ATLANTIC SMALL-MAMMAL: A DATASET OF COMMUNITIES OF RODENTS AND MARSUPIALS OF THE ATLANTIC FORESTS OF SOUTH AMERICA

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Introduction

Elton's seminal work on vole, mice and lemmings (Elton 1924, 1942) has inspired many generations of animal ecologists fascinated by the factors regulating small mammal populations and community dynamics. Since Elton's work, small mammal ecology has been at the epicenter of the advancement of general theories on top-down vs. bottom up control, trophic cascades and population cycles (Oksanen et al. 1981, Lambin et al. 2002, Korpimäki et al. 2003), coexistence and habitat selection (Brown and Davidson 1977, Abramsky et al. 1990, Morris 1999, Morris et al. 2000), kin selection and maternal effects (Chitty 1960, Boonstra and Boag 1987, Lambin and Krebs 1991, 1993), the evolution of social and mating systems (Ostfeld 1990, Sherman and Wolff 2007, Odden et al. 2014), and many others. Ecologists have also used small mammals as model systems for the development of new field and statistical tools (Otis et al. 1978, Nichols and Pollock 1990, Kendall et al. 1995), but also for applied ecological issues such as the impact of habitat fragmentation and destruction on vertebrate populations and communities (Andreassen et al. 1998, Pardini et al. 2010) and the ecology of infectious diseases (Allan et al. 2003, LoGiudice et al. 2003).

One area where small mammal ecology has been less informative is in understanding macroecological patterns of biodiversity, population dynamics and community assembly. For such studies, a large quantity of data from of communities across ecosystems is needed so as

to inquire questions about relationships between organisms and their environment at large spatial scales and clarify generalizations in pattern and process (Brown 1971, May 1988, Purvis and Hector 2000, Karp et al. 2012). Large community databases are also important for biodiversity hotspots regions because of the urgency in conservation actions. However, perhaps because historically temperate regions have been the stronghold of small mammal ecologists, information on the ecology of small mammals from tropical regions has received less attention. For example, Brown's 1995 notorious book on Macroecology (Brown 1995) begins with an example of predicted range shifts in small mammal communities on mountain ranges, but, like most of the rest of the examples in the book, patterns are almost exclusively derived from small mammal desert communities in North America. Recently some large datasets have become available for mammal and bird traits (Wilman et al. 2014) and fruit-frugivore interactions (Bello et al. 2017) on biodiversity hotspots, but no publicly available database exists on non-volant small mammals for such regions.

One of the region with the highest diversity of small mammals is the Atlantic forest of South America (Galindo-Leal and Câmara 2003). The Atlantic forest hosts 119 species of small mammals represented by 22 species of marsupials (Family Didelphidae) and 97 species of small rodents (families Caviidae, Cricetidae, Ctenomyidae, Echimyidae, Cricetidae [=Muridae] and Sciuridae) (Costa et al. 2000, Paglia et al. 2012). The Atlantic forest was one of the largest rainforests of South America, originally covering around 150 million hectares along the Brazilian coast; today fragmented patches cover less than 12% of its original area (Ribeiro et al. 2009). Nonetheless, the remaining forest hosts a larger number of endemic species and is considered one of the five major hotspots in the world for conservation (Myers et al. 2000, Visconti et al. 2011).

Here we compiled a dataset comprising 136 studies covering 300 locations, that sampled small mammals in the Atlantic forest of Brazil and Paraguay (Figure 1). Ecological inventories of small mammals in the Atlantic forest started in 1945 (Davis 1945) and have been carried out in all major biogeographical region in the Atlantic forest (Figure 2). The ATLANTIC-SMALL MAMMAL represents the largest dataset of inventories of small mammal communities for the Neotropical region. We present in this dataset the species composition, richness, and relative abundance (captures/trap nights), which are amenable for population and community ecology studies.

METADATA

CLASS I. DATA SET DESCRIPTORS

A. Data set identity:

Title: ATLANTIC-SMALL MAMMAL: a dataset of communities of rodents and marsupials of the Atlantic Forests of South America

B. Data set and metadata identification codes:

Suggested Data Set Identity Codes: ATLANTIC-SM_Capture.csv, ATLANTIC-SM_Reference.csv, ATLANTIC-SM_Study_site.csv

C. Data set description

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Abstract: The contribution of small mammal ecology to the understanding of macroecological patterns of biodiversity, population dynamics and community assembly has been hindered by the absence of large datasets of small mammal communities from tropical regions. Here we compile the largest dataset of inventories of small mammal communities for the Neotropical region. The dataset reviews small mammal communities from the Atlantic forest of South America, one of the regions with the highest diversity of small mammals and a global biodiversity hotspot, though currently covering less than 12% of its original area due to anthropogenic pressures. The dataset comprises 136 references from 300 locations covering

seven vegetation types of tropical and subtropical Atlantic forests of South America, and presents data on species composition, richness, and relative abundance (captures/trap-nights). One paper was published more that 70 years ago but 80% of them were published after 2000. The dataset comprises 53,518 individuals of 124 species of small mammals, including 30 species of marsupials and 94 species of rodents. Species richness averaged 8.2 species (1 - 21) per site. Only two species occurred in more than 50% of the sites (the common opossum, *Didelphis aurita* and black-footed pigmy rice rat *Oligoryzomys nigripes*). Mean species abundance varied 430-fold, from 4.3 to 0.01 individuals/trap-night. The dataset also revealed a hyper-dominance of 22 species that comprised 78.29% of all individuals captured, with only seven species representing 44% of all captures. The information contained on this dataset can be applied in the study of macroecological patterns of biodiversity, communities and populations, but also to evaluate the ecological consequences of fragmentation and defaunation, and predict disease outbreaks, trophic interactions and community dynamics in this biodiversity hotspot.

D. Key words: biodiversity hotspot, tropical forest, biodiversity dataset, rodent, marsupial, small mammals, species richness, communities, hyper-dominance, live traps.

Description

The dataset is restricted to seven vegetation types in the domain of the Atlantic Forest that cover tropical and subtropical forests in Brazil, Paraguay and Argentina (Ribeiro et al. 2009, Morrone 2014) (Figure 1). Seventy percent of the references are articles in peer reviewed journals and 27% are theses. The duration of the studies varied from one to 75 months. Details of methods can be found in Bovendorp et al. (2017).

We here report the raw data from 300 small mammal communities present in 136 studies and 300 locations. Of these locations, 46% are located in protected areas. Most studies were carried out in Ombrophilous (66%) and Semidecidous (21%) forests, which are the dominant vegetation type of this biome (Ribeiro et al. 2009). The forest sizes varied from 0.15 to 791,652 ha (average= 11,886 ha, median = 390 ha). Altitude varied from sea level to 2,700 m (Parque Nacional de Caparó, Rio de Janeiro). Rainfall varied from 188 mm/year to 4,200 mm/year.

The dataset included 53,518 marked individuals, representing 124 species of non-volant small mammal classified in two orders: Didephimorphia, with 13 genera and 30 species; and

Rodentia with 37 genera and 94 species. Species richness ranged from one species to 23 species. Only two species occurred in more than 50% of the localities (Figure 2).
Most of species are classified as less concern, but four species are considered endangered (Table 1). We recorded that 24% of the sites have at least one invasive species (*Rattus rattus*, *R. norvergicus* and *Mus musculus*). One invasive species (*Rattus rattus*) comprised 1.4% of all individuals captured.

CLASS II. RESEARCH ORIGIN DESCRIPTORS

A. Overall project description

Identity: A compilation of small mammals captured in the Atlantic Forest of Brazil, Argentina and Paraguay.

Period of Study: Dates of source publications range from 1945–2016.

Objectives: Our objectives for compiling the data were: (1) to summarize information about small mammal inventories in the Atlantic Forest biome, focusing on species richness and abundance; and (2) to identify the gaps on the knowledge of small mammal communities of the Atlantic Forest biome to guide future sampling efforts. Our dataset represents a first attempt to obtain a large-scale inventory of small mammals, with potential applications in macroecological studies (Galetti et al. 2013), conservation strategies (Banks-Leite et al. 2014), and population and community ecology research (Pacheco et al. 2013).

Abstract: Same as above.

Sources of funding: The compilation of this data set was supported by grants and scholarships from Programa BIOTA from Fundação de Amparo à Pesquisa do Estado de São Paulo (São Paulo Research Foundation; FAPESP), numbers 2008/55483-8, 2013/25441-0, 2014/18800-6 and 2014/01986-0 (RBS); 2013/50421-2, 2014/01986-0 and 2014/50434-0 (MG); 2015/11521-7 (NV); 2013/22492-2(CB) and CNPq 153423/2016-1 (ALR). MG and ARP receive research grants and fellowships from the Conselho Nacional de Desenvolvimento Científico e Tecnológico (Brazilian Research Council, CNPq).

B. Specific subproject description

Site description: The Atlantic Forest is an important biodiversity hotspot in South America (Willis et al. 2007). It comprises tropical and subtropical evergreen and semideciduous forests with highly heterogeneous environmental conditions (Morellato and Haddad 2000). It supports up to 8% of the world's total species richness and one of the highest rates of endemism in the world (Myers et al. 2000). The Atlantic Forest supports at least 15,519 plant species (3,343 trees) (BFG 2015), 891 bird species (Moreira-Lima 2014), 543 amphibians (Haddad et al. 2013), 200 reptiles (Bérnils and Costa 2015), 350 fishes (MMA 2010), and 298 mammals (Paglia et al. 2012) including 22 species of marsupials (Paglia et al. 2012) and 105 species of rodents (Patton et al. 2015).

Seventy two percent of the Brazilian population lives in areas of the Atlantic Forest domain (~145 million people) (IBGE 2013). Therefore, many past and present anthropogenic activities such as logging, sugarcane and coffee plantations, agribusiness, industrialization and unplanned urban expansion have contributed to the ecosystem deterioration. By now, the conservation of Atlantic Forest is critical, the natural remnants accounting for only 12% of the original biome and above 80% of these remnants are within < 50 ha fragments (Ribeiro et al. 2009), and 88% of the fragments are defaunated from large mammals (Jorge et al. 2013).

Data compilation: Data was obtained from published literature including 136 papers, theses, scientific conferences, technical reports, and our own unpublished data. We searched for potential studies in the following sources: (i) online academic databases (e.g., ISI Web of Knowledge, Google Scholar, Scielo, Scopus, JStore) (ii) digital libraries of state and federal Brazilian universities, (iii) references cited in literature, and (iv) email contacts with local experts. The searches were performed with the following key words: small mammal(s), survey(s), inventory(ies), and Atlantic forest; searches were conducted in English, Portuguese and Spanish.

Research Methods: We included in this database, studies that reported sampling of small mammal species, trapping methods, trap size, sampling design, strata sampled, effort and abundance. Lack of information were filled with NA. However, some studies that did not provide a substantial detailed information about captures were excluded at early stages of the

database. We also included information from the geographical location (when provided, we tabulated latitude, longitude, locality, municipality, state and country). Small mammals information (occurrence and abundance) were compiled from (Davis 1945, Fonseca and Robinson 1990, Herrmann 1991, Stallings et al. 1991, Bergallo 1994, Paglia et al. 1995, Grelle 1996, Palma 1996, Graipel et al. 1997, Stevens and Husband 1998, D'Andrea et al. 1999, Gentile and Fernandez 1999, Lessa et al. 1999, Moura 1999, Vieira 1999, Abel et al. 2000, Barros-Battesti et al. 2000, Passamani 2000, Passamani et al. 2000, Briani et al. 2001, Silva 2001, Bonvicino et al. 2002, Feliciano et al. 2002, Gheler-Costa et al. 2002, Olifiers 2002, Pires et al. 2002, Rosa 2002, Graipel et al. 2003, Grelle 2003, Marinho 2003, Moura 2003, Vieira and Monteiro Filho 2003, Castro and Fernandez 2004, Nieri-Bastos et al. 2004, Pardini 2004, Paresque et al. 2004, Rocha 2004, Santos et al. 2004, Vieira et al. 2004, Cherem 2005, Gaspar 2005, Horn 2005, Oliveira et al. 2005, Passamani et al. 2005, Pedó 2005, Atique 2006, Carlos 2006, Graipel et al. 2006, Graipel and Filho 2006, Pardini and Umetsu 2006, Puttker et al. 2006, Uchôa 2006, Umetsu et al. 2006, Vera Y Conde and Rocha 2006, Caceres et al. 2007, Caldara-Junior and Leite 2007, D'Andrea et al. 2007, Finokiet 2007, Iob 2007, Langone 2007, Pena 2007, Scheibler and Christoff 2007, Silva et al. 2007, Umetsu and Pardini 2007, Amaral 2008, Bezerra and de Moraes 2008, Bressiani and Graipel 2008, Cademartori et al. 2008, Modesto et al. 2008, Moreira et al. 2008, Pinheiro and Geise 2008, Prevedello et al. 2008, Salvador and Fernandez 2008, Steiner-Souza et al. 2008, Umetsu et al. 2008, Antunes et al. 2009, Asfora and Pontes 2009, Moreira et al. 2009, Naxara et al. 2009, Passamani and Ribeiro 2009, Pereira and Geise 2009, Pessôa et al. 2009, Pinto et al. 2009, Vieira et al. 2009, Abreu et al. 2010, Antunes et al. 2010, Galiano 2010, Lima et al. 2010, Paise 2010, Pedó et al. 2010, Peters et al. 2010, Pinotti 2010, Andreazzi et al. 2011, Martins 2011, Melo et al. 2011, Passamani and Fernandez 2011a, Passamani and Fernandez 2011b, Rocha et al. 2011, Amaral et al. 2012, Cerboncini 2012, Dantas-Torres et al. 2012, Leiner and Silva 2012, Loretto 2012, Martin et al. 2012, Mesquita and Passamani 2012, Rosa 2012, Silveira 2012, Albuquerque et al. 2013, Behs 2013, Ferracioli 2013, Gheler-Costa et al. 2013, Lima et al. 2013, Luza et al. 2013, Machado et al. 2013, Milagres et al. 2013, Pacheco et al. 2013, Pereira et al. 2013, Prevedello 2013, Quintela et al. 2013, Rodarte 2013, Siqueira et al. 2013, Abreu and de Oliveira 2014, Balieiro et al. 2014, Cerboncini et al. 2014, de la Sancha 2014, Grazzini 2014, Maestri and Marinho 2014, Mochi-Jr 2014, Oliveira et al. 2014, Rosalino et al. 2014, Teixeira et al. 2014, Tortato et al. 2014, Balieiro et al. 2015, Regolin et al. 2015, Rocha-Mendes et al. 2015, Bergallo 1991, Regolin and Cherem Unpubl. Data-b, a, Souza and Galetti) and our own unpublished data.

Taxonomic data: We used animal taxonomic information for marsupials according to Voss and Jansa (2009) and for the rodent species Patton et al. (2015). We added one column with the current scientific name based on Patton et al. (2015) where this association was possible (*e.g.*, changes on generic attribution, species group name synonymy, species identified as sp. or spp. were sometimes identifiable by geography). In addition, we recorded the basic publishing information of each study (author, title, year, journal, volume, number of issue, pages, place of publication, DOI to the document and others relevant information).

C. Data Limitations and Potential Enhancements

We recognize that documenting all species of small mammals present in megadiverse ecosystems is a challenging task for several reasons, mostly related to species biology and their sampling. In general, although small bodied animals, species of rodents and marsupials occupy quite different niches and exhibit distinct and diversified life-histories, paralleling other more conspicuous medium and large size mammals. As small size mammals, these species are prone to exhibit seasonal population fluctuations in response to wet and dry seasons: during wet seasons, populations are usually higher, benefiting from the higher productivity of forests. Population sizes of these mammals also respond to more drastic events, either climatic (as El Niño and La Niña) or biological (as the flowering and fructification of bamboo), presenting explosive responses and attaining huge sizes (Jaksic and Lima 2003). Therefore, there are marked population fluctuations, with periods of high abundance and likely density, and periods with small abundances. Ideally then, sampling should be performed over different periods to characterize these fluctuations, but on our dataset sampling is quite heterogeneous, limiting controlled comparisons.

Being diverse on their life-histories and habits, small mammals are challenging to sample and survey (Voss and Emmnons 1996, Bovendorp et al. 2017), thus field sampling strongly constrained data assembly. Usual sampling methods with conventional live-traps (such as Sherman and Tomahawk traps) are quite selective, as they employ baits that attract only a subset of the assemblage, usually terrestrial/scansorial omnivourous species. These traps are usually set on the ground level and on the understory, with very few surveys of the canopy (Vieira and Monteiro 2003, Lambert et al. 2006) or aquatic habitats (as river courses, river and lake). Pitfall traps are quite effective and less selective (Hice and Schmidly 2002), but if buckets are small only young individuals will be sampled, and young are more difficult to identify than adults. These methods (conventional and pitfall traps) should be used obligatorily,

to enhance trapping success, not only quantitatively but also qualitatively, along with active search (night census, along with night hunting; see (Voss and Emmnons 1996, Voss et al. 2001), an aspect often neglected by mammalogists. Therefore, sampling of small mammals is complex and demands a combination of survey methods, along with consistent sampling effort, that can be obtained only with large number of traps and/or long-term surveys (see for a review on length of survey): a large number of traps set for a long number of days in a standardized design will produce a high sampling effort, that usually produce more complete lists of species, along with information on abundance and density. Most surveys in our database are heterogeneous, with sampling efforts quite unstandardized (e.g. sampling design, number of traps, sampling days and sampling period being highly variable), precluding more comprehensive diagnosis of diversity throughout the Atlantic Forest. In addition, the length of studies is highly variable, and most of them are conducted through one or two years, limiting the ability to obtain reliable population estimates.

Some aspects of the biology of small mammals also make them difficult to sample, as some species are more elusive, exploring their surroundings cautiously and in a small radius, and generally avoiding traps (trap-shy), especially conventional traps. On the other hand some species are quite inquisitive, actively prospecting the surrounding and being positively attracted to the traps; in some cases the reward offered by the bait is so valuable that in capture-recapture studies, previously captured individuals kept returning to the trap. This precludes from other individuals from being caught, biasing the sample.

Another consistent limitation is the uneven sampling throughout the Atlantic Forest, as extensive areas of the biome remain understudied. States of Santa Catarina, Paraná, Bahia, Alagoas, Pernambuco and Paraíba have been subject to very few studies, while Sergipe and Rio Grande do Norte are virtually not studied. The Atlantic Forest of Argentina and Paraguay also present few available studies on small mammal assemblages. One major aspect is the definition of the Atlantic Forest employed by several authors recovered on this database. Several sampling areas are located on transitional landscapes, and the lists of species include species that are typical of other biomes, such as Pampas in southern Brazil, Cerrado in southeastern Brazil, and Caatinga in northeastern Brazil.

Considering that a study was performed in Atlantic Forest, with an adequate sampling, both qualitative and quantitative, at the appropriate time, some limitation also is apparent on species identification, the most important aspect on the diagnosis of an assemblage. Being quite similar externally, small mammals are difficult to identify. The application of a specific name to an individual or a population is a hypothesis, and as such must be testable under the scientific

paradigm: other scientists should be able to examine the same specimens and confirm or refute previous hypothesis. However, many studies did not report the collection of voucher specimens or genetic samples for a posterior species confirmation, employing new conceptual and/or methodological approaches. Another issue is the use of the appropriate nomenclature: scientific names change through time, with names of the species group taxa being replaced by other names or transferred to other genera. These efforts should be acknowledged by specialists working on the ecology of small mammals, to follow the most current taxonomic conventions. Despite these impediments, we recognize the massive effort of biologists who carried out these studies. Collectively, it represents the best available dataset of the communities of small mammals in a tropical forest biome. We expect that, based on this database, the community of scientists will be able to recognize some patterns and be able to determine: i) priority areas to sample small mammals; ii) minimum trapping effort to obtain consistent information on small mammal assemblages; iii) most adequate periods for sampling these species along the latitudinal and longitudinal extension of the biome; iv) lists of voucher specimens and reference material, and the institutions where they are housed; v) a minimal sampling protocol that will standardize the study of small mammals in the Atlantic Forest and other tropical biomes.

CLASS III. DATA SET STATUS AND ACCESSIBILITY

A. Status

Latest update: March 2017

Latest Archive date: March 2017

Metadata status: Last update 30 March 2017, version submitted

Data verification: Data is mostly from published sources. We searched for extreme values, corrected any transcription errors and homogenized the taxonomic information.

B. Accessibility

Contact person: Ricardo S. Bovendorp or Mauro Galetti, Departamento de Ecologia, Universidade Estadual Paulista, Rio Claro, São Paulo, 13506-900, Brazil. E-mail: bovendorp@rc.unesp.br; mgaletti@rc.unesp.br

Copyright restrictions: None.

Proprietary restrictions: Please cite this data paper when the data are used in publications. We also request that researchers and teachers inform us of how they are using the data.

Costs: None.

CLASS IV. DATA STRUCTURAL DESCRIPTORS

A. Data Set File

Identity: ATLANTIC_SM_Study_Site.csv

ATLANTIC_SM_Reference.csv

ATLANTIC_SM_Capture.csv

Size: 2620 records, 496 KB

Format and storage mode: comma-separated values (.csv)

Header information: See column descriptions in section B.

Alphanumeric attributes: Mixed.

Data Anomalies: If no information is available for a given record, this is indicated as 'NA'.

B. Variable information

1) Table 2. Site Information

2) Table 3. Reference Information

3) Table 4. Capture Information

CLASS V. SUPPLEMENTAL DESCRIPTORS

A. Data acquisition

1. Data request history: None

2. Data set updates history: None

3. Data entry/verification procedures

G. History of data set usage

Bovendorp et al. (2017) used the small mammal dataset in order to determine the influence of trap configuration, trap type, and sampling effort on measures of species richness and abundance.

ACKNOWLEDGMENTS

RSB, MG and NV received FAPESP fellowships and grants (2008/55483-8, 2013/25441-0, 2014/18800-6 and 2014/01986-0 (RBS); 2013/50421-2, 2014/01986-0 and 2014/50434-0

(MG); 2015/11521-7 (NV), 2013/22492-2(CB)) and CNPq 153423/2016-1 (ALR). MG and ARP received research grants and fellowships from the Conselho Nacional de Desenvolvimento Científico e Tecnológico (Brazilian Research Council, CNPq). The authors would like to thank Laís Rodrigues and Thaís Labecca for helping in the early phase of this dataset, and M.C. Ribeiro and C. Bello for comments on the manuscript. This work is dedicated to R. Cerqueira for his contribution on the advancement of Neotropical mammals.

TABLES

Table 1. IUCN conservation status of small mammal species reported in the ATLANTIC dataset. CR= Critically, DD= Data Deficient, EN=Endangered, LC= Least Concern, NT= Near Threatened, VU=Vulnerable

IUCN conservation status	Small mammals
Critically endangered (CR)	1
Endangered (EN)	4
Vulnerable (VU)	2
Near Threatened (NT)	3
Least Concern (LC)	79
Data Deficient (DD)	10
Not evaluated (NE)	7

Table 2. Site information. Description of the fields related with the study sites information.

Type of information	Field	Description	Levels	Example
SITE INFORMATION	ID	Field that link the study site to the complete information table	Sm01-Sm305	Sm01
	Reference_number	The reference number which report small mammal communities	1-166	1
	Country	Country of the study		Brazil
	State	State of the study		SP
	Municipality	Municipality of the study		Cananéia
	Study_location	Specific location of the study		Parque Estadual Ilha do Cardoso, Cananéia, SP
	Latitude	Decimal coordinates		-25.06930556
	Longitude	Decimal coordinates		-47.9200356
	Precision	Precision of the given coordinate	Precise Not-Precise	Precise
	Size	Forest size (area in hectares)		15100
	Altitude	Altitude (m) above sea level		60

	Annual_rainfall	Anual precipitation (mm)		500
	Vegetation type	Atlantic forest vegetation type	Ombrophilous Semidecidouos Decidouos Araucaria Restinga Stepe	Ombrophilous Forest
	Protect_area	If the study is inside to the protected areas		Yes
	Matrix	Predominant vegetation surrounding the forest patch		Sugarcane plantations

Table 3. Reference information. Description of the fields related with reference information of each study.

Type of information	Field	Description	Levels	Example
REFERENCE INFORMATION	Reference_number	The reference number which report small mammal communities	1-136	10
	Reference	Extended information of the reference		Cáceres, N. C., Ghizoni-Jr, I. R., & Graipel, M. E. (2002). Diet of two marsupials, Lutreolina crassicaudata and Micoureus demerarae, in a coastal Atlantic Forest island of Brazil. Mammalia, 66(3), 331–340.
	Publication_year	Year of publication		2001
	Type of publication	Type of publication	Article Book Thesis Unpublished	Article

Table 4. Capture information. Description of the fields related with the complete capture information.

Type of information	Field	Description	Levels	Example
CAPTURE INFORMATION	ID	Field that links the study site to the complete information table	Sm01-Sm305	sm1
	Reference_number	The reference number which reports small mammal communities	1-136	10
	Month_start	Month when the survey started	January-December	March
	Year_start	Year when the survey started		1999
	Month_finish	Month when the survey finished	January-December	July
	Year_finish	Year when the survey finished		2000
	Total_of_months	Number of months used to sample small mammal		16
	Sampling_habitat	Habitat location that was sampled in the patch or site	Interior Edge Rivers Etc.…	Interior
	Sampling_design	Design used to capture small mammal	Aleatory Grid Line transect	Grid
	Effort	Total traps-type per night used to capture small mammal		2692
	Method	Trap type used to capture small mammal	Live traps Pitfall traps Catwalks Manual	Live traps

	Trap_size	Size of traps used to capture small mammal	S - small - (≤23x7x8cm) M - medium - (>23x7x8cm and <38x10x12cm) L – large - (≥38x10x12cm) 20, 30, 35, 40, 60, 100L-liters	M
	Strata_sampling	Trap height for sampling small mammal	Ground Understory Canopy	Ground
	Order	Order taxonomic classification		Didelphimorphia
	Genus	Genus taxonomic classification		*Metachirus*
	Species_name_on_paper	Species taxonomic classification reported on paper		*Metachirus nudicaudatus*
	Actual_species_name	Species taxonomic classification reviewed by specialist		*Metachirus nudicaudatus*
	Species_origin	If the species is native or introduced in Brazil	Native Invasive	Native
	Individuals_captured	Total of individuals captured for every trap type	Individuals/effort (trap-nights)	1
	Abundance_(ind/trap-nights)	Number of individuals captured by trap-night		0,03
	Voucher_Specimens	Paper related voucher specimens in collection or museum	Yes No	Yes

Figures:

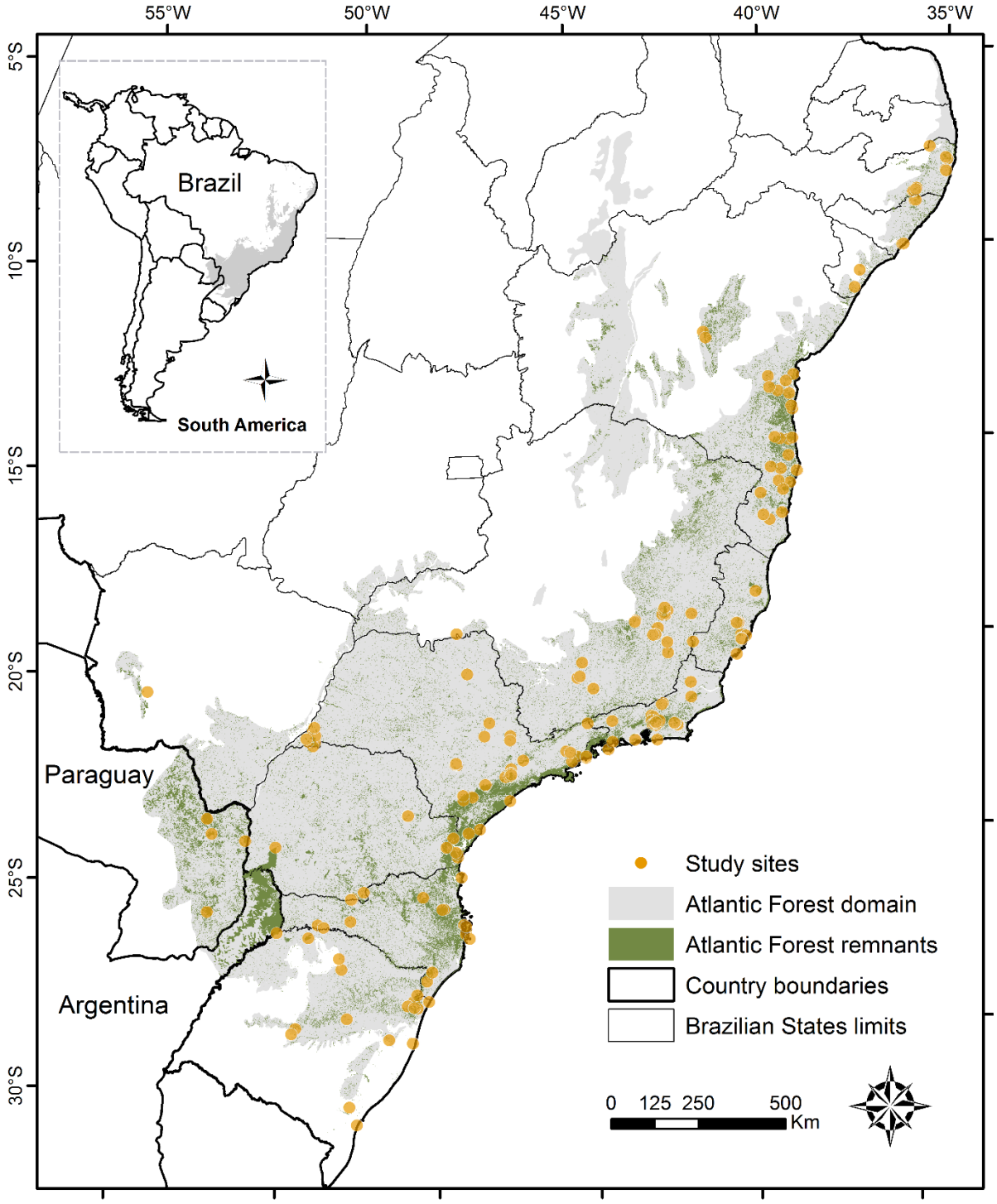

Fig 1. **Distribution of the small mammal assemblage records on the Atlantic Forest biome.** The gray colors show the domain of the Atlantic Forest and the green colors show the remaining Atlantic forest patches (Huang et al. 2007, Ribeiro et al. 2009). The dots show the locations of the original studies reporting the small mammal assemblages.

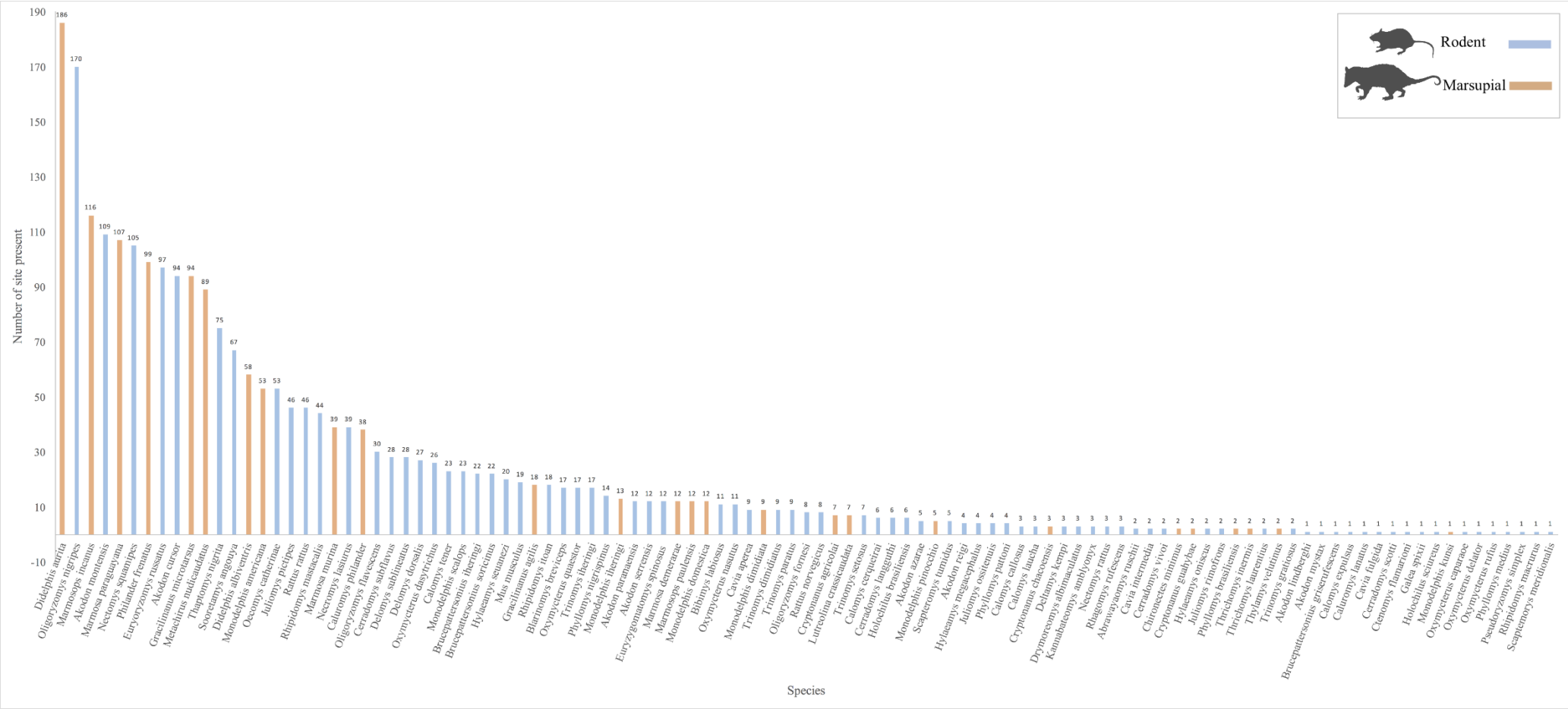

Fig 2. **Total number of sites occupied by every small mammal species.** Blue bars indicate species from the Order Rodentia and orange bars species from the Order Didephimorphia.

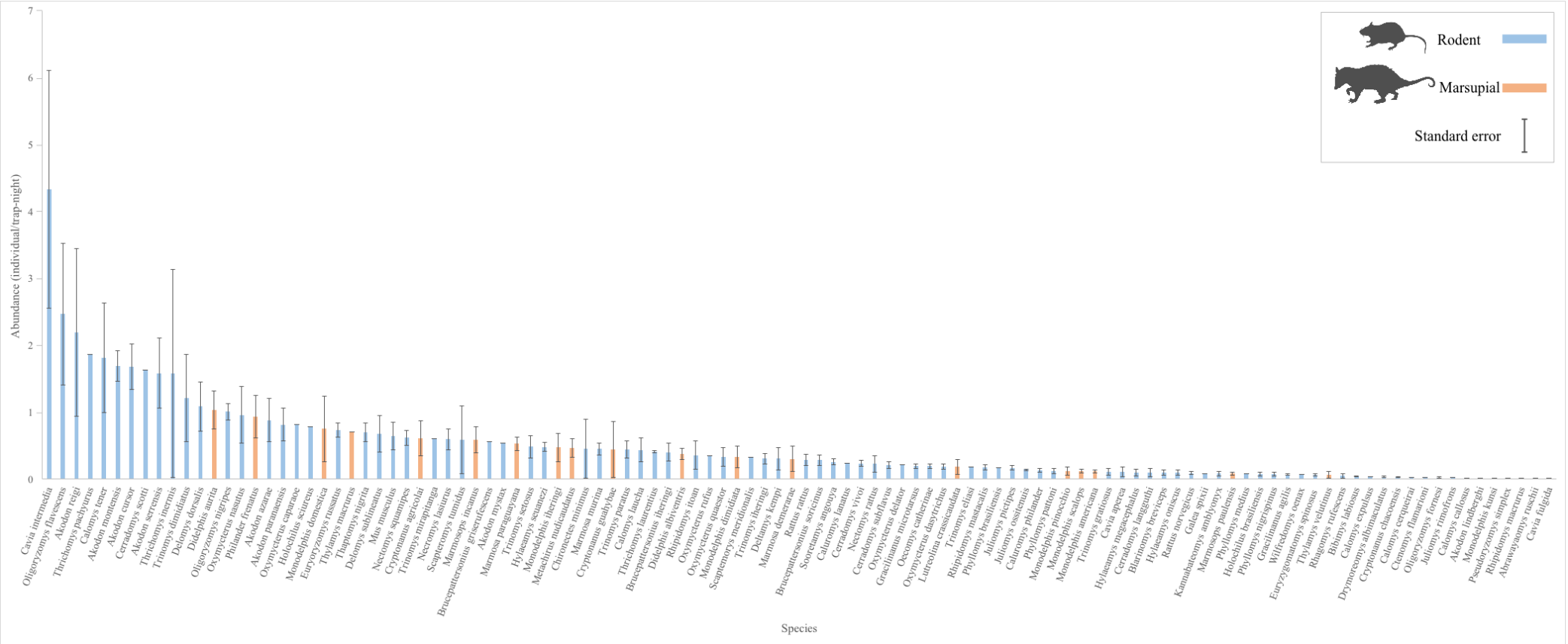

Fig 3. **Mean abundance per site (mean number of individuals captured per trap night) for every small mammal species.** The narrow bars show standard errors, blue bars indicate species from the Order Rodentia and orange bars species from the Order Didephimorphia.

Fig 4. **Accumulated abundance of all small mammal species in the Atlantic forest.** For every species, the size of the box is proportional to the number of captured individuals in all studies. Cumulative abundance was defined as the sum of individuals captured per trap night for any given species as a percentage of the total number of captures per trap night for all species. Twenty-two species (represented by intense colors) represent 78.29% of all individuals captured.

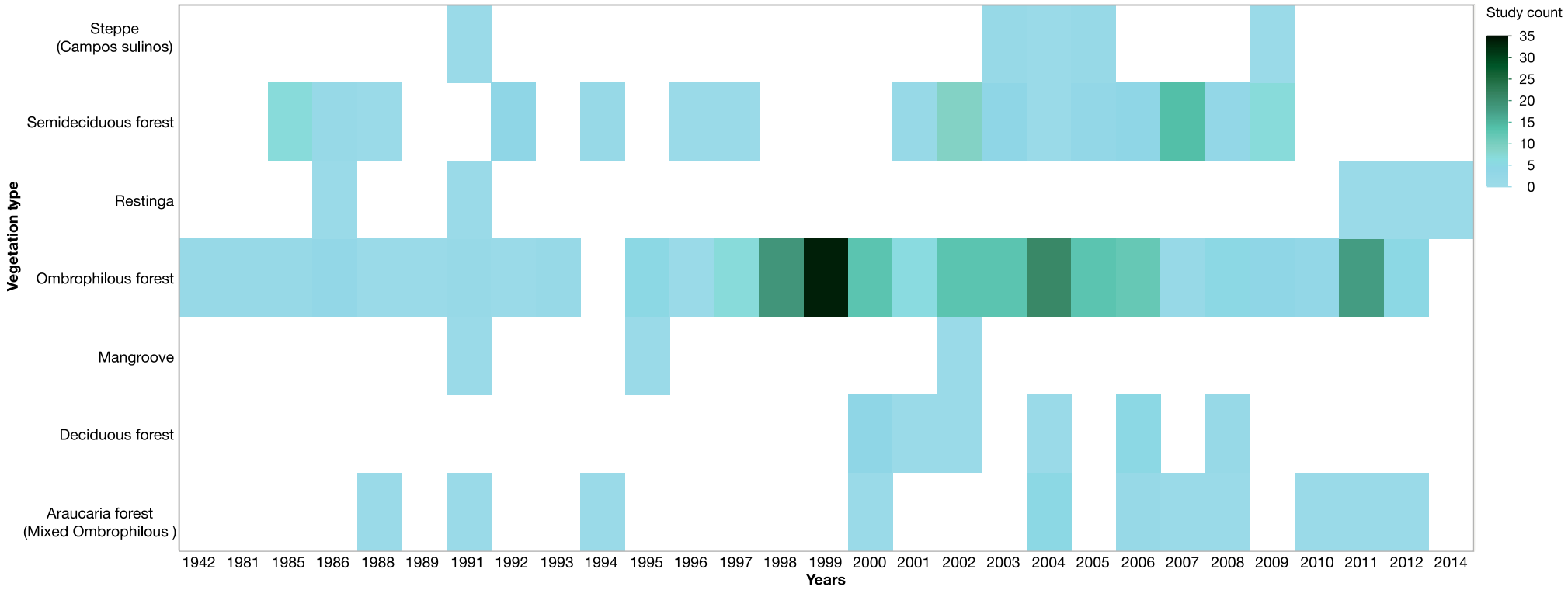

Fig 5. Number of studies conducted by major vegetation type and year in the Atlantic forest. The intensity of the color shade indicates the number of studies. All studies were carried out between 1981 and 2014, with a single exception of the 1942 Davis' study. From the 7 major vegetation types, the Ombrophilous forest is the best studied.

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