

## Supplementary material

Table S1. Species list and body size data used for analysis (snout-to-vent length in millimeters) SVL are average values for each species, including males and females, and were compiled from a large list of primary references (species' original descriptions or taxonomic reviews) and, for a few species, values were obtained by broadly measuring adult individuals in the collection of the Departamento de Biologia Geral, ICB, UFG, or in the herpetological collection of Museu Nacional de Rio de Janeiro (MNRJ/UFRJ). A detailed list of primary references used is available from the authors upon request. SVL= snout-to-vent length.

Species	Family	Description date	SVL
<i>Allobates goianus</i>	Aromobatidae	1975	17
<i>Barycholos ternetzi</i>	Brachycephalidae	1937	24
<i>Eleutherodactylus heterodactylus</i>	Brachycephalidae	1937	12
<i>Ischnocnema juipoca</i>	Brachycephalidae	1978	26
<i>Pristimantis crepitans</i>	Brachycephalidae	1965	16
<i>Pristimantis dundeei</i>	Brachycephalidae	1999	20
<i>Pristimantis fenestratus</i>	Brachycephalidae	1864	27
<i>Ollotis nebulifer</i>	Bufonidae	1824	50
<i>Rhaebo guttatus</i>	Bufonidae	1799	99
<i>Rhinella crucifer</i>	Bufonidae	1821	27
<i>Rhinella margaritifera</i>	Bufonidae	1768	50
<i>Rhinella ocellata</i>	Bufonidae	1858	43
<i>Rhinella ornata</i>	Bufonidae	1821	72
<i>Rhinella rubescens</i>	Bufonidae	1925	108
<i>Rhinella schneideri</i>	Bufonidae	1894	150
<i>Odontophrynus americanus</i>	Cycloramphidae	1841	49
<i>Odontophrynus cultripes</i>	Cycloramphidae	1862	43
<i>Odontophrynus moratoi</i>	Cycloramphidae	1980	39
<i>Odontophrynus salvatori</i>	Cycloramphidae	1996	32
<i>Proceratophrys cururu</i>	Cycloramphidae	1998	16
<i>Proceratophrys goyana</i>	Cycloramphidae	1937	42
<i>Thoropa megatympanum</i>	Cycloramphidae	1984	40
<i>Ameerega braccata</i>	Dendrobatidae	1864	20
<i>Ameerega flavopicta</i>	Dendrobatidae	1925	26
<i>Ameerega picta</i>	Dendrobatidae	1838	23
<i>Aplastodiscus perviridis</i>	Hylidae	1950	68
<i>Bokermannohyla alvarengai</i>	Hylidae	1956	42
<i>Bokermannohyla circumdata</i>	Hylidae	1871	57
<i>Bokermannohyla ibitiguara</i>	Hylidae	1973	42
<i>Bokermannohyla nanuzae</i>	Hylidae	1973	42
<i>Bokermannohyla pseudopseudis</i>	Hylidae	1937	20
<i>Bokermannohyla ravida</i>	Hylidae	2001	66
<i>Bokermannohyla saxicola</i>	Hylidae	1964	18
<i>Bokermannohyla sazimai</i>	Hylidae	1982	32
<i>Corythomantis greeningi</i>	Hylidae	1896	45
<i>Dendropsophus anataliasiasi</i>	Hylidae	1972	23
<i>Dendropsophus araguaya</i>	Hylidae	1998	20

<i>Dendropsophus cerradensis</i>	Hylidae	1998	19
<i>Dendropsophus cruzi</i>	Hylidae	1998	11
<i>Dendropsophus elianeae</i>	Hylidae	2000	23
<i>Dendropsophus jimi</i>	Hylidae	1999	22
<i>Dendropsophus melanargyreus</i>	Hylidae	1887	20
<i>Dendropsophus minutus</i>	Hylidae	1872	20
<i>Dendropsophus nanus</i>	Hylidae	1889	40
<i>Dendropsophus rhea</i>	Hylidae	1999	48
<i>Dendropsophus rubicundulus</i>	Hylidae	1862	55
<i>Dendropsophus soaresi</i>	Hylidae	1983	36
<i>Dendropsophus tritaeniatus</i>	Hylidae	1965	31
<i>Hypsiboas albopunctatus</i>	Hylidae	1824	55
<i>Hypsiboas buriti</i>	Hylidae	1999	40
<i>Hypsiboas cipoensis</i>	Hylidae	1968	31
<i>Hypsiboas crepitans</i>	Hylidae	1824	63
<i>Hypsiboas ericae</i>	Hylidae	2000	27
<i>Hypsiboas faber</i>	Hylidae	1821	93
<i>Hypsiboas goianus</i>	Hylidae	1968	33
<i>Hypsiboas lundii</i>	Hylidae	1973	52
<i>Hypsiboas multifasciatus</i>	Hylidae	1859	23
<i>Hypsiboas pardalis</i>	Hylidae	1824	73
<i>Hypsiboas phaeopleura</i>	Hylidae	2000	42
<i>Hypsiboas pulchellus</i>	Hylidae	1841	52
<i>Hypsiboas punctatus</i>	Hylidae	1799	41
<i>Hypsiboas raniceps</i>	Hylidae	1862	32
<i>Hypsiboas stenocephalus</i>	Hylidae	1999	30
<i>Phasmahyla jandaia</i>	Hylidae	1978	28
<i>Phyllomedusa azurea</i>	Hylidae	1800	42
<i>Phyllomedusa burmeisteri</i>	Hylidae	1882	61
<i>Phyllomedusa centralis</i>	Hylidae	1965	110
<i>Phyllomedusa oreades</i>	Hylidae	2002	32
<i>Pseudis bolbodactyla</i>	Hylidae	1925	36
<i>Pseudis caraya</i>	Hylidae	1964	63
<i>Pseudis limellum</i>	Hylidae	1862	25
<i>Pseudis paradoxa</i>	Hylidae	1758	55
<i>Pseudis tocantins</i>	Hylidae	1998	35
<i>Scinax acuminatus</i>	Hylidae	1862	27
<i>Scinax canastrensis</i>	Hylidae	1982	37
<i>Scinax centralis</i>	Hylidae	1996	32
<i>Scinax duartei</i>	Hylidae	1951	43
<i>Scinax fuscomarginatus</i>	Hylidae	1925	14
<i>Scinax fuscovarius</i>	Hylidae	1925	81
<i>Scinax luizotavioi</i>	Hylidae	1989	86
<i>Scinax machadoi</i>	Hylidae	1973	24
<i>Scinax maracaya</i>	Hylidae	1980	23
<i>Scinax nebulosus</i>	Hylidae	1824	33
<i>Scinax pinima</i>	Hylidae	1973	27
<i>Scinax squalirostris</i>	Hylidae	1925	28
<i>Trachycephalus nigromaculatus</i>	Hylidae	1838	50
<i>Trachycephalus venulosus</i>	Hylidae	1768	19
<i>Crossodactylus bokermanni</i>	Hylodidae	1985	26
<i>Crossodactylus trachystomus</i>	Hylodidae	1862	92
<i>Hylodes otavioi</i>	Hylodidae	1983	18
<i>Eupemphix nattereri</i>	Leiuperidae	1863	45
<i>Physalaemus centralis</i>	Leiuperidae	1962	26

<i>Physalaemus cuvieri</i>	Leiuperidae	1826	37
<i>Physalaemus deimaticus</i>	Leiuperidae	1988	28
<i>Physalaemus evangelistai</i>	Leiuperidae	1967	24
<i>Pseudopaludicola boliviana</i>	Leiuperidae	1927	17
<i>Pseudopaludicola falcipes</i>	Leiuperidae	1867	30
<i>Pseudopaludicola mineira</i>	Leiuperidae	1994	12
<i>Pseudopaludicola mystacalis</i>	Leiuperidae	1887	42
<i>Pseudopaludicola saltica</i>	Leiuperidae	1887	33
<i>Leptodactylus bokermanni</i>	Leptodactylidae	1973	25
<i>Leptodactylus camaquana</i>	Leptodactylidae	1978	34
<i>Leptodactylus chaquensis</i>	Leptodactylidae	1950	39
<i>Leptodactylus cunicularius</i>	Leptodactylidae	1978	47
<i>Leptodactylus furnarius</i>	Leptodactylidae	1978	38
<i>Leptodactylus fuscus</i>	Leptodactylidae	1799	39
<i>Leptodactylus hylaedactylus</i>	Leptodactylidae	1868	24
<i>Leptodactylus jolyi</i>	Leptodactylidae	1978	40
<i>Leptodactylus labyrinthicus</i>	Leptodactylidae	1824	130
<i>Leptodactylus martinezi</i>	Leptodactylidae	1956	24
<i>Leptodactylus mystaceus</i>	Leptodactylidae	1824	46
<i>Leptodactylus mystacinus</i>	Leptodactylidae	1861	48
<i>Leptodactylus ocellatus</i>	Leptodactylidae	1758	103
<i>Leptodactylus pentadactylus</i>	Leptodactylidae	1768	106
<i>Leptodactylus petersii</i>	Leptodactylidae	1864	37
<i>Leptodactylus podicipinus</i>	Leptodactylidae	1862	38
<i>Leptodactylus pustulatus</i>	Leptodactylidae	1870	36
<i>Leptodactylus syphax</i>	Leptodactylidae	1969	78
<i>Leptodactylus tapiti</i>	Leptodactylidae	1978	33
<i>Leptodactylus troglodytes</i>	Leptodactylidae	1926	50
<i>Leptodactylus wagneri</i>	Leptodactylidae	1862	32
<i>Physalaemus albonotatus</i>	Leptodactylidae	1864	30
<i>Pleurodrema fuscomaculatum</i>	Leptodactylidae	1864	21
<i>Chiasmocleis albopunctata</i>	Microhylidae	1884	32
<i>Chiasmocleis centralis</i>	Microhylidae	1952	24
<i>Chiasmocleis mehelyi</i>	Microhylidae	1997	19
<i>Dermatonotus muelleri</i>	Microhylidae	1885	66
<i>Elachistocleis bicolor</i>	Microhylidae	1838	30
<i>Elachistocleis ovalis</i>	Microhylidae	1799	25
<i>Lithobates palmipes</i>	Ranidae	1824	18

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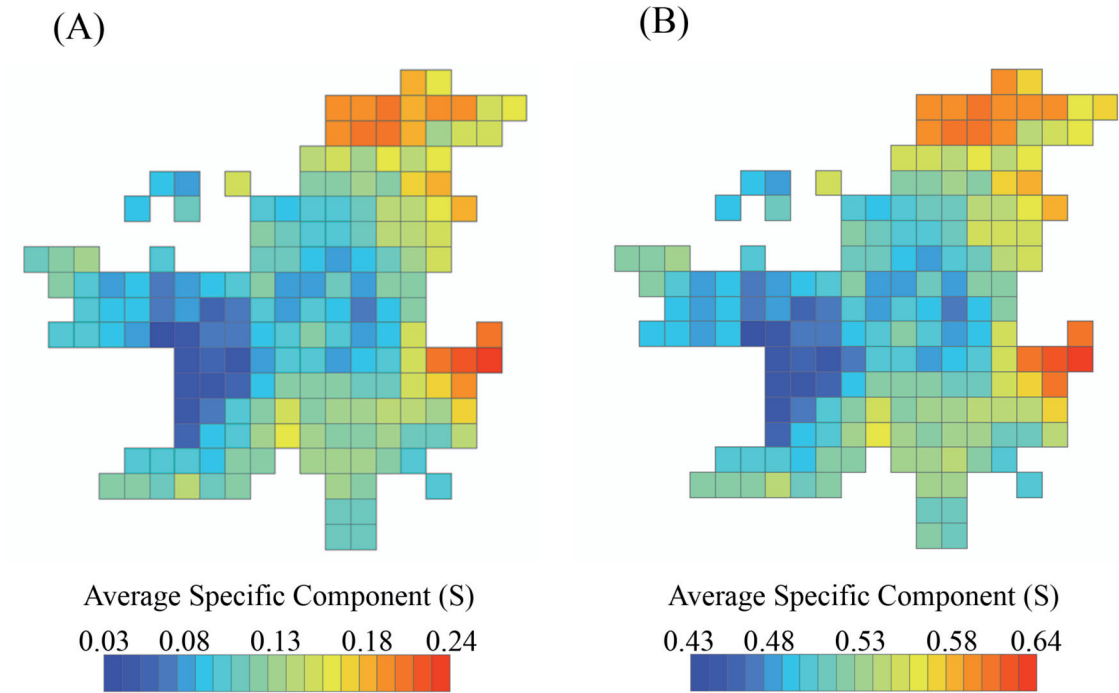


Figure S1. Geographic patterns of the average specific component (S) of body size for the 131 anuran species in the Brazilian Cerrado using two different phylogenetic hypotheses: (A) Frost et al. (2006); (B) Roelants et al. (2007). The data were calculated using a comparative method analogous to phylogenetic eigenvector regression (PVR) (Diniz-Filho et al. 1998) (see Methods for details). Analyses using Wiens (2007) phylogeny provided the same pattern than Roelants et al. (2007) and are not reported to avoid redundancy.