)	5	1	6	4
<i>Onoculus</i> (1 morphospecie)	7	9	16	11
<i>Stephanopoides simoni</i> Keyserling, 1880		1	1	1
<i>Strophius</i> sp.	7	2	9	5
<i>Thomisinae</i> * (4 morphospecies)	6		6	4
<i>Tmarus</i> (13 morphospecies)	36	30	66	17
Thomisidae (1 morphospecie)		1	1	1
Trechaleidae				
<i>Dossenus marginatus</i> Simon, 1898	2		2	2
<i>Neostenus</i> sp.		10	10	5
<i>Paradossenus</i> sp.		1	1	1
<i>Rhoicinus</i> sp.	8	15	23	7
<i>Trechalea amazonica</i> ¹ F.O.P.-Cambridge, 1903	11	48	59	12
<i>Trechalea boliviensis</i> Carico, 1993		2	2	2
<i>Trechalea</i> (2 morphospecies)	19	9	28	3
Trechaleidae gen.1 (2 morphospecies)	8	6	14	6
Trechaleidae gen.2 (2 morphospecies)	9	15	24	6
Uloboridae				
<i>Miagrammopes</i> (3 morphospecies)	5	9	14	5
<i>Philoponella vittata</i> ¹ (Keyserling, 1881)	5	3	8	4
<i>Uloborus trilineatus</i> Keyserling, 1883	14	19	33	19
Uloboridae (2 morphospecies)	3	1	4	2
Total	1682	2460	4142	