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Research Article

Priority mammals for biodiversity conservation in Brazil

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Abstract

More than one fifth of the world´s mammals are listed in an extinction risk category. However, extinction risk should not be the only criterion used in conservation prioritization schemes. Here, we used a species and spatial prioritization scheme for the conservation of Brazilian mammals that incorporates other parameters in addition to extinction risk. Our results suggest that 3.4% of all Brazilian mammal species are high priorities and 29.1% of all Brazilian ecoregions are also high priorities. Since 62.5% of the species identified as high-priority do not have any national conservation plan, we hope our results will help guide mammal conservation actions.

Key words: charismatic species; criteria-based approach; evolutionary relationship; extinction risk; public appeal.

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Introduction

Mammals are one of the few taxonomic groups whose conservation status has been globally evaluated [1]. Brazil is the world's leading country in mammal richness, with a total of 701 species occurring within the country [2], representing almost 12% of global mammal diversity [3]. However, the status of Brazilian mammals is deteriorating [4], with 81 species globally listed as threatened [5], and 69 as nationally threatened (these two threat levels are not mutually exclusive) [6]. Brazil also ranks high in the discovery of new mammal species [2, 7], indicating a greater mammal diversity than currently recorded for the country.

Extinction risk assessments are used as tools to guide the development of conservation strategies [8]. Due to its transparent and objective criteria, the Red List of the International Union for Conservation of Nature and Natural Resources (IUCN) is the most common extinction risk tool used by governments to guide national policies [9]. However, extinction risk should not be the only criterion for prioritizing species for conservation [10, 11]. For example, using extinction risk as the single parameter to define conservation priorities, we would ignore the fact that species differ in the amount of evolutionary history they represent [12, 13], even if they are classified in the same extinction risk category. Also, the implementation of conservation strategies involves political, cultural and socioeconomic issues, and parameters incorporating these conservation angles should be incorporated into prioritization schemes [14]. Our objective is to develop a species prioritization scheme for the conservation of Brazilian mammals according to a set of parameters to complement extinction risk [15]. We also made a spatial rank for Brazilian mammals, indicating the ecoregions that conservation agents should pay more attention to.

Methods

A recent revision updated the mammal species list for Brazil, with a total of 701 native species recorded in the country [2].We used the conservation priority scheme proposed elsewhere [15] to rank each species according to four attributes: extinction risk, degree of endemicity, taxonomic uniqueness, and public appeal.

Risk of extinction represents the temporal flexibility needed to address extinction. Species listed as Vulnerable, Endangered and Critically Endangered were assigned scores of one, two and three, respectively [5, 15]. Since national and global red lists do not always match [16], we adopted both lists [5, 6]. Where a species has different categories between red lists, we adopted the conservative position to list it at its worst category [15]. The degree of endemicity represents both the spatial flexibility to conserve the species and the importance of the national population to the preservation of the species as a whole. Species endemic to Brazil received a score of three; those also occurring in other neotropic countries were assigned a score of two, and species occurring in other biogeographic realms were assigned a score of one [15].

Taxonomic uniqueness reflects the evolutionary history of a species. Species belonging to a monospecific genus were assigned a score of three; species in a genus with two to 10 species were assigned a score of two; and species belonging to a genus with more than 10 species were assigned a score of one [15]. Public appeal refers to the fact that conservation actions are easier if society supports them. A score of three was assigned to charismatic species (e.g. used as pets or as cultural symbols according to [5]); a score of two was assigned to species that are used by human populations (e.g. hunted), and a score of one to species that do not attract human interest [15]. According to [15], a combined priority score was calculated by multiplying the value assigned to each attribute to avoid redundant results. We divided the species' scores in high (>20 points), medium (>10 points ≤20) or low priority (≤10 points; [15]).

In order to indicate spatial priorities for mammal conservation in Brazil, we listed the occurrence of mammal species in each Brazilian ecoregion [17]. We overlapped the extension of occurrence of all mammal species [5] with each Brazilian ecoregion [18], which generated a presence/absence matrix. Then, we added the

scores for the species that occurred in a given ecoregion and divided by the quantity of species that occurred in that ecoregion, which generated the mean priority score per ecoregion. Then, we added the mean priority scores of all ecoregions and divided them into three equal groups, which corresponded to a priority category (high, medium or low).

Results

From all Brazilian mammals (701 species), 14.2% (100 species) were listed in at least one red list (global or national), and therefore were assigned to a priority category. From those, 23% were high priority for conservation (41% were medium and 36% were low priority; appendix 1 and 2). Within high priority mammals, Primates comprised 74% (17 species) of the species, followed by Rodentia (17% - four species), Cetartiodactyla and Carnivora (one species each; appendix 1 and 2).

From all Brazilian terrestrial ecoregions (48 ecoregions), 27% (13 ecoregions) were high priority for mammal conservation (56% were medium and 17% were low priority; Table 1). Within the high priority ecoregions, seven were in the Amazon Forest, five in the Atlantic Forest, and the remnant in the Cerrado biome (Figure 1; Appendix 3).

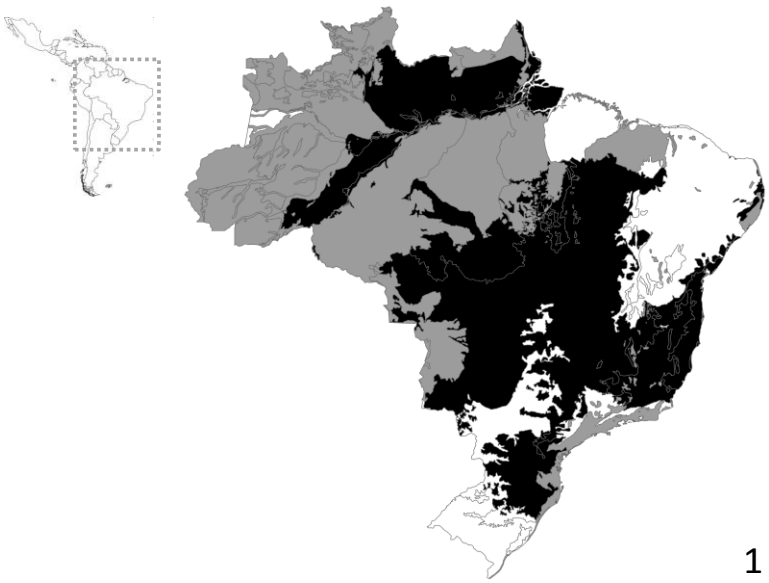

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Fig. 1. The priority ecoregions of Brazil based on the average of the species' priority scores occurring in each ecoregion (the ecoregions' names are in supplementary information 1; the colors are: white= low; gray=medium; and black= high priority).

Discussion

Of the top priority Brazilian mammals for conservation, four were primates and two were rodents. These two orders are among the best-studied by Brazilian mammalogists [19]. The northern muriqui and the lion tamarins are already conservation flagships for the Atlantic Forest and have action plans dedicated to them [20, 21]. There is a national action plan under preparation for the black-bearded saki [22]. Unfortunately we do not observe this level of attention for the rodents listed as top priorities for mammal conservation in Brazil. *Cavia intermedia* is the mammal with the smallest range distribution in the world and one of the smallest population sizes [23, 24], highlighting this species not only as a national, but as a global conservation priority. However, there is no formal action plan or long-term research dedicated to this rare mammal. The candango mouse should be one of the country's most celebrated species, but its existence and history are almost forgotten. The candango mouse was discovered in 1965 when Brazil's new capital, Brasília, was being built. It has not been recorded since then, despite exhaustive surveys conducted within its small known historical range. Although listed as Extinct by IUCN [25], Brazil's national red list classifies the candango mouse as Critically Endangered [6]. This disparity in conservation status makes it a top priority species. If extant, it is under urgent need of actions. If it is really extinct, surveys focusing on this species should put an end to doubts regarding its status.

Table 1. Priority categories for Brazilian's terrestrial ecoregions. From the 48 terrestrial ecoregions, 13 were high priority for conservation.

High (≥16.5 points)	Medium (≥13.5 points <16.5 points)	Low (<13.5 points)
Araucaria moist forests	Tapajós-Xingu moist forests	Solimões-Japurá moist forests
Pernambuco interior forests	Chiquitano dry forest	Humid Chaco
Uatuma-Trombetas moist forests	Xingu-Tocantins-Araguaia moist forests	Alto Paraná Atlantic forests
Southern Atlantic mangroves	Campos Rupestres montane savanna	Atlantic dry forests
Gurupa varzea	Serra do Mar coastal forests	Caatinga enclaves moist forest
Bahia coastal forests	Madeira-Tapajós moist forests	Uruguayan savanna
Mato grosso seasonal forests	Caatinga	Northeastern Brazil restingas
Cerrado	Guianan savanna	Southern Cone mesopotamian savanna
Marajó varzea	Beni savanna	
Tocantins/Pindare moist forests	Atlantic Coast restingas	
Bahia interior forests	Maranhão babaçu forests	
Purus-Madeira moist forests	Pernambuco coastal forests	
Monte alegre várzea	Japurá-Solimoes-Negro moist forests	
	Guianan piedmont and lowland moist forests	
	Guianan highlands moist forests	
	Caqueta moist forest	
	Negro-Branco moist forests	
	Juruá-Purus moist forests	
	Iquitos varzea	
	Amazon-Orinoco-southern caribbean mangroves	
	Guianan moist forests	
	Dry Chaco	
	Purus varzea	
	Pantanal	
	Pantepui	
	Southwest Amazon moist forests	
	Rio Negro campinarana	

The results of the ecoregion priorities for mammal conservation show that from the top 13 sites, seven are in the Amazon, five are in the Atlantic Forest, and one in the Cerrado. The top priority sites identified here at the national scale are also sites of global importance in other prioritization schemes, such as WWF Global 200 [26, 27], Biodiversity Hotspots [28, 29, 30], Crisis Ecoregions [31], Wilderness Areas [29, 32], the Last Frontier Forests [33] and Last of the Wild [34].

Two important considerations need to be made in our spatial analysis. First, the aim of our analysis was only to indicate the most important regions for conservation of mammal species and to guide resource allocation by decision-makers and conservationists. However, on-the-ground conservation actions must be planned on a finer spatial scale. Second, the geographic data used for each species (extension of occurrence) tend to overestimate the actual geographic distribution of a given species, generating commission errors. This means that the assumption that a species occurs in every single locality within its distribution is wrong. It is important to be careful when interpreting priority scores of species with large ranges, but which may have small areas of occupancy. However, as discussed above, these issues would be taken into account when on-the-ground conservation actions are implemented, a natural next step from our current analytical scheme.

Although the majority of on-the-ground conservation actions taken by governments and non-governmental organizations are based solely on extinction risk schemes, it is already known that other parameters must be taken into account [10, 11]. Setting conservation priorities is not only a scientific process, but also a socio-political one [14], and criteria-based conservation approaches should take this into account. One example is the thin-spinned porcupine *Chaetomys subspinosus,* which in a threat-only prioritization would be considered medium priority, but in this multiple approach is high priority, because despite being listed as Vulnerable, it is endemic to Brazil, it is the only species in its genus, and it is a mammal that attracts human attention.

Implications for conservation

The methodology used in this study is simple, comprehensible, and can be used for other taxonomic groups and/or regions. Since 62.5% (15 species) of all high-priority Brazilian mammals do not have any national action plan, we hope our results are taken into account when national environmental agencies (e.g. ICMBio) decide which species will be the targets for national action plans in the future [22].

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References

[1] Schipper, J. *et al.* 2008. The status of the world's land and marine mammals: diversity, threat, and knowledge. *Science* 322: 225-230.

[2] Paglia, A.P *et al.* 2012. Annotated checklist of Brazilian mammals. *Occasional Papers in Conservation Biology* 6: 1-76.

[3] Wilson, D.E. and Reeder, D.A. 2005. *Mammal species of the world: a taxonomic and geographic reference*. Baltimore, Johns Hopkins University Press, 2000p.
[4] Paglia, A.P. and da Fonseca, G.A.B. 2009. Assessing changes in the conservation status of threatened Brazilian vertebrates. *Biodiversity and Conservation* 18: 3563-3577.
[5] IUCN. 2011. *The IUCN Red List of threatened species*. Available online at: http://www.iucnredlist.org/ [Accessed: June 2011]
[6] Chiarello, A.G., Aguiar, L.M.S., Cerqueira, R., Melo, F.R., Rodrigues, F.H.G. and Silva, V.M.F. 2008. *Mamíferos ameaçados de extinção no Brasil*, p. 680-882. In: Machado, A.B.M., Drummond, G.M. & Paglia, A.P. (Eds.). *Livro vermelho da fauna brasileira ameaçada de extinção.* Brasília, Ministério do Meio Ambiente, 1420p.
[7] Reeder, D.A., Helgen, K.M. and Wilson, D.E. 2007. Global trends and biases in new mammal species discoveries. *Occasional Paper of the Museum of the Texas Tech University* 269: 1-34.
[8] Collar, N.J. 1996. The reasons for red data books. *Oryx* 30: 121-130.
[9] Rodrigues, A.S.L., Pilgrim, J.D., Lamoreux, J.F., Hoffmann, M. and Brooks, T.M. 2006. The value of the IUCN Red List for conservation. *Trends in Ecology & Evolution* 21: 71-76.
[10] Mace, G.M., Possingham, H.P. & Leader-Willians, N. 2007. Prioritizing choices in conservation, p. 17-34. In: MacDONALD, D.W. & K. SERVICE (Eds.) *Key topics in conservation biology*. Blackwell Oxford, United Kingdom, 307p.
[11] Possingham, H.P., Andelman, S.J, Burgaman, M.A., Medellín, R.A., Master, L.L. and Keith, D.A. 2002. Limits to the use of threatened species lists. *Trends in Ecology & Evolution* 17: 503-507.
[12] Mace, G.M., Gittleman, J.L. and Purvis A. 2003. Preserving the tree of life. *Science* 300: 1707-1709.
[13] Isaac, N.J.B., Turvey, S.T., Collen, B., Waterman, C. and Baillie, J.E.M. 2007. Mammals on the EDGE: conservation priorities based on threat and phylogeny. *PLoS One* 3: e296. Doi:10.1371/journal.pone.0000296.
[14] Miller, R.M. *et al.* 2006. Extinction risk and conservation priorities. *Science* 313: 441.
[15] Rodríguez, J.P., Rojas-Suaréz, F. and Sharpe, C.J. 2004. Setting priorities for the conservation of Venezuelan's threatened birds. *Oryx* 38: 373-382.
[16] Brito, D., Ambal, R.G., Brooks, T., De Silva, N., Foster, M., Hao, W., Hilton-Taylor, C., Paglia, A., Rodríguez, J.P., Rodríguez and Rodríguez, J.V. 2010. How similar are national red lists and the IUCN Red List? *Biological Conservation* 143: 1154-1158.
[17] Olson, D.M. 2001. Terrestrial ecoregions of the world: a new map of life on Earth. *BioScience* 51: 933-938.
[18] WWF. 2012. *Wildfinder: online database of species distributions*. Available online at: http://www.worldwildlife.org/science/wildfinder/ [Acessed: June 2012]
[19] Brito, D., Oliveira, L.C., Oprea, M. and Mello, M.A.R. 2009. An overview of Brazilian mammalogy: biases, trends and future directions. *Zoologia* 26: 67-73.
[20] Holst, B. 2006. *Lion Tamarin Population and Habitat Viability Assessment Workshop 2005, final report.* Apple Valley, IUCN/SSC Conservation Breeding Specialist Group, 205p.
[21] Jerusalinsky, L., Talebi, M. and Melo, F.R. 2011. *Plano de ação nacional para a conservação dos muriquis*. Brasília, ICMBio, 143p.
[22] ICMBIO. 2012. *Institute Chico Mendes for the conservation of biodiversity.* Available online at: http://www.icmbio.gov.br/portal/biodiversidade/fauna-brasileira/planos-de-acao-nacionais.html [Acessed: June 2012]
[23] Cherem, J.J., Olímpio, J. and Ximenez A. 1999. Descrição de uma nova espécie do gênero *Cavia* Pallas, 1766 (Mammalia – Caviidae) das Ilhas dos Moleques do Sul, Santa Catarina, sul do Brasil. *Biotemas* 12: 95-117.

[24] Salvador, C.H. and Fernandez F.A.S. 2008. Population dynamics and conservation status of the insular cavy *Cavia intermedia* (Rodentia: Caviidae). *Journal of Mammalogy* 89: 721-729.
[25] Leite, Y. Patterson, B. 2008. *Juscelinomys candango*. In: IUCN 2012. *IUCN Red List of threatened species*. Available online at: http://www.iucnredlist.org/apps/redlist/details/10946/0 [Acessed: June 2012]
[26] Olson, D.M. and Dinerstein E. 1998. The global 200: a representation approach to conserving the Earth's most biologically valuable ecoregions. *Conservation Biology* 12: 502-515.
[27] Olson, D.M. and Dinerstein E. 2002. The global 200: priority ecoregions for global conservation. *Annals of the Missouri Botanical Garden* 89: 199-224.
[28] Myers, N., Mittermeier, R.A., Mittermeier, C.G., Da Fonseca, G.A.B. and Kent, J. 2000. Biodiversity hotspots for conservation priorities. *Nature* 403: 853-858.
[29] Mittermeier, R.A., Myers, N., Thomsen, J.B., Da Fonseca, G.A.B. and Olivieri S. 1998. Biodiversity hotspots and major tropical wilderness areas: approaches to setting conservation priorities. *Conservation Biology* 12: 516-520.
[30] Mittermeier, R.A., Gil, P.R., Hoffmann, M., Pilgrim, J., Brooks, T., Mittermeier, C.G., Lamoreux, J. and Da Fonseca, G.A.B. 2005. *Hotspots Revisited: Earth's biologically richest and most endangered terrestrial ecoregions*. Mexico City, CEMEX, 392p.
[31] Hoekstra, J.M., Boucher, T.M., Ricketts, T.H. and Roberts, C. 2005. Confronting a biome crisis: global disparities of habitat loss and protections. *Ecology Letters* 8: 23-29.
[32] Mittermeier, R.A., Mittermeier, C.G., Gil, P.R., Pilgrim, J., Da Fonseca, G.A.B., Brooks, T. and Konstant, W.R. 2003. *Wilderness: Earth's last wild places.* Mexico City, CEMEX, 576p.
[33] Bryant, D., Nielsen, D. Tangley, L. 1997. *Last frontier forests.* Washington DC, World Resources Institute, 42p.
[34] Sanderson, E.W., Jaiteh, M., Levy, M.A., Redford, K.H., Wannebo, A.V. and Woolmer, G. 2002. The human footprint and the last of the wild. *BioScience* 52: 891-904.

Appendix 1. Risk categories, attributes and priority scores of Brazilian's mammals (N - National; G - Global; ER - Extinction risk; DE - Degree of endemicity; TU - Taxonomic uniqueness; PU - Public appeal; PS - Priority score). We used the list with the higher extinction risk category due to the precautionary principle.

Species	Category		Attribute score				
	N	G	ER	DE	TU	PA	PS
Brachyteles hypoxanthus	CR	CR	3	3	2	3	54
Cavia intermedia	-	CR	3	3	2	3	54
Chiropotes satanas	EN	CR	3	3	2	3	54
Juscelinomys candango	CR	-	3	3	2	3	54
Leontopithecus caissara	CR	CR	3	3	2	3	54
Leontopithecus chrysopygus	CR	EN	3	3	2	3	54
Brachyteles arachnoides	EN	EN	2	3	2	3	36
Callithrix flaviceps	EN	EN	2	3	2	3	36
Chiropotes albinasus	-	EN	2	3	2	3	36
Chiropotes utahickae	VU	EN	2	3	2	3	36
Leontopithecus chrysomelas	EN	EN	2	3	2	3	36
Leontopithecus rosalia	EN	EN	2	3	2	3	36
Pontoporia blainvillei	EN	VU	2	2	3	3	36
Pteronura brasiliensis	VU	EN	2	2	3	3	36
Carterodon sulcidens	CR	-	3	3	3	1	27
Cebus flavius	-	CR	3	3	1	3	27
Cebus kaapori	CR	CR	3	3	1	3	27
Cebus xanthosternos	CR	CR	3	3	1	3	27
Chaetomys subspinosus	VU	VU	1	3	3	3	27
Saguinus bicolor	CR	EN	3	3	1	3	27
Ateles belzebuth	VU	EN	2	2	2	3	24
Ateles marginatus	EN	EN	2	3	2	2	24
Lagothrix cana	-	EN	2	2	2	3	24
Alouatta ululata	CR	EN	3	3	1	2	18
Balaenoptera musculus	CR	EN	3	1	2	3	18
Bradypus torquatus	VU	VU	1	3	2	3	18
Callibella humilis	-	VU	1	3	3	2	18
Callicebus barbarabrownae	CR	CR	3	3	1	2	18
Callicebus coimbrai	CR	EN	3	3	1	2	18
Callistomys pictus	VU	VU	1	3	3	2	18
Callithrix aurita	VU	VU	1	3	2	3	18
Caluromysiops irrupta	CR	-	3	2	3	1	18
Cebus robustus	VU	EN	2	3	1	3	18
Chrysocyon brachyurus	VU	-	1	2	3	3	18
Myrmecophaga tridactyla	VU	-	1	2	3	3	18
Pithecia albicans	-	VU	1	3	2	3	18
Priodontes maximus	VU	VU	1	2	3	3	18
Tolypeutes tricinctus	VU	VU	1	3	2	3	18
Trichecus manatus	CR	VU	3	1	2	3	18
Wilfredomys oenax	CR	EN	3	2	3	1	18
Ateles chamek	-	EN	2	2	2	2	12
Balaenoptera borealis	VU	EN	2	1	2	3	12
Balaenoptera physalus	EN	EN	2	1	2	3	12
Blastocerus dichotomus	VU	VU	1	2	3	2	12
Cacajao calvus	-	VU	1	2	2	3	12
Cacajao ayresi	-	VU	1	3	2	2	12
Cacajao hosomi	-	VU	1	2	2	3	12

Dinomys branickii	-	VU	1	2	3	2	12
Eubalaena australis	EN	-	2	1	2	3	12
Euryoryzomys lamia	-	EN	2	3	2	1	12
Kunsia fronto	CR	EN	3	2	2	1	12
Lagothrix poeppigii	-	VU	1	2	2	3	12
Leopardus colocolo	VU	-	1	2	2	3	12
Leopardus pardalis	VU	-	1	2	2	3	12
Leopardus tigrinus	VU	VU	1	2	2	3	12
Leopardus wiedii	VU	-	1	2	2	3	12
Lonchophylla dekeyseri	VU	-	1	3	2	2	12
Mazama bororo	-	VU	1	3	2	2	12
Mazama nana	VU	-	1	2	2	3	12
Tapirus terrestris	-	VU	1	2	2	3	12
Trichechus inunguis	VU	VU	1	2	2	3	12
Trinomys eliasi	-	EN	2	3	2	1	12
Trinomys moojeni	-	EN	2	3	2	1	12
Trinomys yonenagae	-	EN	2	3	2	1	12
Megaptera novaeangliae	VU	-	1	1	3	3	9
Mico leucippe	-	VU	1	3	1	3	9
Mico rondoni	-	VU	1	3	1	3	9
Microakodontomys transitorius	-	VU	1	3	3	1	9
Monodelphis unistriata	-	CR	3	3	1	1	9
Neonycteris pusilla	-	VU	1	3	3	1	9
Phaenomys ferrugineus	VU	VU	1	3	3	1	9
Phyllomys mantiqueirensis	-	CR	3	3	1	1	9
Phyllomys unicolor	CR	CR	3	3	1	1	9
Physeter macrocephalus	VU	VU	1	1	3	3	9
Lagothrix lagothrica	-	VU	1	2	2	2	8
Ateles paniscus	-	VU	1	2	2	2	8
Alouatta belzebul	-	VU	1	3	1	2	6
Alouatta discolor	-	VU	1	3	1	2	6
Callimico goeldii	-	VU	1	2	3	1	6
Ctenomys flamarioni	VU	EN	2	3	1	1	6
Hylaeamys oniscus	-	VU	1	3	2	1	6
Juliomys rimofrons	-	VU	1	3	2	1	6
Lonchophylla bokermanni	VU	-	1	3	2	1	6
Panthera onca	VU	-	1	1	2	3	6
Phyllomys brasiliensis	EN	EN	2	3	1	1	6
Phyllomys lundi	-	EN	2	3	1	1	6
Phyllomys thomasi	EN	EN	2	3	1	1	6
Podoxymys roraimae	-	VU	1	2	3	1	6
Rhagomys rufescens	VU	-	1	3	2	1	6
Saimiri vanzolinii	VU	VU	1	3	2	1	6
Speothos venaticus	VU	-	1	2	3	1	6
Thylamys karimii	-	VU	1	3	2	1	6
Callicebus melanochir	VU	VU	1	3	1	1	3
Callicebus personatus	VU	VU	1	3	1	1	3
Ctenomys lami	-	VU	1	3	1	1	3
Lasiurus ebenus	VU	-	1	3	1	1	3
Monodelphis umbristriata	-	VU	1	3	1	1	3
Platyrrhinus recifinus	VU	-	1	3	1	1	3
Saguinus niger	-	VU	1	3	1	1	3
Myotis ruber	VU	-	1	2	1	1	2

Appendix 2. Priority categories for Brazilian's mammals. From 100 priority species, 23 were high priority for conservation.

High (>20 points)	Medium (>10 points≤ 20 points)	Low (≤10 points)
Brachyteles hypoxanthus	*Ateles chamek*	*Megaptera novaeangliae*
Cavia intermedia	*Alouatta ululata*	*Mico leucippe*
Chiropotes satanas	*Balaenoptera musculus*	*Mico Rondoni*
Juscelinomys candango	*Bradypus torquatus*	*Microakodontomys transitorius*
Leontopithecus caissara	*Callibella humilis*	*Monodelphis unistriata*
Leontopithecus chrysopygus	*Callicebus barbarabrownae*	*Neonycteris pusilla*
Brachyteles arachnoides	*Callicebus coimbrai*	*Phaenomys ferrugineus*
Callithrix flaviceps	*Callistomys pictus*	*Phyllomys mantiqueirensis*
Chiropotes albinasus	*Callithrix aurita*	*Phyllomys unicolor*
Chiropotes utahickae	*Caluromysiops irrupta*	*Physeter macrocephalus*
Leontopithecus chrysomelas	*Cebus robustus*	*Lagothrix lagothrica*
Leontopithecus rosalia	*Chrysocyon brachyurus*	*Ateles paniscus*
Pontoporia blainvillei	*Myrmecophaga tridactyla*	*Alouatta belzebul*
Pteronura brasiliensis	*Pithecia albicans*	*Alouatta discolor*
Carterodon sulcidens	*Priodontes maximus*	*Callimico goeldii*
Cebus flavius	*Tolypeutes tricinctus*	*Ctenomys flamarioni*
Cebus kaapori	*Trichecus manatus*	*Hylaeamys oniscus*
Cebus xanthosternos	*Wilfredomys oenax*	*Juliomys rimofrons*
Chaetomys subspinosus	*Balaenoptera borealis*	*Lonchophylla bokermanni*
Saguinus bicolor	*Balaenoptera physalus*	*Panthera onca*
Ateles belzebuth	*Blastocerus dichotomus*	*Phyllomys brasiliensis*
Ateles marginatus	*Cacajao ayresi*	*Phyllomys lundi*
Lagothrix cana	*Cacajao calvus*	*Phyllomys thomasi*
	Cacajao hosomi	*Podoxymys Roraimae*
	Dinomys branickii	*Rhagomys rufescens*
	Eubalaena australis	*Saimiri vanzolinii*

	Euryoryzomys lamia	*Speothos venaticus*
	Kunsia fronto	*Thylamys karimii*
	Lagothrix poeppigii	*Callicebus melanochir*
	Leopardus colocolo	*Callicebus personatus*
	Leopardus pardalis	*Ctenomys lami*
	Leopardus tigrinus	*Lasiurus ebenus*
	Leopardus wiedii	*Monodelphis umbristriata*
	Lonchophylla dekeyseri	*Platyrrhinus recifinus*
	Mazama bororo	*Saguinus niger*
	Mazama nana	*Myotis ruber*
	Tapirus terrestris	
	Trichechus inunguis	
	Trinomys eliasi	
	Trinomys moojeni	
	Trinomys yonenagae	

Appendix 3. The mean priority scores of each Brazilian's terrestrial ecoregions. The mean score is explained in the text. Ecoregions: Acr – Atlantic Coast restingas; Adf – Atlantic dry forests; Amf – Araucária moist forests; Aos – Amazon-Orinoco-Southern Caribbean mangroves; Apa – Alto Paraná Atlantic forests; Bcf – Bahia coastal forests; Bif – Bahia interior forests; Bs – Beni savanna; C – Cerrado; Ca – Caatinga; Cdf – Chiquitano dry forests; Cem – Caatinga enclaves moist forests; Cmf – Caqueta moist forests; Crm – Campos Rupestres montane savanna; Dc – Dry chaco; Ghm – Guianan highlands moist forests; Gmf – Guianan moist forests; Gpl – Guianan piedmont and lowland moist forests; Gs - Guianan savanna; Gv - Gurupa várzea; Hc – Humid chaco; Iv – Iquitos várzea; Jpm – Juruá-Purus moist forests; Jpn – Japurá-Solimões-Negro moist forests; Mav – Monte Alegre várzea; Mbf – Maranhão babaçu forests; Mgs – Mato Grosso seasonal forests; Mtm – Madeiras-Tapajós moist forests; Mv – Marajó várzea; Nbm – Negro-Branco moist forests; Neb – Northeastern Brazil restingas; P – Pantanal; Pcf – Pernambuco coastal forests; Pif – Pernambuco interior forests; Pm – Purus-Madeira moist forests; Pt – Pantepui; Pv – Purus várzea; Rnc – Rio Negro campinarana; Sam – Southern Atlantic mangroves; Scm – Southern Cone Mesopotamian savanna; Sjm – Solimões-Japurá moist forests; Smc – Serra do Mar coastal forests; Swa – Southwest Amazon moist forests; Tpm – Tocantins/Pindare moist forests; Txm – Tapajós-Xingu moist forests; Us – Uruguayan savanna; Utm – Uatuma-Trombetas moist forests; Xta – Xingu-Tocantins-Araguaia moist forests.

	Ecoregions							
Species	Apaf	Aoscm	Amf	Acr	Adf	Bcf	Bif	Bs
Alouatta belzebul		X		X				
Alouatta discolor								
Alouatta ululata		X						
Ateles belzebuth								
Ateles chamek								X
Ateles marginatus								
Ateles paniscus		X						
Blastocerus dichotomus	X		X	X	X		X	X
Brachyteles arachnoides	X						X	
Brachyteles hypoxantus			X			X	X	
Bradypus torquatus	X			X		X	X	
Cacajao ayresi								
Cacajao calvus								
Cacajao hosomi								
Callibella humilis								
Callicebus barbarabrownae					X	X	X	
Callicebus coimbrai				X		X	X	
Callicebus melanochir				X		X	X	
Callicebus personatus				X		X	X	
Callimico goeldii								
Callistomys pictus				X		X	X	
Callithrix aurita	X			X			X	
Callithrix flaviceps						X	X	
Caluromysiops irrupta								
Carterodon sulcidens					X		X	
Cavia intermedia								

Cebus flavius				X		X		
Cebus kaapori		X						
Cebus robustus				X		X	X	
Cebus xanthosternos				X	X	X	X	
Chaetomys subspinosus				X		X	X	
Chiropotes albinasus								
Chiropotes satanas		X						
Chiropotes utahickae								
Chrysocyon brachyurus	X		X		X	X	X	
Ctenomys flamarioni	X		X	X				
Ctenomys lami	X							
Dinomys branickii								
Euryoryzomys lamia	X							
Hylaeamys oniscus								
Juscelinomys candango								
Juliomys rimofrons	X							
Kunsia fronto								
Lagothrix cana								
Lagothrix lagothrica								
Lagothrix poeppigii								
Lasiurus ebenus								
Leontopithecus caissara								
Leontopithecus chrysomelas				X		X	X	
Leontopithecus chrysopygus	X		X					
Leontopithecus rosalia	X			X				
Leopardus colocolo	X			X	X		X	
Leopardus pardalis	X	X	X	X	X	X	X	X
Leopardus tigrinus	X	X	X	X	X	X	X	X
Leopardus wiedii	X	X	X	X	X	X	X	X
Lonchophylla bokermanni	X						X	
Lonchophylla dekeyseri								
Mazama bororo	X		X	X				
Mazama nana	X		X					
Mico leucippe								
Mico rondoni								
Microakodontomys transitorius								
Monodelphis umbristriata	X						X	
Monodephis unistriata	X		X					
Myotis ruber	X			X	X	X	X	
Myrmecophaga tridactyla	X	X		X	X	X	X	X

Neonycteris pusilla								
Panthera onca	X	X		X	X	X	X	X
Phaenomys ferrugineus	X							
Phyllomys brasiliensis							X	X
Phyllomys lundi	X						X	
Phyllomys mantiqueirensis								
Phyllomys thomasi								
Phyllomys unicolor						X		
Pithecia albicans								
Platyrrhinus recificinus	X	X		X	X	X	X	
Priodontes maximus	X	X						X
Pteronura brasiliensis							X	X
Podoxymys roraimae								
Rhagomys rufescens	X						X	
Saguinus bicolor								
Saguinus niger		X						
Saimiri vanzolinii								
Speothos venaticus	X	X		X	X	X	X	X
Tapirus terrestris	X	X		X	X	X	X	X
Thylamys karimii	X				X			
Tolypeutes tricinctus	X			X	X		X	
Trinomys eliasi	X			X			X	
Trinomys moojeni							X	
Trinomys yonenagae					X			
Wilfredomys oenax			X					
Richness	34	15	12	28	19	24	35	11
Mean score	13.4	14.6	19.2	15.3	12.6	18	17.1	15.3
	Ecoregions							
Species	Ca	Cemf	Crms	Cmf	C	Cdf	Dc	Ghmf
Alouatta belzebul	X				X			
Alouatta discolor								
Alouatta ululata	X	X						
Ateles belzebuth				X				X
Ateles chamek					X	X		
Ateles marginatus								
Ateles paniscus								X
Blastocerus dichotomus	X		X		X	X	X	
Brachyteles arachnoides			X		X			
Brachyteles hypoxantus			X		X			
Bradypus torquatus	X		X					
Cacajao ayresi								
Cacajao calvus								

Cacajao hosomi								X
Callibella humilis								
Callicebus barbarabrownae	X		X					
Callicebus coimbrai	X							
Callicebus melanochir	X							
Callicebus personatus	X		X		X			
Callimico goeldii								
Callistomys pictus								
Callithrix aurita			X		X			
Callithrix flaviceps			X					
Caluromysiops irrupta								
Carterodon sulcidens	X		X		X			
Cavia intermedia								
Cebus flavius	X							
Cebus kaapori								
Cebus robustus	X		X		X			
Cebus xanthosternos	X		X		X			
Chaetomys subspinosus	X							
Chiropotes albinasus					X	X		
Chiropotes satanas					X			
Chiropotes utahickae					X			
Chrysocyon brachyurus	X		X		X	X		
Ctenomys flamarioni								
Ctenomys lami								
Dinomys branickii								
Euryoryzomys lamia					X			
Hylaeamys oniscus	X							
Juscelinomys candango					X			
Juliomys rimofrons			X					
Kunsia fronto					X			
Lagothrix cana					X	X		
Lagothrix lagothrica				X				
Lagothrix poeppigii								
Lasiurus ebenus								
Leontopithecus caissara								
Leontopithecus chrysomelas								
Leontopithecus chrysopygus					X			
Leontopithecus rosalia								
Leopardus colocolo					X	X	X	

Leopardus pardalis	X	X	X	X	X	X	X	X
Leopardus tigrinus	X	X	X	X	X	X	X	X
Leopardus wiedii	X		X	X	X	X		X
Lonchophylla bokermanni			X		X			
Lonchophylla dekeyseri					X			
Mazama bororo			X		X			
Mazama nana					X			
Mico leucippe								
Mico rondoni								
Microakodontomys transitorius					X			
Monodelphis umbristriata			X		X			
Monodephis unistriata					X			
Myotis ruber			X		X			
Myrmecophaga tridactyla	X	X	X	X	X	X	X	X
Neonycteris pusilla								
Panthera onca	X	X	X	X	X	X	X	X
Phaenomys ferrugineus			X					
Phyllomys brasiliensis	X	X	X	X	X	X	X	X
Phyllomys lundi								
Phyllomys mantiqueirensis			X					
Phyllomys thomasi								
Phyllomys unicolor								
Pithecia albicans								
Platyrrhinus recificinus	X	X	X		X			
Priodontes maximus			X	X	X	X	X	X
Pteronura brasiliensis	X	X	X	X	X	X	X	X
Podoxymys roraimae								
Rhagomys rufescens			X		X			
Saguinus bicolor								
Saguinus niger					X			
Saimiri vanzolinii								
Speothos venaticus	X		X	X	X	X	X	X
Tapirus terrestris	X	X	X	X	X	X	X	X
Thylamys karimii	X		X		X	X		
Tolypeutes tricinctus	X	X	X		X			
Trinomys eliasi								
Trinomys moojeni			X		X			
Trinomys yonenagae	X				X			
Wilfredomys oenax								
Richness	27	8	33	11	45	16	10	12
Mean score	15.4	12.4	16	14.9	17.8	16	14.4	15
	Ecoregions							

Species	Gmf	Gplmf	Gs	Gv	Hc	Iv	Jsnmf	Jpmf
Alouatta belzebul								
Alouatta discolor				X				
Alouatta ululata								
Ateles belzebuth		X	X				X	
Ateles chamek						X	X	X
Ateles marginatus				X				
Ateles paniscus	X	X	X	X			X	
Blastocerus dichotomus					X	X		
Brachyteles arachnoides								
Brachyteles hypoxantus								
Bradypus torquatus								
Cacajao ayresi							X	
Cacajao calvus						X	X	X
Cacajao hosomi		X					X	
Callibella humilis								
Callicebus barbarabrownae								
Callicebus coimbrai								
Callicebus melanochir								
Callicebus personatus								
Callimico goeldii						X		X
Callistomys pictus								
Callithrix aurita								
Callithrix flaviceps								
Caluromysiops irrupta								
Carterodon sulcidens								
Cavia intermedia								
Cebus flavius								
Cebus kaapori								
Cebus robustus								
Cebus xanthosternos								
Chaetomys subspinosus								
Chiropotes albinasus				X				
Chiropotes satanas								
Chiropotes utahickae				X				
Chrysocyon brachyurus					X			
Ctenomys flamarioni								
Ctenomys lami								
Dinomys branickii						X	X	X
Euryoryzomys lamia								
Hylaeamys oniscus								
Juscelinomys candango								

Juliomys rimofrons								
Kunsia fronto								
Lagothrix cana				X		X	X	X
Lagothrix lagothrica							X	X
Lagothrix poeppigii						X		X
Lasiurus ebenus								
Leontopithecus caissara								
Leontopithecus chrysomelas								
Leontopithecus chrysopygus								
Leontopithecus rosalia								
Leopardus colocolo								
Leopardus pardalis	X	X	X	X	X	X	X	X
Leopardus tigrinus	X	X	X	X	X	X	X	X
Leopardus wiedii	X	X	X	X		X	X	X
Lonchophylla bokermanni								
Lonchophylla dekeyseri								
Mazama bororo								
Mazama nana								
Mico leucippe								
Mico rondoni								
Microakodontomys transitorius								
Monodelphis umbristriata								
Monodephis unistriata								
Myotis ruber					X			
Myrmecophaga tridactyla	X	X	X	X	X	X	X	X
Neonycteris pusilla							X	
Panthera onca	X	X	X	X	X	X	X	X
Phaenomys ferrugineus								
Phyllomys brasiliensis	X	X	X	X	X	X	X	X
Phyllomys lundi								
Phyllomys mantiqueirensis								
Phyllomys thomasi								
Phyllomys unicolor								
Pithecia albicans							X	X
Platyrrhinus recificinus								
Priodontes maximus	X	X	X	X	X	X	X	X
Pteronura brasiliensis	X	X	X	X	X	X	X	X
Podoxymys roraimae								
Rhagomys rufescens								
Saguinus bicolor							X	

Saguinus niger								
Saimiri vanzolinii							X	
Speothos venaticus	X	X	X	X	X	X	X	X
Tapirus terrestris	X	X	X	X	X	X	X	X
Thylamys karimii								
Tolypeutes tricinctus								
Trinomys eliasi								
Trinomys moojeni								
Trinomys yonenagae								
Wilfredomys oenax								
Richness	10	12	11	15	10	16	22	17
Mean score	14.4	15	15.3	18	13.4	14.6	15	14.6
	Ecoregions							
Species	Mtmf	Mv	Mbf	Mgsf	Mav	Nbmf	Nebr	P
Alouatta belzebul		X	X	X				
Alouatta discolor	X	X		X				
Alouatta ululata			X				X	
Ateles belzebuth					X	X		
Ateles chamek	X			X	X			X
Ateles marginatus	X	X		X				
Ateles paniscus	X	X			X			
Blastocerus dichotomus	X			X	X			X
Brachyteles arachnoides								
Brachyteles hypoxantus								
Bradypus torquatus								
Cacajao ayresi						X		
Cacajao calvus								
Cacajao hosomi						X		
Callibella humilis	X				X			
Callicebus barbarabrownae								
Callicebus coimbrai								
Callicebus melanochir								
Callicebus personatus								
Callimico goeldii								
Callistomys pictus								
Callithrix aurita								
Callithrix flaviceps								
Caluromysiops irrupta	X				X			
Carterodon sulcidens								
Cavia intermedia								
Cebus flavius								
Cebus kaapori		X	X					

Cebus robustus								
Cebus xanthosternos								
Chaetomys subspinosus								
Chiropotes albinasus	X			X	X			
Chiropotes satanas		X	X	X				
Chiropotes utahickae		X		X				
Chrysocyon brachyurus	X		X	X				X
Ctenomys flamarioni								
Ctenomys lami								
Dinomys branickii					X			
Euryoryzomys lamia								
Hylaeamys oniscus								
Juscelinomys candango								
Juliomys rimofrons								
Kunsia fronto								
Lagothrix cana	X			X	X			
Lagothrix lagothrica						X		
Lagothrix poeppigii								
Lasiurus ebenus								
Leontopithecus caissara								
Leontopithecus chrysomelas								
Leontopithecus chrysopygus								
Leontopithecus rosalia								
Leopardus colocolo	X			X				X
Leopardus pardalis	X	X	X	X	X	X	X	X
Leopardus tigrinus	X	X	X	X	X	X	X	X
Leopardus wiedii	X	X	X	X	X		X	X
Lonchophylla bokermanni								
Lonchophylla dekeyseri								
Mazama bororo								
Mazama nana								
Mico leucippe	X							
Mico rondoni	X				X			
Microakodontomys transitorius								
Monodelphis umbristriata								
Monodephis unistriata								
Myotis ruber								X
Myrmecophaga tridactyla	X	X	X	X	X	X	X	X
Neonycteris pusilla								
Panthera onca	X	X	X	X	X	X	X	X

Phaenomys ferrugineus								
Phyllomys brasiliensis	X	X		X	X	X		X
Phyllomys lundi								
Phyllomys mantiqueirensis								
Phyllomys thomasi								
Phyllomys unicolor								
Pithecia albicans					X			
Platyrrhinus recificinus			X				X	
Priodontes maximus	X	X	X	X	X	X		X
Pteronura brasiliensis	X	X		X	X	X		X
Podoxymys roraimae								
Rhagomys rufescens								
Saguinus bicolor								
Saguinus niger		X	X	X				
Saimiri vanzolinii								
Speothos venaticus	X	X	X	X	X	X	X	X
Tapirus terrestris	X	X	X	X	X	X	X	X
Thylamys karimii	X			X				
Tolypeutes tricinctus			X	X				
Trinomys eliasi								
Trinomys moojeni								
Trinomys yonenagae								
Wilfredomys oenax								
Richness	23	17	16	23	20	12	9	14
Mean score	15.6	17.6	15.2	17.9	16.9	14.8	11	14.3
	Ecoregions							
Species	Pt	Pcf	Pif	Pv	Pmmf	Rnc	Smcf	Sjmf
Alouatta belzebul		X	X					
Alouatta discolor								
Alouatta ululata								
Ateles belzebuth	X			X		X		
Ateles chamek				X	X			X
Ateles marginatus								
Ateles paniscus	X					X		
Blastocerus dichotomus							X	
Brachyteles arachnoides							X	
Brachyteles hypoxantus								
Bradypus torquatus			X				X	
Cacajao ayresi						X		
Cacajao calvus				X				X
Cacajao hosomi	X					X		
Callibella humilis								

Callicebus barbarabrownae								
Callicebus coimbrai			X					
Callicebus melanochir								
Callicebus personatus								
Callimico goeldii				X				X
Callistomys pictus								
Callithrix aurita							X	
Callithrix flaviceps								
Caluromysiops irrupta								
Carterodon sulcidens								
Cavia intermedia							X	
Cebus flavius		X	X					
Cebus kaapori								
Cebus robustus								
Cebus xanthosternos			X					
Chaetomys subspinosus			X					
Chiropotes albinasus					X			
Chiropotes satanas								
Chiropotes utahickae								
Chrysocyon brachyurus							X	
Ctenomys flamarioni							X	
Ctenomys lami								
Dinomys branickii				X	X			X
Euryoryzomys lamia								
Hylaeamys oniscus		X	X					
Juscelinomys candango								
Juliomys rimofrons							X	
Kunsia fronto								
Lagothrix cana				X	X			
Lagothrix lagothrica				X		X		X
Lagothrix poeppigii				X				X
Lasiurus ebenus							X	
Leontopithecus caissara							X	
Leontopithecus chrysomelas								
Leontopithecus chrysopygus								
Leontopithecus rosalia							X	
Leopardus colocolo								
Leopardus pardalis	X	X	X	X	X	X	X	X
Leopardus tigrinus	X	X	X	X	X	X	X	X
Leopardus wiedii	X			X	X	X	X	X
Lonchophylla bokermanni							X	

Lonchophylla dekeyseri								
Mazama bororo							X	
Mazama nana							X	
Mico leucippe								
Mico rondoni				X	X			
Microakodontomys transitorius								
Monodelphis umbristriata								
Monodephis unistriata							X	
Myotis ruber							X	
Myrmecophaga tridactyla	X	X	X	X	X	X	X	X
Neonycteris pusilla						X		
Panthera onca	X			X	X	X	X	X
Phaenomys ferrugineus							X	
Phyllomys brasiliensis	X	X	X	X	X	X	X	X
Phyllomys lundi							X	
Phyllomys mantiqueirensis							X	
Phyllomys thomasi							X	
Phyllomys unicolor								
Pithecia albicans				X	X			
Platyrrhinus recificinus		X	X				X	
Priodontes maximus	X			X	X	X	X	X
Pteronura brasiliensis	X	X	X	X	X	X	X	X
Podoxymys roraimae	X							
Rhagomys rufescens							X	
Saguinus bicolor								
Saguinus niger								
Saimiri vanzolinii				X				
Speothos venaticus	X			X	X	X	X	X
Tapirus terrestris	X	X	X	X	X	X	X	X
Thylamys karimii								
Tolypeutes tricinctus		X	X					
Trinomys eliasi							X	
Trinomys moojeni								
Trinomys yonenagae								
Wilfredomys oenax							X	
Richness	13	10	14	20	15	15	33	15
Mean score	14.3	15	18.4	14.3	17	13.9	15.8	13.2
	Ecoregions							
Species	Sam	Scms	Swamf	Txmf	Tpmf	Utmf	Us	Xtamf
Alouatta belzebul	X			X	X	X		X
Alouatta discolor				X				X
Alouatta ululata								

Ateles belzebuth						X		
Ateles chamek			X	X		X		
Ateles marginatus				X		X		X
Ateles paniscus						X		
Blastocerus dichotomus		X	X				X	X
Brachyteles arachnoides	X							
Brachyteles hypoxantus	X							
Bradypus torquatus	X							
Cacajao ayresi								
Cacajao calvus			X					
Cacajao hosomi								
Callibella humilis								
Callicebus barbarabrownae								
Callicebus coimbrai	X							
Callicebus melanochir	X							
Callicebus personatus	X							
Callimico goeldii			X					
Callistomys pictus	X							
Callithrix aurita	X							
Callithrix flaviceps								
Caluromysiops irrupta			X					
Carterodon sulcidens								
Cavia intermedia								
Cebus flavius	X							
Cebus kaapori					X			X
Cebus robustus	X							
Cebus xanthosternos	X							
Chaetomys subspinosus	X							
Chiropotes albinasus				X		X		
Chiropotes satanas					X			X
Chiropotes utahickae				X	X	X		X
Chrysocyon brachyurus					X		X	X
Ctenomys flamarioni							X	
Ctenomys lami							X	
Dinomys branickii			X					
Euryoryzomys lamia								
Hylaeamys oniscus	X							
Juscelinomys candango								
Juliomys rimofrons								
Kunsia fronto								
Lagothrix cana			X	X		X		
Lagothrix lagothrica			X					

Lagothrix poeppigii			X					
Lasiurus ebenus								
Leontopithecus caissara	X							
Leontopithecus chrysomelas	X							
Leontopithecus chrysopygus								
Leontopithecus rosalia								
Leopardus colocolo		X					X	
Leopardus pardalis	X	X	X	X	X	X	X	X
Leopardus tigrinus	X	X	X	X	X	X	X	X
Leopardus wiedii	X	X	X	X	X	X	X	X
Lonchophylla bokermanni								
Lonchophylla dekeyseri								
Mazama bororo	X							
Mazama nana							X	
Mico leucippe				X				
Mico rondoni			X					
Microakodontomys transitorius								
Monodelphis umbristriata								
Monodephis unistriata								
Myotis ruber	X	X					X	
Myrmecophaga tridactyla	X		X	X	X	X	X	X
Neonycteris pusilla								
Panthera onca	X		X	X	X	X	X	X
Phaenomys ferrugineus	X							
Phyllomys brasiliensis	X		X	X	X	X		X
Phyllomys lundi								
Phyllomys mantiqueirensis								
Phyllomys thomasi								
Phyllomys unicolor								
Pithecia albicans								
Platyrrhinus recificinus	X				X			X
Priodontes maximus			X	X	X	X	X	X
Pteronura brasiliensis	X		X	X	X	X		X
Podoxymys roraimae								
Rhagomys rufescens	X							
Saguinus bicolor						X		
Saguinus niger				X	X	X		X
Saimiri vanzolinii								
Speothos venaticus	X		X	X	X	X		X
Tapirus terrestris	X	X	X	X	X	X	X	X

Thylamys karimii								X
Tolypeutes tricinctus	X							
Trinomys eliasi								
Trinomys moojeni								
Trinomys yonenagae								
Wilfredomys oenax	X						X	
Richness	31	7	19	18	16	19	15	20
Mean score	18.3	10.6	14.1	16.2	17.4	18.3	11.5	16.3