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Lists of Species

List of species of spiders (Arachnida, Araneae) from the Pico da Neblina, state of Amazonas, Brazil

André A. Nogueira [1*], Eduardo M. Venticinque [2], Antonio D. Brescovit [3], Nancy F. Lo-Man-Hung [4] and David F. Candiani [4]

1 Instituto Nacional de Pesquisas da Amazônia, INPA, Coordenação de Pesquisas em Ecologia - CPEC. Avenida André Araújo, 2936, Aleixo, Cx. Postal 478. CEP 69011-970. Manaus, AM, Brazil.
2 Universidade Federal do Rio Grande do Norte/UFRN, Departamento de Botânica, Ecologia e Zoologia. CEP 59072-970. Natal, RN, Brasil.
3 Instituto Butantan, Laboratório de Artrópodes, Av. Vital Brasil, 1500. CEP 05503-900. São Paulo, SP, Brazil.
4 Carste Consultores Associados, Rua Manoel Alonso Esteves, 93, Jardim Esmeralda. CEP 05589-020. São Paulo, SP, Brazil.
* Corresponding author. Email: *andrearanhas@gmail.com*

Abstract: We present a list of species of spiders collected at the Pico da Neblina, the highest mountain in Brazil (Amazonas, Brazil). We sampled at six altitudes (100, 400, 860, 1,550, 2,000 and 2,400 m a.s.l.), through manual active search, during the night and with a beating tray, during the day. We obtained a total of 3,143 adult individuals, which were assigned to 529 species, from 39 families. The most species rich families were Theridiidae (108 species), Araneidae (98 species) and Salticidae (60 species). Most species were rarely collected, as 389 (73% of total richness) species were represented by up to five individuals, and 197 (37% of total richness) of them by just one individual. We briefly compare our results with those from other spider surveys in the Amazon basin.

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Introduction

Spiders (Araneae, Arachnida) are a remarkable group under many aspects. Conspicuous animals even in urban environments, they represent the most familiar arachnid order and usually arouse intense reactions from the general public, from the care of tarantula pet owners to the exaggerated fear of aracnophobics. All spiders are predators (with one single exception—Meehan *et al.* 2009), near the top of the invertebrate food chain (Coddington *et al.* 1991) and most feed mainly on insects (Turnbull 1973), which confers them an unquestionable ecological importance. Present in all terrestrial ecosystems (except for the Antarctic continent), they are a very diverse taxon, with more than 44,000 species currently described (Platnick 2013), which probably represent only a fraction of the effective number of species (roughly estimated at up to 170,000 species, Coddington and Levi 1991). Spiders can also be locally very diverse and abundant, especially in tropical forests, where hundreds of species and thousands of individuals can be gathered in relatively short periods (Silva and Coddington 1996; Coddington *et al.* 2009; Dias and Bonaldo 2012).

Spider surveys, especially short term expeditions, may result in incomplete sampling of the community, as suggested by the high proportion of rare species usually observed (Coddington *et al.* 2009). However, they still provide valuable information on the diversity and composition of spider communities, and usually also lead to the discovery of new species, as well as to a better knowledge on the distribution of known species, especially in poorly sampled regions.

Although the Amazon basin has been the focus of some spiders surveys, the region can still be considered undersampled, given its immense extent (Höfer and Brescovit 2001) and diversity of habitats. Most species lists are from Terra Firme forests (Borges and Brescovit 1996; Höfer and Brescovit 2001; Bonaldo *et al.* 2009a) and flooded forests (Borges and Brescovit 1996; Silva 1996; Höfer 1997; Rego *et al.* 2009). Other surveys sampled a larger number of environments, such as different forests types and open formations (Silva and Coddington 1996; Ricetti and Bonaldo 2008; Dias and Bonaldo 2012). Some studies have investigated the diversity of spiders from some Andean localities (Coddington *et al.* 1991—Bolivia; Silva 1992—Peru), but no species list was provided, which means that Amazonian montane spider fauna have been completely overlooked so far.

In this study, we present the species list of a spider survey conducted on the Pico da Neblina, the highest Brazilian mountain (2,994 m). Montane biotas present a high biological interest and are usually characterized by high diversity (Orme *et al.* 2005) and endemism levels (Jetz *et al.* 2004). Located at the boundary between Brazil and Venezuela, the Pico da Neblina is part of the Neblina massif, one of the southern mountain ranges of the Guayana shield, a region of very old geological origin which represents the watershed between the Amazon and Orinoco basins (RADAM 1978). This region is famous for its peculiar topography, whose main characteristic is the presence of isolated table-top sandstone mountains (*tepuis*), and by its diverse and endemic flora (Berry and Riina 2005). The remote location of the Pico da Neblina also guarantees an unusual degree of conservation, with almost pristine environments along the whole altitudinal gradient.

Material and Methods

The study was conducted on the Pico da Neblina (00°48′07″ N and 66°00′40″ W) (Figure 1), in the Pico da Neblina National Park, state of Amazonas, Brazil. The park

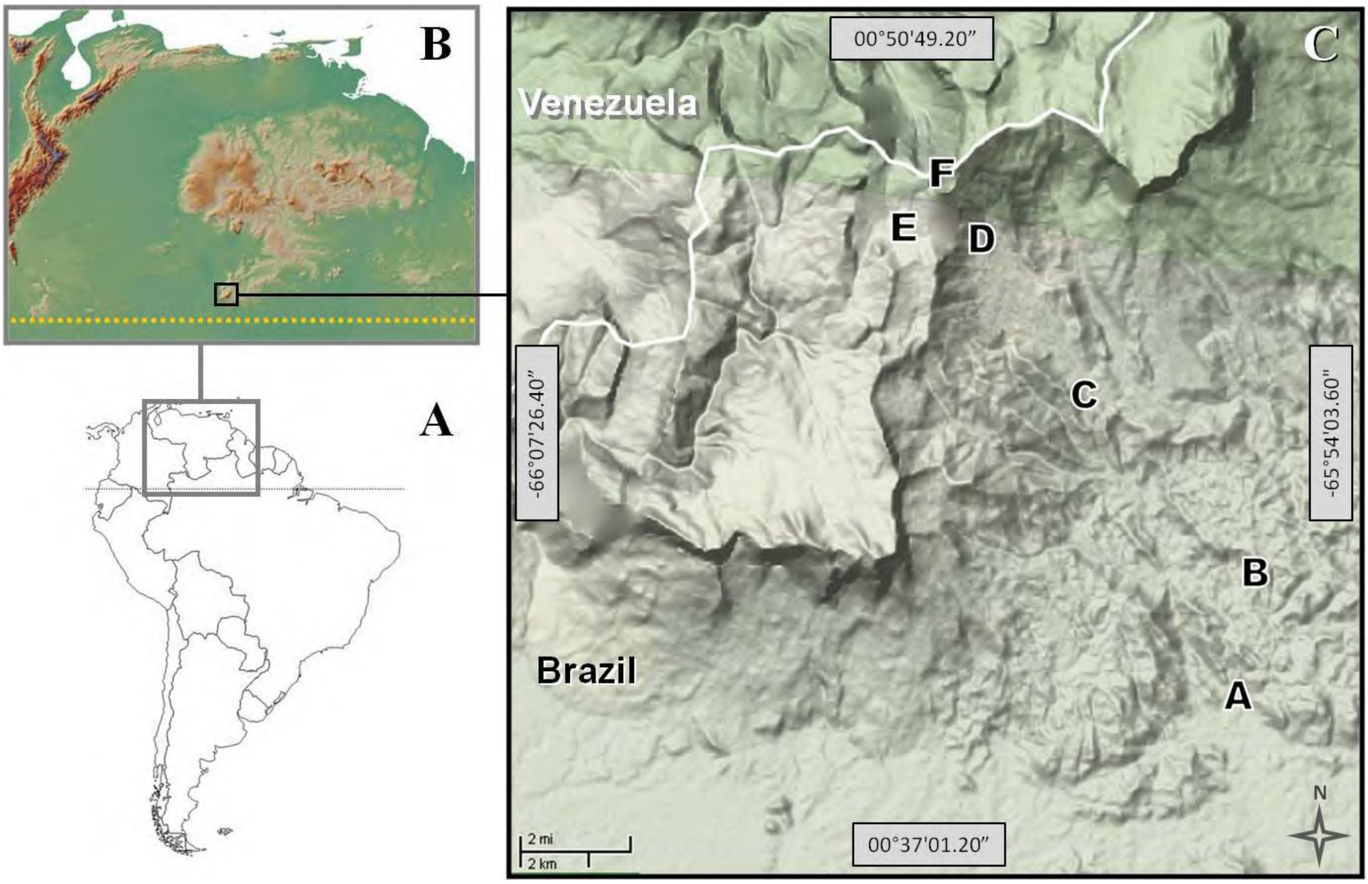

Figure 1. Study area. A - Study area. A) South America; B) Northern South America (rectangle of map A enlarged). The mountain range at the left of the map represents the northern part of the Andes, and the mountainous region in the center of the map is the Guayana Shield, showing the study area in its southern part, and dotted yellow line represents the equator; C) Closer view of the study area (rectangle of map B enlarged), the Pico da Neblina. Letters represent the altitudes sampled: A – 100 m, B – 400 m, C – 860 m, D – 1,550 m, E – 2,000 m, F – 2,400 m. Geographic coordinates represent the latitudes and longitudes of the borders of the figure.

covers an area of 2,260,344 ha, representing one of the largest conservation units in Brazil, and is situated in the municipality of São Gabriel da Cachoeira. Most of the park, including the Pico da Neblina, overlaps with the Yanomami Indigenous Land.

The Neblina massif is mainly composed of sandstones and is characterized by extensive high-altitude plateaus, although it does not possess the tipical tepui shape. The climate of the region is tropical humid and varies little through the year. According to a division proposed for the Guayana region (Huber 1995), the study area can be divided in three main physiographic units according to temperature and altitude. Lowlands, up to 500 m with macrothermic climate (> 24°C annual average), uplands from 500 to 1,500 m with submesothermic climate (18–24°C), and highlands from 1,500 to 2,994 m, with mesothermic (18–12°C) and submicrothermic climate (8–12°C) (Huber 1995). The annual average rainfall in the lowlands of the Pico da Neblina, is 3,000 mm/year, without a distinct dry season, and the humidity is about 85–90% (RADAM 1978). Rainfall increases with altitude until around 1800 m, being gradually replaced by a constant mist, and the average humidity reaches almost 100% (RADAM 1978).

Vegetation of the lowlands is composed of tall evergreen forest. Uplands are covered by montane forests, which present decreasing biomass and tree size, especially when declivity is accentuated and soils shallow (Pires and Prance 1985). In the highlands, forests are replaced by more opened types of vegetation, such as high altitude scrublands and broad-leaf meadows, which grow on organic-peat soils and on rocky substrates (Figure 2). Forests formations occur up to almost 2,000 m, and the high altitude formations stand out for their diversity and endemism (Berry *et al.* 1995). Species from the families Bromeliacea and Rapateacea are among the most characteristics elements of this flora (Berry *et al.* 1995). Detailed information on the geology and vegetation of the region can be found in Berry *et al.* (1995) and Berry and Riina (2005).

We collected spiders with two methods, beating tray and manual active search. In the first method the understory vegetation was sampled during the day (08:00 to 11:00 h) through the beating of leaves, branches, vines and other parts of the vegetation with a stick, while holding a 1 m^2 tray under it. The spiders falling into the tray were collected, and the sampling unit consisted of 20 of those beating events. In the second method, employed at night (19:30 to 23:00) spiders from the forest floor and from the understory were directly collected with the help of tweezers and/or plastic vials. The sampling unit represents one hour of search along an approximate area of 300 m^2 (a plot 30 m long and 10 m wide). This method represents a fusion of the methods "looking up" and "looking down" (Coddington *et al.* 1991). All spiders collected were fixed in 70% ethanol.

Sampling was carried out by three collectors at six altitudes, 100, 400, 860, 1550, 2000 and 2400 m (Figure 1). At each altitude we investigated three different sites around

Figure 2. Aspect of the vegetation at the altitudes sampled at the Pico da Neblina: A – 100 m; B – 400 m; C – 860 m; D – 1,550 m; E – 2,000 m and F – 2,400 m. Photos by André Nogueira.

our camps. At each site we obtained 18 samples, 9 diurnal and 9 nocturnal, which represent a total of 54 samples for each altitude (27 of each method) and a final count of 324 samples (162 of each method) for the Pico da Neblina. The sampling expedition occurred from 22 September 2007 to 13 October 2007, a period with lesser rainfall.

We only identified adult spiders, since allocation of juveniles to species based on morphology is usually impractical. Specimens were sorted into morphospecies, usually by the first author, and then identified to the lowest taxonomic level by specialists. Voucher specimens are deposited in the collection of the Instituto Nacional de Pesquisas da Amazônia, Manaus (INPA, AR6164-6276) and duplicates are deposited in the Instituto Butantan, São Paulo (IBSP, 160437-160493) and the Museu Paraense Emílio Goeldi, Belém (MPEG, 15666-15684). The material was collected under the license Ibama-Sisbio 11762–1.

We compared our results with those obtained in other spider surveys from the Amazon basin. We excluded studies that focused on only a subset of the community, or a specific kind of habitat, such as tree's trunks.

Results

We obtained 3,143 adult spiders (35% of the total number of spiders sampled), representing 529 morphospecies from 39 families (Table 1), and only 148 (27.9%) of the morphospecies could be identified to the specific level. Some of the species are represented in Figure 3. The most species-rich families were Theridiidae, Araneidae and Salticidae, with 108 (20% of total richness), 98 (18%) and 60 (11%) species (Table 2). Most of the spiders collected belonged to 14 families: Anyphaenidae, Araneidae, Corinnidae, Ctenidae, Linyphiidae, Mimetidae, Pholcidae, Salticidae, Sparassidae, Tetragnathidae, Theridiidae, Theridiosomatidae, Thomisidae and Uloboridae. Those families were the most species rich and abundant in the samples, and were represented by at least 10 species and 52 individuals. Together, they account for 89% of total richness and 93% of spiders collected. Fewer species of the remaining 27 families were collected, although some species, such as *Architis tenuis* Simon 1898 (Pisauridae, 27 individuals), Hahniidae sp. (25 individuals) and *Orchestina* sp. (Oonopidae, 27 individuals) were relatively abundant in samples.

The two most abundant species, with 137 (4.3% of the total abundance) and 96 (3.1%) individuals were hitherto undiscribed species collected at high altitude from the genus *Chrysometa* (Tetragnathidae), *C. petrasierwaldae* Nogueira *et al.* 2011 and *C. nubigena* Nogueira *et al.* 2011. However, the majority of species were rarely collected. Most (389; 73%) were represented by up to five individuals, and 197 (37% of total richness) of them were represented by just one individual.

Nine species collected during this expedition were new to science and have already been described, one from the genus *Architis* (Santos and Nogueira 2008, Pisauridae), one *Syntrechalea* (Silva and Lise 2010, Trechaleidae) and seven from the genus *Chrysometa* (Nogueira *et al.* 2011, Tetragnathidae).

The survey encountered individuals from several poorly known groups. The specimens of *Rhytidiculos* sp. (Cyrtaucheniidae) represent the second record of this monotypic genus for Brazil, and the first of a female (R. Indicatti, pers. com.). The morphospecies *Drymusa* sp. belongs to the rare family Drymusidae (16 species) and is probably a new species. Known from only nine species until recently, none from Brazil, five species have been described since 2004 from surveys in the Brazilian Amazon (Brescovit *et al.* 2004; Bonaldo *et al.* 2006).

Discussion

All the results we are presenting, from the richness and species abundance distribution, to the level of taxonomic resolution, are similar to those obtained in other surveys in the Amazon basin (Table 3). Species richness reported ranges from 102 to 1.140 species, but in most localities the number of species lies around 500. Comparisons must be made with care, as those results are directly influenced by many factors, such as sampling effort (which can be estimated from the number of individuals obtained), sampling methods, type of environment and number and heterogeneity of different localities sampled. However, we believe that the number of species and families reported at the Pico da Neblina is large, considering that only two sampling methods were employed, while most of the other surveys included additional methods, which increases the coverage of the study. For example, the litter fauna, usually investigated with pitfall traps, Winkler extractors or litter search, was only superficially assessed at the Pico da Neblina. The collecting of specimens from families, such as Anapidae, Hahniidae, Ochyroceratidae, Symphytognathidae and Oonopidae was occasional, and the diversity of those families at the Pico da Neblina is certainly underrepresented.

A factor that certainly enhanced the richness reported in our study was the fact that our sampling sites were scattered along an important altitudinal gradient, as turnover rates are higher in strong environmental gradients, such as those represented by mountains (Melo *et al.* 2009). The patterns of alpha and beta diversity of the spider communities from the Pico da Neblina will be explored and presented in another study (Nogueira *et al.,* in prep.).

The presence and relative abundance of families showed little variation among collections from different surveys, indicating that the diversity patterns at the higher taxonomic level of family are well established. The families Araneidae, Salticidae and Theridiidae contained most species in collections from all the studies considered, and the 14 most common families, mentioned in the results section, were recorded in all of those surveys, with few exceptions (families Pholcidae and Linyphiidae were absent from the lists of Ricetti and Bonaldo 2008 and Rego *et al.* 2009, respectively). In fact, most of the families reported in our study, such as Deinopidae, Lycosidae, Oonopidae, Pisauridae and Scytodidae, are also present in all or at least most of these studies, but usually represented by few species and individuals. Nonetheless, characteristics of the habitats may influence the relative contribution of different families. In the flooded forest, the relative abundance of the families associated with water bodies, such as Pisauridae and Trechaleidae (Höfer and Brescovit 2001; Bonaldo *et al.* 2009a) increases, although their richness remains moderate (Borges and Brescovit 1996; Rego *et al.* 2009).

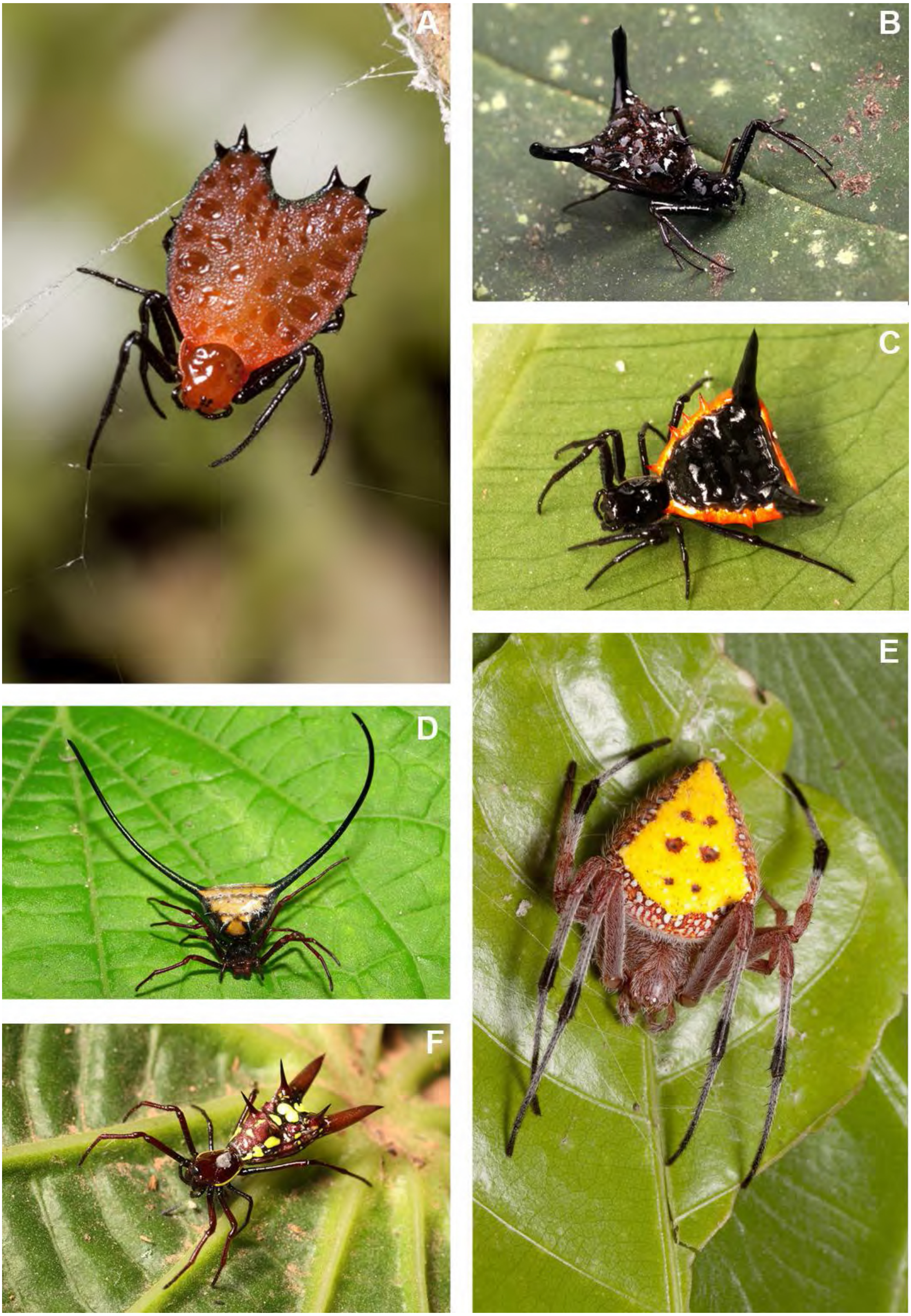

Figure 3. Spiders recorded at the Pico da Neblina. Species of the family Araneidae. A – *Micrathena clypeata*; B – *Micrathena embira*; C – *Micrathena pungens*; D – *Micrathena cyanospina*; E – *Eriophora nephiloides*; F – *Micrathena spinosa*. With the exception of *M. cyanospina*, specimens photographed are not from the Pico da Neblina. Photos A, B, C, E and F by Flávio Yamamoto and D by Rafael Indicatti.

The species abundance distribution observed in our results, with many rare species, was also similar to that reported in other studies (Silva and Coddington 1996; Bonaldo and Dias 2010). This low abundance in samples seems to be characteristic of very diverse tropical spider communities, as it represents a pattern commonly reported in spider inventories (Silva 1996; Ricetti and Bonaldo 2008; Dias and Bonaldo 2012). Alternatively, some authors hypothesized that this pattern may be due to undersampling (Coddington *et al.* 2009), and that a larger sampling effort should change the dominance pattern to a more even distribution of abundance among the species of the community. Thus, inventories based on a very larger sampling effort then those usually reported (which currently result in a several hundred to a few thousand adult individuals captured- Table 3) are needed to clarify this important question.

Finally, the low taxonomic resolution level of our list is shared with other surveys (Silva 1996; Bonaldo *et al.* 2009a; Rego *et al.* 2009), with the exception of the study conducted at the Reserva Ducke (RFAD) (Höfer and Brescovit 2001), which presents a much higher proportion of identified species (55%). The better resolution for this area may be a consequence of its proximity to Manaus, ensuring an unparalleled accessibility to researchers in comparison with the others areas sampled, which turn the RFAD one of the most studied localities of the Amazon basin. Moreover, sampling performed by Höfer and Brescovit (2001) were also accompanied by taxonomic studies, including the description of new species, and as a consequence the RFAD is the type locality of 38 species of spiders (Bonaldo *et al.* 2009b). Finally, the species list of the RFAD is not only the product of sampling over many years, but also from records of the literature, which means that all species added by this method are necessarily identified to the specific level.

Among the 529 species collected nine were new to science and were described. However, the list presented in this study certainly harbors several other new species. It must be kept in mind that the low level of taxonomic resolution of this list is partially a consequence of the lack, or unavailability, of taxonomic experts for several of these families and genera. It is reasonable to suppose that most of the species which could not be identified to species are undescribed species, although they may have already been collected in other Amazonian localities. Morphospecies from genera such as *Eustala*, *Dipoena* and *Tmarus*, are reported in almost every survey cited in this study, and at present it is not possible to know the proportion of widespread or endemic species among then.

This is further evidence of the still incipient knowledge of Brazilian Amazonian arachnids and reinforces the fundamental importance of faunal surveys, especially in remote regions that have not yet been sampled, which represent most of the Amazon basin.

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Table 1. List of spider species collected at six altitudes at the Pico da Neblina (AM, Brazil). We present the abundance by altitude, total abundance, and relative abundance (abundance of each species in relation to total abundance) in samples for each species.
* Species described from specimens obtained in this study.

FAMILY SPECIES	ALTITUDES SAMPLED (m)						TOTAL ABUNDANCE	% ABUNDANCE
	100	400	860	1,550	2,000	2,400		
Amaurobiidae								
Amaurobiidae sp.					2		2	0.06
Retiro sp. 1				4			4	0.13
Retiro sp. 2					1		1	0.03
Anapidae								
Anapidae sp.					1		1	0.03
Pseudanapis sp.	2						2	0.06
Anyphaenidae								
Anyphaenoides aff. *xiboreninho*				3			3	0.10
Anyphaenoides sp.					4	25	29	0,92
Arachosia sp. 1					1	3	4	0.13
Arachosia sp. 2					1		1	0.03
Bromelina oliola Brescovit, 1993					2		2	0.06
Josa sp. 1						12	12	0.38
Josa sp. 2					4		4	0.13
Katissa sp. 1					1	1	2	0.06
Patrera sp. 1				13			13	0.41
Patrera sp. 2	2						2	0.06
Patrera sp. 3	1	1					2	0.06
Patrera sp. 4				1	1		2	0.06
Patrera sp. 5				2			2	0.06
Patrera sp. 6		1					1	0.03
Patrera sp. 7	1						1	0.03
Patrera sp. 8						1	1	0.03
Patrera sp. 9					1		1	0.03
Patrera sp. 10	1		2				3	0.10
Wulfila modestus Chickering, 1937		2					2	0.06
Wulfila sp. 1		1					1	0.03
Wulfila sp. 2		1					1	0.03
Anyphaenidae sp. 1	3						3	0.10
Anyphaenidae sp. 2			2	2	1	3	8	0.25
Araneidae								
Acacesia benigna Glueck, 1994	2						2	0.06
Alpaida antonio Levi, 1988		1					1	0.03
Alpaida negro Levi, 1988	1	1	2				4	0.13
Alpaida septemmammata (O. P.-Cambridge, 1889)	1						1	0.03

Table 1. *Continued.*

FAMILY SPECIES	ALTITUDES SAMPLED (m)						TOTAL ABUNDANCE	% ABUNDANCE
	100	400	860	1,550	2,000	2,400		
Alpaida truncata (Keyserling, 1865)	4	1	3				8	0.25
Alpaida aff. *cuyabeno*		11	1				12	0.38
Alpaida aff. *delicata*	9		11				20	0.64
Alpaida aff. *iquitos*	1						1	0.03
Alpaida sp. 1				12			12	0.38
Alpaida sp. 2	1	1					2	0.06
Araneus bogotensis (Keyserling, 1864)				1	15	6	22	0.70
Araneus guttatus (Keyserling, 1865)			1				1	0.03
Aspidolasius branicki (Taczanowski, 1879)	1						1	0.03
Bertrana elinguis (Keyserling, 1883)	4						4	0.13
Bertrana sp.	1						1	0.03
Cyclosa caroli (Hentz, 1850)		3	1				4	0.13
Cyclosa fililineata Hingston, 1932	4		1	2			7	0.22
Cyclosa inca Levi, 1999	7		3	1			11	0.35
Cyclosa rubronigra Caporiacco, 1947	2			2			4	0.13
Cyclosa tapetifaciens Hingston, 1932	12	1					13	0.41
Cyclosa vieirae Levi, 1999		2					2	0.06
Dubiepeira lamolina Levi, 1991	1						1	0.03
Eriophora fuliginea (C. L. Koch, 1838)	1		1				2	0.06
Eriophora nephiloides (O. P.-Cambridge, 1889)	1	1					2	0.06
Eustala sp. 1		22	16				38	1.21
Eustala sp. 2	9	1	2		6		18	0.57
Eustala sp. 3		5	2				7	0.22
Eustala sp. 4	1		5				6	0.19
Eustala sp. 5	1	2	3				6	0.19
Eustala sp. 6	1	1	1				3	0.10
Eustala sp. 7		2	1				3	0.10
Eustala sp. 8			1				1	0.03
Eustala sp. 9		1					1	0.03
Eustala sp. 10		1					1	0.03
Eustala sp. 11		6	7				13	0.41
Eustala sp. 12					5		5	0.16
Eustala sp. 13		2					2	0.06
Eustala sp. 14	2						2	0.06
Eustala sp. 15	1						1	0.03
Hypognatha aff. *putumayo*	12	9	2				23	0.73
Kaira altiventer O. P.-Cambridge, 1889		1	1				2	0.06
Mangora amacayacu Levi, 2007	1	2	6				9	0.29
Mangora apaporis Levi, 2007		1	2				3	0.10
Mangora bovis Levi 2007		7					7	0.22
Mangora aff. *acre*	1		4	15			20	0.64
Mangora sp. 1	3						3	0.10
Mangora sp. 2	2						2	0.06
Mangora uraricoera Levi, 2007		1	2				3	0.10
Manogea porracea (C. L. Koch, 1838)		4					4	0.13
Melychiopharis cynips Simon, 1895			1				1	0.03
Metazygia ducke Levi, 1995	1						1	0.03
Metazygia enabla Levi, 1995	1	1	7				9	0.29
Metazygia laticeps (O. P.-Cambridge, 1889)		2					2	0.06
Metazygia yucumo Levi, 1995			1				1	0.03
Micrathena clypeata (Walckenaer, 1805)	24	3	1				28	0.89
Micrathena cyanospina (Lucas, 1835)			7				7	0.22
Micrathena duodecimspinosa (O. P.-Cambridge, 1889)	4						4	0.13
Micrathena embira Levi, 1985	1						1	0.03
Micrathena exilinae Levi, 1985	15						15	0.48
Micrathena flaveola (C. L. Koch, 1839)		1					1	0.03
Micrathena kirbyi (Perty, 1833)	9	6					15	0.48
Micrathena plana (C. L. Koch, 1836)			1	2			3	0.10
Micrathena pungens (Walckenaer, 1841)	3	1					4	0.13
Micrathena spinosa (Linnaeus, 1758)			2				2	0.06
Micrathena triangularis (C. L. Koch, 1836)	2	6	7	3			18	0.57

Table 1. *Continued.*

FAMILY SPECIES	ALTITUDES SAMPLED (m)						TOTAL ABUNDANCE	% ABUNDANCE
	100	400	860	1,550	2,000	2,400		
Micrathena triangularispinosa (De Geer, 1778)	5		7				12	0.38
Micrathena vigorsi (Perty, 1833)	4	1	2				7	0.22
Micrathena sp. 1	4	2	11				17	0.54
Micrepeira fowleri Levi, 1995	1						1	0.03
Micrepeira hoeferi Levi, 1995	1	1					2	0.06
Ocrepeira bispinosa (Mello-Leitão, 1945)				1	1		2	0.06
Ocrepeira covillei Levi, 1993	4	2	1				7	0.22
Ocrepeira sp. 1					1		1	0.03
Ocrepeira sp. 2					1		1	0.03
Parawixia hypocrita (O. P.-Cambridge, 1889)	2	2					4	0.13
Parawixia kochi (Taczanowski, 1873)	1	2	1				4	0.13
Parawixia monticola (Keyserling, 1892)		1	1				2	0.06
Parawixia rimosa (Keyserling, 1892)				3	3		6	0.19
Parawixia tomba Levi, 1992			1				1	0.03
Parawixia velutina (Taczanowski, 1878)	2		1				3	0.10
Pronous nigripes Caporiacco, 1947		6					6	0.19
Rubrepeira rubronigra (Mello-Leitão, 1939*)*		1					1	0.03
Scoloderus sp.	3	2					5	0.16
Spilasma duodecimguttata Keyserling, 1879		1					1	0.03
Spintharidius rhomboidalis Simon, 1893		1					1	0.03
Taczanowskia striata Keyserling, 1879	1	1					2	0.06
Testudinaria quadripunctata Taczanowski, 1879		1	3				4	0.13
Verrucosa sp.		1					1	0.03
Wagneriana atuna Levi, 1991			1				1	0.03
Wagneriana pakitza Levi, 1991	1		1				2	0.06
Wagneriana aff. *neblina*	1						1	0.03
Wagneriana aff. *silvae*	1		1				2	0.06
Wagneriana sp. 1	3	1	4				8	0.25
Wagneriana sp. 2		5					5	0.16
Wagneriana sp. 3			4				4	0.13
Wagneriana sp. 4		3	6				9	0.29
Araneidae sp. 1	1						1	0.03
Araneidae sp. 2		1					1	0.03
Clubionidae								
Elaver sp. 1	1	1					2	0.06
Elaver sp. 2	2						2	0.06
Corinnidae								
Castianeira cf. *rubicunda*				1			1	0.03
Corinna ducke Bonaldo, 2000	10	4	7	2			23	0.73
Corinna gr. *capito* sp.		1					1	0.03
Corinna gr. *ducke* sp. 1		1					1	0.03
Corinna gr. *ducke* sp. 2		8	7				15	0.48
Corinna gr. *ducke* sp. 3			14	2			16	0.51
Corinna gr. *ducke* sp. 4		1					1	0.03
Corinna gr. *ducke* sp. 5			1				1	0.03
Falconina sp.		1	1				2	0.06
Methesis sp.	1						1	0.03
Myrmecium sp. 1	1						1	0.03
Myrmecium sp. 2	4						4	0.13
Myrmecium sp. 3	3	1	2				6	0.19
Myrmecotypus sp.	1	1					2	0.06
Parachemmis hassleri (Gertsch, 1942)			4				4	0.13
Parachemmis sp. 1		1					1	0.03
Parachemmis sp. 2	1						1	0.03
Simonestus sp.	1						1	0.03
Stethorrhagus archangelus Bonaldo & Brescovit, 1994				1			1	0.03
Stethorragus duidae Gertsch, 1942				1	1		2	0.06
Trachelas sp. 1	1						1	0.03
Trachelas sp. 2	2						2	0.06
Tupirinna aff. *trilineata*		1		2			3	0.10
gen. aff. *Apochinomma*			1				1	0.03

Table 1. *Continued.*

FAMILY SPECIES	ALTITUDES SAMPLED (m)						TOTAL ABUNDANCE	% ABUNDANCE
	100	400	860	1,550	2,000	2,400		
Corinnidae sp.						2	2	0.06
Ctenidae								
Ancylometes rufus (Walckenaer, 1837)	1						1	0.03
Centroctenus auberti (Caporiacco, 1954)	5	1	1				7	0.22
Centroctenus sp. 1			1				1	0.03
Centroctenus sp. 2			2				2	0.06
Ctenus amphora Mello-Leitão, 1930	11	51	11				73	2.32
Ctenus inaja Höfer, Brescovit & Gasnier, 1994	1						1	0.03
Ctenus villasboasi Mello-Leitão, 1949	6	2	24	3			35	1.11
Ctenus aff. *satanas*			2	12			14	0.45
Ctenus sp. 1		11					11	0.35
Ctenus sp. 2	6	2	17				25	0.80
Ctenus sp. 3		4					4	0.13
Enoploctenus sp. 1				1			1	0.03
Enoploctenus sp. 2				1			1	0.03
Enoploctenus sp. 3				1			1	0.03
Gephyroctenus portovelho Polotow & Brescovit, 2008	1	2					3	0.10
Phymatoctenus aff. *comosus*	1						1	0.03
Phoneutria fera Perty, 1833	1						1	0.03
Ctenidae sp. 1		1					1	0.03
Ctenidae sp. 2					1	1	2	0.06
Ctenidae sp. 3			4				4	0.13
Ctenizidae								
Ummidia sp.				1			1	0.03
Cyrtaucheniidae								
Rhytidicolus sp.		1					1	0.03
Deinopidae								
Deinopis sp. 1	1	2	6				9	0.29
Deinopis sp. 2				2			2	0.06
Dipluridae								
Diplura sp.		2					2	0.06
Linothele sp.				1			1	0.03
Masteria sp.	1						1	0.03
Drymusidae								
Drymusa sp.				1			1	0.03
Gnaphosidae								
Zimiromus sp.					2		2	0.06
Hahniidae								
Hahniidae sp.					25		25	0.80
Hersiliidae								
Ypipuera vittata (Simon, 1887)	2						2	0.06
Linyphiidae								
Dubiaranea caeca Millidge, 1991					5	1	6	0.19
Dubiareanea margaritata Millidge, 1991			5	14			19	0.61
Dubiaranea sp. 1			7				7	0.22
Dubiaranea sp. 2				2			2	0.06
Dubiaranea sp. 3					1		1	0.03
Dubiaranea sp. 4					3		3	0.10
Dubiaranea sp. 5					1		1	0.03
Exocora sp.				2			2	0.06
Novafrontina uncata (F. O. P.-Cambridge, 1902)		1					1	0.03
Sphecozone crassa (Millidge, 1991)				9	7		16	0.51
Lycosidae								
Aglaoctenus castaneus (Mello-Leitão, 1942)	6	4	2				12	0.38
Mimetidae								
Ero sp. 1				6			6	0.19
Ero sp. 2						9	9	0.29
Ero sp. 3				1			1	0.03
Ero sp. 4			1				1	0.03
Ero sp. 5			1				1	0.03
Ero sp. 6		5	2	2			9	0.29

Table 1. *Continued.*

FAMILY SPECIES	ALTITUDES SAMPLED (m)						TOTAL ABUNDANCE	% ABUNDANCE
	100	400	860	1,550	2,000	2,400		
Ero sp. 7	3	2					5	0.16
Ero sp. 8				1			1	0.03
Ero sp. 9					1		1	0.03
Ero sp. 10			1				1	0.03
Gelanor sp. 1				8			8	0.25
Gelanor sp. 2				6			6	0.19
Gelanor sp. 3	1	1					2	0.06
Gelanor sp. 4	1						1	0.03
Mysmenidae								
Mysmenopsis sp.	1						1	0.03
Mysmenidae sp.		1	1				2	0.06
Nephilidae								
Nephila clavipes (Linnaeus, 1767)	2		1				3	0.10
Oonopidae								
Gamasomorpha sp.				1			1	0.03
Neoxyphinus sp.		1					1	0.03
Oonops sp.				1			1	0.03
Orchestina sp.		3	1	1	22		27	0.86
Oonopidae sp.	1						1	0.03
Oxyopidae								
Hamataliwa sp. 1	1						1	0.03
Hamataliwa sp. 2			1				1	0.03
Schaenicoscelis guianensis Caporiacco, 1947		2					2	0.06
Pholcidae								
Carapoia sp.		31	37				68	2.17
Litoporus aff. *uncatus*		3	7				10	0.32
Mecolaesthus aff. *taino*				1			1	0.03
Mesabolivar aurantiacus (Mello-Leitão, 1930)	3	10	67				80	2.55
Mesabolivar eberhardi Huber, 2000			3				3	0.10
Mesabolivar aff. *aurantiacus*			12	8			20	0.64
Mesabolivar aff. *huambisa*	2		2				4	0.13
Mesabolivar aff. *pseudoblechroscelis*	3	3	3				9	0.29
Mesabolivar sp. 1	2	3					5	0.16
Mesabolivar sp. 2				1	2	1	4	0.13
Metagonia mariguitarensis (González-Sponga, 1998)				5			5	0.16
Metagonia sp. 1		2					2	0.06
Metagonia sp. 2	2	1					3	0.10
Priscula cf. *taruma*			11	14		4	29	0,92
Wanauna sp.				2			2	0.06
Pholcidae sp.	1			1	1		3	0.10
Pisauridae								
Architis neblina Santos & Nogueira, 2008*	8						8	0.25
Architis tenuis Simon, 1898	18	9					27	0.86
Thaumasia sp. 1	3						3	0.10
Thaumasia sp. 2			1				1	0.03
Prodidomidae								
Prodidomidae sp.				1			1	0.03
Salticidae								
Alcmena sp.	1						1	0.03
Amycus sp. 1	1						1	0.03
Amycus sp. 2	4	3					7	0.22
Beata sp.		1					1	0.03
Breda sp.	1						1	0.03
Corythalia sp. 1		1					1	0.03
Corythalia sp. 2		1					1	0.03
Corythalia sp. 3			2				2	0.06
Cotinusa sp. 1					5		5	0.16
Cotinusa sp. 2			1				1	0.03
Cylistella sp. 1	2		1				3	0.10
Cylistella sp. 2		1					1	0.03
Cylistella sp. 3				1			1	0.03

Table 1. *Continued.*

FAMILY SPECIES	ALTITUDES SAMPLED (m)						TOTAL ABUNDANCE	% ABUNDANCE
	100	400	860	1,550	2,000	2,400		
Dendryphantinae sp.					2		2	0.06
Erica sp.		2					2	0.06
Euophryinae sp. 1	2	2	1				5	0.16
Euophryinae sp. 2		1		1			2	0.06
Euophryinae sp. 3					5	2	7	0.22
Euophryinae sp. 4			1	12			13	0.41
Euophryinae sp. 5				1			1	0.03
Euophryinae sp. 6		1					1	0.03
Euophryinae sp. 7		1	1				2	0.06
Euophryinae sp. 8	1						1	0.03
Euophryinae sp. 9	3						3	0.10
Euophryinae sp. 10				1			1	0.03
Euophryinae sp. 11					2		2	0.06
Fluda sp. 1	3				1		4	0.13
Fluda sp. 2			1	1			2	0.06
Freyinae sp. 1	2						2	0.06
Hypaeus sp. 1	1						1	0.03
Hypaeus sp. 2	4						4	0.13
Hypaeus sp. 3	1						1	0.03
Hypaeus sp. 4				3			3	0.10
Hypaeus sp. 5					1		1	0.03
Itata sp.	2						2	0.06
Kalcerrytus sp.	2	1					3	0.10
Lyssomanes sp. 1	2						2	0.06
Lyssomanes sp. 2	1	2	3				6	0.19
Lyssomanes sp. 3	5						5	0.16
Lyssomanes sp. 4	1		3				4	0.13
Lyssomanes sp. 5		1					1	0.03
Lyssomanes sp. 6				1			1	0.03
Mago sp. 1	2	8	3				13	0.41
Mago sp. 2			3	1	1		5	0.16
Mago sp. 3		1					1	0.03
Mago sp. 4	1	2					3	0.10
Mago sp. 5				1		1	2	0.06
Noegus sp. 1	8		1				9	0.29
Noegus sp. 2		6	4				10	0.32
Noegus sp. 3			2				2	0.06
Noegus sp. 4				3			3	0.10
Noegus sp. 5	4						4	0.13
Noegus sp. 6	5						5	0.16
Noegus sp. 7	1	5					6	0.19
Psecas sp.		1					1	0.03
Sassacus sp.		1					1	0.03
Scopocira sp.	6	3	1	1			11	0.35
Synemosyna sp.		2					2	0.06
Thiodina sp.			1				1	0.03
cf. *Zuniga*			1				1	0.03
Scytodidae								
Scytodes auricula Rheims & Brescovit, 2000		5	1				6	0.19
Scytodes balbina Rheims & Brescovit, 2000			4	13			17	0.54
Scytodes lineatipes Taczanowski, 1874	1						1	0.03
Selenopidae								
Selenops sp.	1	1					2	0.06
Senoculidae								
Senoculus caniliculatus F. O. P.-Cambridge, 1902		1		1			2	0.06
Senoculus ruficapillus (Simon, 1880)	4						4	0.13
Senoculus aff. *Iricolor*		1					1	0.03
Senoculus sp.			1	7			8	0.25
Sparassidae								
Olios velox (Simon, 1880)			1				1	0.03
Olios sp.				1			1	0.03

Table 1. *Continued.*

FAMILY SPECIES	ALTITUDES SAMPLED (m)						TOTAL ABUNDANCE	% ABUNDANCE
	100	400	860	1,550	2,000	2,400		
Pseudosparianthis ravida Simon, 1897	3	3	1				7	0.22
Sparianthis sp.	2	1					3	0.10
Sparassidae sp. 1	16	29	18				63	2.01
Sparassidae sp. 2				23	2		25	0.80
Sparassidae sp. 3	5	3					8	0.25
Sparassidae sp. 4			1				1	0.03
Sparassidae sp. 5	1						1	0.03
Sparassidae sp. 6			1				1	0.03
Symphytognathidae								
Symphytognatha sp. 1		1					1	0.03
Symphytognatha sp. 2						1	1	0.03
Synotaxidae								
Synotaxus brescoviti Santos & Rheims, 2005	1						1	0.03
Synotaxus waiwai Agnarsson, 2003			1				1	0.03
Tetragnathidae								
Azilia histrio Simon, 1895	2	2	4				8	0.25
Azilia sp. 1	5						5	0.16
Azilia sp. 2		1					1	0.03
Azilia sp. 3						2	2	0.06
Chrysometa boraceia Levi, 1986				6			6	0.19
Chrysometa candianii Nogueira et al. 2011*			3				3	0.10
Chrysometa guttata (Keyserling, 1881)			4				4	0.13
Chrysometa lomanhungae Nogueira et al. 2011*					2	1	3	0.10
Chrysometa minuta (Keyserling, 1883)	1	2	4				7	0.22
Chrysometa nubigena Nogueira et al. 2011*					62	34	96	3,06
Chrysometa opulenta (Keyserling, 1881)		1	4	29			34	1.08
Chrysometa petrasierwaldae Nogueira et al. 2011*						137	137	4.36
Chrysometa santosi Nogueira et al. 2011*					1		1	0.03
Chrysometa waikoxi Nogueira et al. 2011*				41			41	1.31
Chrysometa yanomami Nogueira et al. 2011*					3		3	0.10
Chrysometa sp.					1		1	0.03
Cyrtognatha sp. 1		1					1	0.03
Cyrtognatha sp. 2	1						1	0.03
Dolichognatha sp. 1	1		1				2	0.06
Dolichognatha sp. 2	1						1	0.03
Dolichognatha sp. 3	1						1	0.03
Dolichognatha sp. 4	2						2	0.06
Homalometa sp.				4	2		6	0.19
Leucauge sp. 1	12						12	0.38
Leucauge sp. 2			2	3			5	0.16
Leucauge sp. 3	4						4	0.13
Leucauge sp. 4		1	2				3	0.10
Leucauge sp. 5			4	2			6	0.19
Leucauge sp. 6	5	1					6	0.19
Leucauge sp. 7			2				2	0.06
Leucauge sp. 8						2	2	0.06
Theraphosidae								
Avicularia sp.		1					1	0.03
Ephebopus uatuman Lucas, Silva & Bertani, 1992	3	2					5	0.16
Hapalopus sp.	2	1					3	0.10
Ischnocolinae sp.			1				1	0.03
Theraphosa blondi (Latreille, 1804)		1					1	0.03
Theraphosinae sp. 1	1						1	0.03
Theridiidae								
Achaearanea hieroglyphica (Mello-Leitão, 1940)	1		1				2	0.06
Achaearanea tingo Levi, 1963			1				1	0.03
Achaearenea trapezoidalis (Taczanowski, 1873)			1	1			2	0.06
Ameridion sp. 1	1		2	1			4	0.13
Anelosimus domingo Levi, 1963			46				46	1.46
Anelosimus eximius (Keyserling, 1884)	12	7					19	0.61
Ariamnes attenuatus O. P.-Cambridge, 1881	4		2				6	0.19

Table 1. *Continued.*

FAMILY SPECIES	ALTITUDES SAMPLED (m)						TOTAL ABUNDANCE	% ABUNDANCE
	100	400	860	1,550	2,000	2,400		
Cerocida ducke Marques & Buckup, 1989	1						1	0.03
Chrosiothes sp. 1	8						8	0.25
Chrosiothes sp. 2			1				1	0.03
Chrosiothes sp. 3	1						1	0.03
Chrysso questona Levi, 1962			3				3	0.10
Chrysso sp. 1	2						2	0.06
Chrysso sp. 2			7				7	0.22
Chrysso sp. 3	1						1	0.03
Chrysso sp. 4	1						1	0.03
Cryptachaea bellula (Keyserling, 1891)				1			1	0.03
Crypacheae dea (Buckup & Marques 2006)				8			8	0.25
Cryptachaea hirta (Taczanowski, 1873)		1					1	0.03
Cryptachaea maraca (Buckup & Marques, 1991)				2			2	0.06
Cryptachaea schneirlai (Levi, 1959)	1						1	0.03
Cryptachaea taeniata (Keyserling, 1884)			28	8			36	1.15
Cryptachaea sp. 1				1	1		2	0.06
Cryptachaea sp. 2				4			4	0.13
Cryptachaea sp. 3			1	3			4	0.13
Cryptachaea sp. 4		1					1	0.03
Cryptachaea sp. 5			1				1	0.03
Cryptachaea sp. 6		1					1	0.03
Cryptachaea sp. 7	3						3	0.10
Dipoena anas Levi, 1963	1						1	0.03
Dipoena duodecimpunctata Chickering, 1943	1		3	14			18	0.57
Dipoena militaris Chickering, 1943		2					2	0.06
Dipoena rubella (Keyserling, 1884*)*		6		8	2	3	19	0.61
Dipoena tiro Levi, 1963		1					1	0.03
Dipoena sp. 1	2	5		6	1		14	0.45
Dipoena sp. 2			3	1			4	0.13
Dipoena sp. 3	2						2	0.06
Dipoena sp. 4	1						1	0.03
Dipoena sp. 5	1						1	0.03
Dipoena sp. 6	2	2					4	0.13
Dipoena sp. 7			1				1	0.03
Dipoena sp. 8		1	1				2	0.06
Dipoena sp. 9		2					2	0.06
Dipoena sp. 10				1			1	0.03
Dipoena sp. 11		3					3	0.10
Dipoena sp. 12			1				1	0.03
Dipoena sp. 13			1				1	0.03
Dipoenata balboae (Chickering, 1943)				8			8	0.25
Echinotheridion levii Ramírez & González, 1999	4						4	0.13
Emertonella taczanowskii (Keyserling, 1886)			2				2	0.06
Episinus sp. 1				18			18	0.57
Episinus sp. 2	6						6	0.19
Episinus sp. 3		1					1	0.03
Episinus sp. 4		30					30	0.96
Episinus sp. 5	12						12	0.38
Episinus sp. 6	1						1	0.03
Episinus sp. 7		1	6				7	0.22
Episinus sp. 8	1	2					3	0.10
Exalbidion fungosum Keyserling, 1886			2	9	4		15	0.48
Exalbidion sexmaculatum (Keyserling, 1884)				1			1	0.03
Exalbidion sp. 1					1		1	0.03
Exalbidion sp. 2		1					1	0.03
Faiditus amplifrons (O. P.-Cambridge, 1880)	21						21	0.67
Faiditus atopus (Chamberlin & Ivie, 1936)			5				5	0.16
Faiditus convolutus (Exline & Levi, 1962)	9						9	0.29
Faiditus sp. 1			1				1	0.03
Faiditus sp. 2		3	1				4	0.13
Faiditus sp. 3	1						1	0.03

Table 1. *Continued.*

FAMILY SPECIES	ALTITUDES SAMPLED (m) 100	400	860	1,550	2,000	2,400	TOTAL ABUNDANCE	% ABUNDANCE
Faiditus sp. 4			5				5	0.16
Faiditus sp. 5	3		1				4	0.13
Faiditus sp. 6	2				1		3	0.10
Faiditus sp. 7					1		1	0.03
Faiditus sp. 8		2	4				6	0.19
Helvibis sp. 1	9	1					10	0.32
Janula bicruciata (Simon, 1895)		1					1	0.03
Janula malachina (Simon, 1895)		2					2	0.06
Janula nebulosa (Simon, 1895)				23			23	0.73
Janula salobrensis (Simon, 1895)	11	1		1			13	0.41
Parasteatoda nigrovittata (Keyserling, 1884)	2	1					3	0.10
Phoroncidia moyobamba Levi, 1964		2		4			6	0.19
Phoroncidia sp. 1		2	1				3	0.10
Phycosoma altum (Keyserling, 1886)	1						1	0.03
Phycosoma sp. 1	1				2	4	7	0.22
Rhomphaea metaltissima Soares & Camargo, 1948			1	5			6	0.19
Rhomphaea sp. 1	2						2	0.06
Spintharus sp. 1				13			13	0.41
Spintharus sp. 2	1	10	13	7			31	0.99
*Steatoda moesta (*O. P.-Cambridge, 1896)		1					1	0.03
Stemmops servus Levi, 1964s	1						1	0.03
Styposis sp. 1				6	4		10	0.32
Styposis sp. 2					1		1	0.03
Tekellina sp. 1					2		2	0.06
Theridion incertissimum (Caporiacco, 1954)			2				2	0.06
Theridion longipedatum Roewer, 1942				33	8		41	1.31
Theridion plaumanni Levi, 1963					1		1	0.03
Theridion sp. 1					2	1	3	0.10
Theridion sp. 2	1	1					2	0.06
Theridion sp. 3					3		3	0.10
Theridion sp. 4					1		1	0.03
Theridion sp. 5	1						1	0.03
Theridion sp. 6			1		1		2	0.06
Theridion sp. 7				3			3	0.10
Thymoites sp. 1					1		1	0.03
Thwaitesia bracteata (Exline, 1950)	1	3	2				6	0.19
Tidarren haemorrhoidale (Bertkau, 1880)			1				1	0.03
Wamba sp. 1					3		3	0.10
Wamba sp. 2					1		1	0.03
Theridiidae sp. 1				1			1	0.03
Theridiosomatidae								
Chthonos sp. 1	1	2		1			4	0.13
Chthonos sp. 2	1	1					2	0.06
Chthonos sp. 3		1	1				2	0.06
Naatlo fauna (Simon, 1897)				12	38		50	1.59
Naatlo splendida (Taczanowski, 1879)	2	1	3				6	0.19
Naatlo sp. 1	7						7	0.22
Naatlo sp. 2	9	2	10				21	0.67
Ogulnius sp. 1	1						1	0.03
Ogulnius sp. 2		1					1	0.03
Theridiosoma sp. 1	4	2	1				7	0.22
Theridiosoma sp. 2	1						1	0.03
Theridiosoma sp. 3					1		1	0.03
Theridiosoma sp. 4					1		1	0.03
Theridiosomatidae sp. 1		1					1	0.03
Theridiosomatidae sp. 2	1						1	0.03
Thomisidae								
Acentroscelus sp.				4			4	0.13
Aphantochilus taurifrons O. P.-Cambridge, 1881		2					2	0.06
Deltoclita sp.			1				1	0.03
Epicadus sp. 1	2	1					3	0.10

Table 1. *Continued.*

FAMILY SPECIES	ALTITUDES SAMPLED (m) 100	400	860	1,550	2,000	2,400	TOTAL ABUNDANCE	% ABUNDANCE
Epicadus sp. 2		2					2	0.06
Onocolus sp.	2						2	0.06
Titidius sp.	2		1				3	0.10
Tmarus sp. 1	5	1		5			11	0.35
Tmarus sp. 2				3			3	0.10
Tmarus sp. 3				1			1	0.03
Tmarus sp. 4	1						1	0.03
Tmarus sp. 5				1			1	0.03
Tmarus sp. 6	1						1	0.03
Tmarus sp. 7	1						1	0.03
Tmarus sp. 8	1						1	0.03
Tmarus sp. 9				1			1	0.03
Tmarus sp. 10				1			1	0.03
Tmarus sp. 11	5	5	3				13	0.41
Thomisidae sp. 1			1				1	0.03
Thomisidae sp. 2	1						1	0.03
Trechaleidae								
Syntrechalea neblina Silva & Lise 2010*	1						1	0.03
Syntrechalea syntrechaloides (Mello-Leitão, 1941)	3						3	0.10
Syntrechalea sp.		1					1	0.03
Uloboridae								
Ariston sp.				1			1	0.03
Conifaber sp. 1	3	2					5	0.16
Conifaber sp. 2		1					1	0.03
Conifaber sp. 3		1					1	0.03
Miagrammopes sp. 1				26			26	0.83
Miagrammopes sp. 2	7	2					9	0.29
Miagrammopes sp. 3	1	2					3	0.10
Miagrammopes sp. 4	1	4					5	0.16
Miagrammopes sp. 5			2				2	0.06
Miagrammopes sp. 6	1	3					4	0.13
Philoponella republicana (Simon, 1891)	4		4	5			13	0.41
Philoponella sp. 1	3	2	5				10	0.32
Philoponella sp. 2				4			4	0.13
Philoponella sp. 3			1				1	0.03
Uloborus sp. 1	7						7	0.22
Uloborus sp. 2	8	6	4				18	0.57
Uloborus sp. 3		1					1	0.03
Uloborus sp. 4			4				4	0.13
Uloborus sp. 5	3	1					4	0.13
Uloborus sp. 6	1						1	0.03
Uloborus sp. 7	2	6	5				13	0.41
Uloboridae sp. 1	1						1	0.03
Uloboridae sp. 2	1						1	0.03

Table 2. Species richness, abundance, and proportional species richness and abundance by family of spider collected at the six altitudes at the Pico da Neblina.

FAMILY	RICHNESS	% RICHNESS	ABUNDANCE	% ABUNDANCE
Amaurobiidae	3	0.57	7	0.22
Anapidae	2	0.38	3	0.10
Anyphaenidae	23	4.36	100	3.18
Araneidae	98	18.52	558	17.75
Clubionidae	2	0.38	4	0.13
Corinnidae	25	4.73	94	2.99
Ctenidae	20	3.79	189	6.02
Ctenizidae	1	0.19	1	0.03
Cyrtaucheniidae	1	0.19	1	0.03
Deinopidae	2	0.38	11	0.35
Dipluridae	3	0.57	4	0.13
Drymusidae	1	0.19	1	0.03
Gnaphosidae	1	0.19	2	0.06
Hahniidae	1	0.19	25	0.80
Hersiliidae	1	0.19	2	0.06
Linyphiidae	10	1.89	58	1.85
Lycosidae	1	0.19	12	0.38
Mimetidae	14	2.65	52	1.66
Mysmenidae	2	0.38	3	0.10
Nephilidae	1	0.19	3	0.10
Oonopidae	5	0.95	31	0.99
Oxyopidae	3	0.57	4	0.13
Pholcidae	16	3.03	248	7.90
Pisauridae	4	0.76	39	1.24
Prodidomidae	1	0.19	1	0.03
Salticidae	60	11.36	190	6.05
Scytodidae	3	0.57	24	0.76
Selenopidae	1	0.19	2	0.06
Senoculidae	4	0.76	15	0.48
Sparassidae	10	1.89	111	3.54
Symphytognathidae	2	0.38	2	0.06
Synotaxidae	2	0.38	2	0.06
Tetragnathidae	31	5.87	406	12.93
Theraphosidae	6	1.14	12	0.38
Theridiidae	108	20.45	626	19.94
Theridiosomatidae	15	2.84	106	3.38
Thomisidae	20	3.79	54	1.72
Trechaleidae	3	0.57	5	0.16
Uloboridae	23	4.36	135	4.30
Total	529	100	3,143	100

Table 3. Amazonian spider surveys. Authors and year of the study, locality, environment, collecting methods, richness of families and species and abundance of adults. n.i. - no information available. Methods: NMAS – nocturnal manual active searching, DMAS – diurnal manual active searching, BT – beating tray, SN – sweeping net, PIT – pitfall trap, LIT – litter searching, W – winkler extractor, FOG – fogging, GE – ground eclector, TE – trunk eclector, LITERAT – information from literature.

STUDY	LOCALITIY	ENVIRONMENT	SAMPLING METHODS	RICHNESS		ABUNDANCE
				FAMILIES	SPECIES	
Borges & Brescovit 1996	Mamirauá and Tefé, AM, Brazil	Flooded and terra firme forest	NMAS, BT	22	102	649
Silva 1996	Samiria, Peru	Flooded forest	NMAS, DMAS, FOG	39	1140	5895
Silva & Coddington 1996	Paktiza, Peru	Seven forest types	NMAS, DMAS, BT	32	498	2616
Höfer & Brescovit 2001	RF Adolpho Ducke, AM, Brazil	Terra firme forest	NMAS, BT, FOG, PIT, LIT, GE, TE, LITERAT	52	506	n.i.
Ricetti & Bonaldo 2008	Serra do Cachimbo, PA, Brazil	Open rainforest, riparian forest, arboreal savanna, white sand vegetation	NMAS, BT, SN, LIT	37	427	2750
Bonaldo et al. 2009	FLONA de Caxiuanã, PA, Brazil	Terra firme forest	NMAS, BT, SN, PIT, W	42	591	4768
Rego et al. 2009	AM and PA, Brazil	Flooded forest	NMAS, BT	34	384	4142
Bonaldo & Dias 2010	Porto Urucu, Coari, AM, Brasil	Terra firme forest and forest gaps	NMAS, BT, PIT, W, SN	37	393	1612
Dias & Bonaldo 2012	Porto Urucu, Coari, AM, Brasil	Terra firme forest and forest gaps	NMAS, BT, W	39	623	3786
Present study	PARNA Pico da Neblina AM, Brazil	Terra firme forest, montane forest and high altitude formations	NMAS, BT	39	529	3143