

Snakes from the Atlantic Rainforest area of Serra do Mendanha, in Rio de Janeiro state, southeastern Brazil: a first approximation to the taxocenosis composition

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(With 3 figures)

Abstract

We studied the species composition of the snake community of Serra do Mendanha, in Rio de Janeiro state, Southeastern Brazil, with an effort of 800 hours/man in different habitats, including undisturbed forest, secondary forest, areas under regeneration, and banana plantation. We sampled snakes monthly in the area using a combination of methods including intensive visual searching and pitfall traps with drift-fences. We found a total of 191 individuals of 27 snake species, belonging to four families: Boidae, Colubridae, Elapidae and Viperidae. In terms of species richness, the most speciose snake family in the area was Colubridae (85.2%; n = 23), followed by Viperidae (7.4%; n = 2), Boidae (3.7%; n = 1) and Elapidae (3.7%; n = 1) (Table 1). Quantitatively, the family Colubridae represented 81.7% (n = 156) of the total of individuals captured throughout the study, followed by Elapidae (13.1% of the individuals; n = 25), Viperidae (4.7%; n = 9) and Boidae (0.5%; n = 1). The data obtained in the study allowed a first approximation of the richness and composition of the snake fauna from Serra do Mendanha, including the records obtained during fieldwork in the present study and those of specimens deposited in Institutional Collections and detailed field data for each voucher specimen. All records are novel data for the area.

Keywords: Snake community, Snake richness, Serra do Mendanha, Atlantic rainforest.

Serpentes da Serra do Mendanha, estado do Rio de Janeiro, sudeste do Brasil: uma primeira aproximação da composição da taxocenose

Resumo

Estudamos a composição da comunidade de serpentes da Serra do Mendanha, Estado do Rio de Janeiro, com um esforço de 800 horas/homem nos diferentes habitats da região incluindo mata pouco perturbada, mata secundária e áreas de cultivo de bananeiras. Para amostrar as serpentes, utilizamos os métodos de procura visual e armadilhas de queda com cercas-guia. Encontramos um total de 191 indivíduos de 27 espécies de serpentes, distribuídas em quatro famílias: Boidae, Colubridae, Elapidae e Viperidae. Em termos de riqueza de espécies, a família com maior número de espécies foi a Colubridae (85,2%; n = 23), seguida pela Viperidae (7,4%; n = 2), Boidae (3,7%; n = 1) e Elapidae (3,7%; n = 1) (Tabela 1). Quantitativamente, a família Colubridae representou 81,7% (n = 156) do total de indivíduos capturados durante o estudo; Elapidae (13,1% dos indivíduos; n = 25); Viperidae (4,7%; n = 9); e Boidae (0,5%; n = 1). Os dados obtidos no presente estudo permitiram uma primeira aproximação da riqueza e composição da fauna de serpentes da Serra do Mendanha, incluindo os registros obtidos durante o trabalho de campo neste estudo, dos espécimes depositados em coleções institucionais e dos dados de campo de cada espécime-testemunho. Todos os registros obtidos são inéditos para a região.

Palavras-chave: comunidade de serpentes, riqueza de serpentes, Serra do Mendanha, Mata Atlântica.

1. Introduction

The Atlantic Forest of Serra do Mendanha, which is included in the municipalities of Rio de Janeiro, Mesquita and Nova Iguaçu, in Rio de Janeiro state, Brazil (Figure 1), is approximately 8,500 ha in area,

and is one of the world's largest forest remnants located within the limits of a large city (Pontes, 2005; Prefeitura da Cidade do Rio de Janeiro, 2000; Rocha et al. 2003; SEMADS, 2001). This remnant is of considerable con-

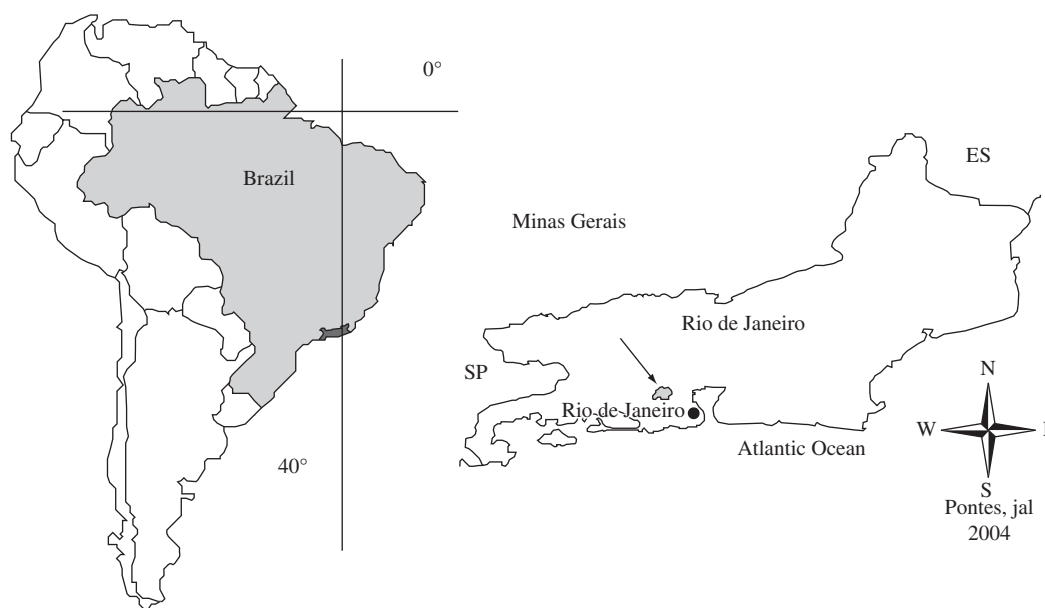


Figure 1. Location of the study area of Serra do Mendanha in Rio de Janeiro state, southeastern Brazil.

ervation value not only due to the richness of the flora and fauna this forest contains but also because it is one of the main forest remnants protecting the Guanabara Bay hydrographic basin, which is the main source of water for most municipalities surrounding the Guanabara Bay, including the metropolis of Rio de Janeiro (Pontes, 2005; Rocha et al. 2003; SEMADS, 2001). Despite the relevance of this forest remnant, the knowledge on most of its fauna and flora is still lacking. There is no previous information regarding the snake fauna inhabiting the area. During a project on the snake fauna in the Serra do Mendanha, carried out during 48 months, we monthly sampled snakes in the area which allowed a first approximation of the richness and composition of the snake fauna of the region. Here we present the snake species found, including a first checklist of the species for the Serra do Mendanha Atlantic and provide detailed field data for voucher specimens sampled. All records are novel data for the area.

2. Material and Methods

The study was carried out in the Atlantic Rainforest area of Serra do Mendanha, (22° 48'; 22° 51' S and 43° 31'; 43° 28' W) (Figure 1), located in Rio de Janeiro state, Southeastern Brazil. The region is included in the Atlantic Rainforest Biome and presently is covered with forests with relatively low level of anthropic disturbances and secondary forests with different levels of regeneration. The climate of the area is wet and hot with a relatively dry winter and rainy summer (Aw). The mean annual temperature in the area varies from 18 to 24° C and mean annual rainfall averages 1200-2000 mm, with most rain falling from November to March (CLINO, 1996).

We sampled snakes monthly in the Serra do Mendanha from April 2002 to March 2006, totaling around 800 hours/man of study. For the snake species inventory we used a combination of methods including intensive visual searching and pitfall traps with drift-fences (Heyer et al. 1994; Cechin and Martins, 2000). Sampling was made at three major habitats in the Serra do Mendanha: undisturbed forest, secondary forest and a disturbed area of the forest (mostly dominated by banana plantations). In each of these three habitats we carried out a similar sampling effort. Intensive visual searching were performed monthly during different times of day and night along four linear transects of 500 m extension in each of the three habitats, totaling 6 km of extension for the whole area of Serra do Mendanha each month. In addition, at each habitat we established three systems of pitfall traps. Each pitfall system was composed of a set of four 100 liter gallons disposed along a line in which one gallon was set 10 meters from the next. At each habitat 12 gallons were set, totaling 36 gallons for the whole area. The gallons of each pitfall system were interconnected with drift fences, totaling 50 m extension of drift fences for each system and a total 450 m of extension for the whole area. The systems remained open during 24 hours from December 2002 to May 2004. Each pitfall trap was checked every two days throughout the month. For each captured snake, its body length (total length = TTL, and snout-vent length = SVL using measuring tapes to the nearest 1mm and Vernier® calipers to the nearest 0.2 mm) and mass (to the nearest g using a Pesola® dinamometer) were taken. The sex of each individual was recorded whenever possible. The altitude (in m a.s.l.) and the microhabitat used by each snake at the time they were first

sighted were also registered. Photographs were taken of all captured specimens. Voucher specimens were deposited at the Museu Nacional, Rio de Janeiro (MNRJ). In addition, we supplemented our data with existing specimens from the Serra do Mendanha deposited in the snake collections of the Instituto Vital Brazil (IVB) in Niterói, Rio de Janeiro, the Museu Nacional, Rio de Janeiro (MNRJ) and the Instituto Butantan (IB) in São Paulo. Snakes were identified with the aid of published keys (Campbell and Lamar 2004; Dixon et al. 1993; Hoge and Romano-Hoge, 1978/79; Peters and Orejas-Miranda, 1970; Vanzolini et al. 1980) and a guide for identification of snakes (Marques et al. 2001), and their identities were posteriorly verified by Ronaldo Fernandes (Curator, Herpetology Section, Vertebrate Department Museu Nacional, Rio de Janeiro) and by Daniel S. Fernandes (Herpetology Section, Vertebrate Department Museu Nacional, Rio de Janeiro).

2. Results and Discussion

During the study we captured a total of 191 individuals of 24 different snake species through visual researching (Figure 2), belonging to four families: Boidae, Colubridae, Elapidae and Viperidae (Table 1). However, the pitfall traps did not propitiate any capture during this study. In terms of species richness, the most speciose snake family in the area was Colubridae (85.2%; $n = 23$), followed by Viperidae (7.4%; $n = 2$), Boidae (3.7%; $n = 1$) and Elapidae (3.7%; $n = 1$) (Table 1). Quantitatively, the family Colubridae represented 81.7% ($n = 156$) of the total of individuals captured during the study, followed by Elapidae (13.1% of the individuals; $n = 25$), Viperidae (4.7%; $n = 9$) and Boidae (0.5%; $n = 1$) (Figure 3). Additionally, we found three individuals of three snake species deposited in the Institutional Collection of the Instituto Vital Brazil (*Erythrolamprus aesculapii*, *Leptodeira annulata* e *Siphlophis compressus*) which were not sampled during our study in the area, which supplement our data and add three species to the present checklist of the Serra do Mendanha. In the herpetological collection of the Museu Nacional, Rio

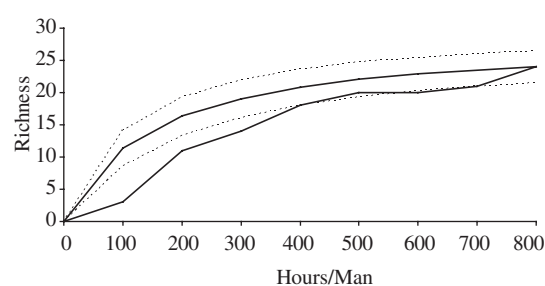


Figure 2. Rarefaction curve (black line) and collector curve (gray line) with CI = 95% (traced lines) (EstimateS Program and Mao Tao Indices). Serra do Mendanha in Rio de Janeiro State, Southeastern Brazil.

de Janeiro we found seven specimens belonging to five species (*Liophis miliaris*, *L. poecilogyrus*, *Oxyrhopus petola*, *Spilotes pullatus* and *Bothrops jararaca*) but all of them were recorded during this study. We did not find snake specimens from the Serra do Mendanha deposited in the herpetological collection of the Instituto Butantan. Voucher specimen of the species recorded in the area are listed in Appendix 1, including information on precise location (coordinates), altitude in the forest, habitat, microhabitat, height above ground, sex, size (in cm) and weight (in g).

The dominance of the family Colubridae found in the present study is compatible to findings in other studies on Brazilian snake assemblages in different Biomes such as the Pantanal (Strüssmann, 1992), the Amazonian forest (Martins and Oliveira, 1998), the Atlantic Forest (Di-Bernardo, 1998; Freire, 2001; Marques, 1998; Rocha, 1998; Rocha et al., 2000; Rocha and Van Sluys, 2006) and in the Cerrado (Sawaya, 2003). This suggests a conservative pattern in the dominance of Colubridae among snake assemblages, independent of the Biome. This trend may result from the fact that Colubridae is the largest and most structurally diverse snake group (Zug et al., 2001).

Considering only the snakes recorded by us in the field, the most abundant species in the snake assemblage of the Serra do Mendanha was *Liophis miliaris* ($n = 32$), followed by *Micrurus corallinus* ($n = 25$) and *Chironius fuscus* ($n = 24$) which together represent around 40% of the total number of recorded snakes. The least abundant snakes were *Elapomorphus quinquelineatus*, *Pseustes sulphureus* and *Tropidodryas serra* (one individual each species). *Chironius fuscus*, *Liophis miliaris* and *Micrurus corallinus* are, in general, species relatively common in Atlantic Forest areas and have usually been found with considerable frequency in studies realized in other Atlantic forest areas in the states of Rio de Janeiro (Rocha et al. 2000; Rocha and Van Sluys, 2006), São Paulo (Marques, 1998; Marques and Sazima, 2004; Sazima and Haddad, 1992), and Espírito Santo (Rocha, 1998), although the abundance of them differed somewhat from other areas. The variation in the species abundance among snake assemblages probably reflects differences in the local environment and historical features of each region (Di-Bernardo, 1998; Freire, 2001; Marques, 1998). The reduced frequencies of records of some species such as *E. quinquelineatus*, *T. serra* and *U. ricardinii* in the present study suggests that probably they are comparatively low in abundance in the Serra do Mendanha forest, or it may be due to their secretive or cryptic behavior, or both. The capture of the snake *Uromacerina ricardinii* represents the first record of this species for the Metropolitan Region of Rio de Janeiro state.

The markedly low abundance of *B. constrictor* (only one individual was found and associated to the anthropic area) could be due to the preference of the species to relatively open areas, which results in usually being found also in low abundance in some forested areas of Atlantic

Table 1. Checklist of Snake species from the Atlantic Rainforest area of Serra do Mendanha, in Rio de Janeiro State, South-eastern Brazil. 1) Instituto Vital Brazil, Niterói; 2) Museu Nacional, Rio de Janeiro; and 3) Instituto Butantan, São Paulo.

Snake family/species	Recorded in the field	Species housed in Institutional collections		
BOIDAE				
<i>Boa constrictor</i> Linnaeus, 1758	x	-		
COLUBRIDAE				
<i>Chironius bicarinatus</i> (Wied, 1820)	x	-		
<i>Chironius exoletus</i> (Linnaeus, 1758)	x	-		
<i>Chironius fuscus</i> (Linnaeus, 1758)	x	-		
<i>Chironius laeivcollis</i> (Wied, 1824)	x	-		
<i>Chironius multiventris</i> Smith e Walker, 1943	x	-		
<i>Echianthera affinis</i> (Günther, 1858)	x	-		
<i>Echianthera cephalostriata</i> Di Bernardo, 1996	x	-		
<i>Elapomorphus quinquelineatus</i> (Raddi, 1820)	x	-		
<i>Erythrolamprus aesculapii</i> (Linnaeus, 1766)		1		
<i>Helicops carinicaudus</i> (Wied, 1825)	x	-		
<i>Leptodeira annulata</i> (Linnaeus, 1758)*		1		
<i>Leptophis ahaetulla</i> (Linnaeus, 1758)	x	-		
<i>Liophis miliaris</i> (Linnaeus, 1758)	x	2		
<i>Liophis poecilogyrus</i> (Wied, 1835)	x	2		
<i>Oxyrhopus petola</i> (Linnaeus, 1758)	x	1, 2		
<i>Philodryas olfersii</i> (Lichtenstein, 1823)	x	-		
<i>Pseustes sulphureus</i> (Wied, 1825)	x	1		
<i>Siphophis compressus</i> (Daudin, 1803)		1		
<i>Spilotes pullatus</i> (Linnaeus, 1758)	x	2		
<i>Thammodynastes hypoconia</i> (Cope, 1860)	x	-		
<i>Tropidodryas serra</i> (Schelegel, 1837)	x	-		
<i>Uromacerina ricardinii</i> (Peracca, 1897)	x	-		
<i>Xenodon newwiedii</i> Günther, 1863	x	-		
ELAPIDAE				
<i>Micrurus corallinus</i> (Merrem, 1820)	x	1		
VIPERIDAE				
<i>Bothrops jararaca</i> (Wied, 1824)	x	1, 2		
<i>Bothrops jararacussu</i> Lacerda, 1884	x			
Total number of species = 27	24	7 (1)	5 (2)	0 (3)

*specimen recorded in the surrounding area of Serra do Mendanha.

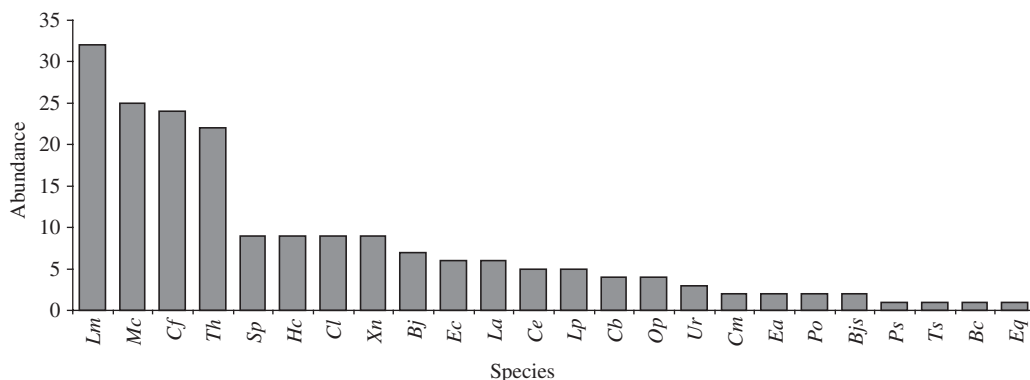


Figure 3. Distribution of abundance for snake species sampled with visual searching (800 hours/man), in Serra do Mendanha, Rio de Janeiro State, Southeastern Brazil (*Lm* = *Liophis miliaris*, *Mc* = *Micrurus corallinus*, *Cf* = *Chironius fuscus*, *Th* = *Thammodynastes hypoconia*, *Sp* = *Spilotes pullatus*, *Hc* = *Helicops carinicaudus*, *Cl* = *C. laeivcollis*, *Xn* = *Xenodon newwiedii*, *Bj* = *Bothrops jararaca*, *Ec* = *Echianthera cephalostriata*, *La* = *Leptophis ahaetulla*, *Ce* = *C. exoletus*, *Lp* = *Liophis poecilogyrus*, *Cb* = *C. bicarinatus*, *Op* = *Oxyrhopus petola*, *Ur* = *Uromacerina ricardinii*, *Cm* = *C. multiventris*, *Ea* = *E. affinis*, *Po* = *Philodryas olfersii*, *Bjs* = *B. jararacussu*, *Ps* = *Pseustes sulphureus*, *Ts* = *Tropidodryas serra*, *Bc* = *Boa constrictor*, *Eq* = *Elapomorphus quinquelineatus*).

Forest (Rocha, 1998; Rocha et al., 2000) or absent in others (Freire, 2001; Marques, 1998; Rocha and Van Sluys, 2006).

Eleven of the snake species found in Serra do Mendanha (41%) are endemic to the Atlantic Rainforest Biome (*B. jararaca*, *B. jararacussu*, *C. bicarinatus*, *C. laevicollis*, *C. multiventris*, *E. affinis*, *E. cephalostriata*, *E. quinquelineatus*, *H. carinicaudus*, *M. corallinus*, *T. serra*), representing about 18.6% of the endemic snake species of this Biome. This indicates a considerable value of the conservation of the Serra do Mendanha forest also for snake species.

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Appendix 1

Voucher specimens of the snake species recorded in the Atlantic Rainforest of Serra do Mendanha, Rio de Janeiro, Brazil, during the present study. Specimens were deposited in the Herpetological Collection of the Vertebrate Department of the Museu Nacional, Rio de Janeiro (MNRJ). We include for most specimens information on size (in mm), sex, mass (in g), the habitat and microhabitat in the Forest where the snake was found, altitude and the geographic coordinates.

Serpentes

BOIDAE

Boa constrictor Linnaeus, 1758. MNRJ 13177 – Bica do Padre (Secondary forest, 60m a.s.l.); 21 June 2004, 7:15 PM; J.A.L. Pontes and R.C. Pontes; juvenile male (686 mm TTL; 606 mm SVL; 132 g), margin of the Guandu do Sena road (22° 50' 10.9" S and 43° 30' 12.1" W).

COLUBRIDAE

Chironius bicarinatus (Wied, 1820). MNRJ 10976 – Trilha da Jararacuçu (Secondary forest, 80 m a.s.l.); 03 November 2002, 12:30 PM; J.A.L. Pontes and J.P. Figueiredo; adult female (1091 mm TTL; 837 mm SVL; 120 g), on ground (22° 50' 05.3" S and 43° 29' 97.8" W).

Chironius exoletus (Linnaeus, 1758). MNRJ 10976 – Projeto SEMEAR property (Secondary forest, 36 m a.s.l.); 2003; J.A.L. Pontes and J.P. Figueiredo; adult female (725 mm TTL; 469 mm SVL; 16 g), on ground (22° 50' 17.3" S and 43° 29' 59.1" W). MNRJ 10949 – Projeto SEMEAR property (Secondary forest, 36 m a.s.l.); 2003; J.A.L. Pontes and J.P. Figueiredo; adult female (650 mm TTL; 394 mm SVL; 13 g), on ground (22° 50' 17.3" S and 43° 29' 59.1" W). MNRJ 14062 – margin of the Guandu do Sena road (Anthropic area, 26 m a.s.l.); 18 October 2005, 09:30 AM; J.A.L. Pontes; adult male (486 mm TTL; 732 mm SVL; 85 g), moving on ground (22° 50' 25.0" S and 43° 30' 02.0" W).

Chironius fuscus (Linnaeus, 1758). MNRJ 10960 – margin of the Fundão river, in shrub (Secondary forest, 75 m a.s.l.); 24 May 2002, 11:00 AM; J.A.L. Pontes and J.P. Figueiredo; juvenile male (522 mm TTL; 360 mm SVL; 20 g), moving on ground (22° 50' 11.2" S and 43° 29' 93.2" W). MNRJ 10959 – Área de Convivência do Parque 1 (Secondary forest, 75 m a.s.l.); 27 July 2002, 4:30 PM; J.A.L. Pontes and J.P. Figueiredo; adult female (640 mm TTL; 418 mm SVL; 40 g), on ground (22° 50' 10.3" S and 43° 29' 93.8" W). MNRJ 10958 – margin of the Fundão river (Secondary forest, 78 m a.s.l.); 03 November 2002, 4:30 PM; J.A.L. Pontes and J.P. Figueiredo; adult male (1395 mm TTL; 950 mm SVL; 250 g), on rocks (22° 50' 10.4" S and 43° 29' 87.0" W). MNRJ 10954 – margin of the Fundão river (Secondary

forest, 80 m a.s.l.); 02 March 2003, 12:45 PM; J.A.L. Pontes and J.P. Figueiredo; adult male (1025 mm TTL; 810 mm SVL; 175 g), moving on rocks, body temperature 28.8 °C (22° 50' 07.4" S and 43° 29' 82.8" W). MNRJ 13109 – margin of the Guandu do Sena road (Anthropic area, 26 m a.s.l.); 16 April 2005, 12:45 PM; J.A.L. Pontes and R.C. Pontes; adult male (1231 mm TTL; 789 mm SVL; 188 g), moving on ground (22° 50' 37.5" S and 43° 29' 97.7" W).

Chironius laevicollis (Wied, 1824). MNRJ 10968 – Bica do Padre (Anthropic area, 63 m a.s.l.); 10 February 2004, 12:45 PM; J.A.L. Pontes and R.C. Pontes; adult male (1660 mm TTL; 1135 mm SVL; 650 g), on tree, 3 m above ground (22° 50' 06.4" S and 43° 30' 03.6" W). MNRJ 12505 – playground (Secondary forest, 72 m a.s.l.); 09 August 2004, 10:00 AM; J.A.L. Pontes and R.C. Pontes; juvenile female (378 mm TTL; 254 mm SVL; 9 g), on ground (22° 50' 11.4" S and 43° 29' 92.4" W). MNRJ 13178 – Guandu do Sena road (Anthropic area, 26 m a.s.l.); 11 June 2005, 10:00 AM; J.A.L. Pontes and R.C. Pontes; juvenile female (427 mm TTL; 290 mm SVL; 10 g), on ground (22° 50' 37.5" S and 43° 29' 97.7" W).

Echinanthera cephalostriata Di Bernardo, 1996. MNRJ 10978 – Trilha da Jararacuçu (Forest little disturbed, 448 m a.s.l.); 22 April 2002, 2:45 PM; J.A.L. Pontes and J.P. Figueiredo; adult female (651 mm TTL; 420 mm SVL; 50 g), basking on leaf litter, body temperature 28 °C (22° 49' 57.2" S and 43° 30' 16.1" W). MNRJ 10979 – draining trough on the playground (Secondary forest, 72 m a.s.l.); 31 May 2003, 7:10 AM; J.A.L. Pontes and J.P. Figueiredo; juvenile female (212 mm TTL; 149.5 mm SVL; 5 g), moving on ground (22° 50' 11.4" S and 43° 29' 92.4" W).

Elapomorphus quinquelineatus (Raddi, 1820). MNRJ 14086 – Caixinha road (Anthropic area, 30 m a.s.l.); 02 December 2005, 10:00 AM; J.A.L. Pontes; juvenile female (236 mm TTL; 211 mm SVL; 3 g), moving on ground (22° 50' 17.3" S and 43° 29' 59.1" W).

Helicops carinicaudus (Wied, 1825). MNRJ 10973 – Guandu do Sena road (Anthropic area, 30 m a.s.l.); 31 October 2003, 6:00 PM; J.A.L. Pontes and J.P. Figueiredo; adult female (1165 mm TTL; 990 mm SVL; 750 g), moving on ground (22° 50' 28.1" S and 43° 29' 49.2" W). MNRJ 14082 – Guandu do Sena road (Anthropic area, 26 m a.s.l.); 05 January 2006, 9:30 AM; J.A.L. Pontes and R.C. Pontes; adult male (657 mm TTL; 485 mm SVL; 82 g), moving on ground (22° 50' 25.0" S and 43° 30' 02.0" W).

Leptophis ahaetulla (Linnaeus, 1758). MNRJ 10967 – near the showers (Secondary forest, 68 m a.s.l.); 19 July 2003, 7:10 AM; J.A.L. Pontes and J.P. Figueiredo; adult female (1172 mm TTL; 720 mm SVL; 70 g), on a tree branch 3 m above ground (22° 50' 13.8" S and 43° 29' 95.4" W). MNRJ 10966 – Caixinha road (Secondary forest, 61 m a.s.l.); 18 April 2004,

2:00 PM; J.A.L. Pontes and R.C. Pontes; adult female (824 mm TTL; 498 mm SVL; 22 g), moving on ground (22° 50' 22.9" S and 43° 29' 91.3" W).

Liophis miliaris (Linnaeus, 1758). MNRJ 10953 – circular trail, margin of the Fundão river (Secondary forest, 76 m a.s.l.); 31 August 2002, 2:00 PM; J.A.L. Pontes and J.P. Figueiredo; adult male (1060 mm TTL; 900 mm SVL; 420 g), moving on ground (22° 50' 07.4" S and 43° 29' 82.8" W). MNRJ 10955 – rural property, near the Guandu do Sena road (Anthropic area, 18 m a.s.l.); 14 March 2003, 12:00 PM; J.A.L. Pontes and J.P. Figueiredo; adult female (639.2 mm TTL; 611 mm SVL; 100 g), moving in swamp (22° 50' 48.1" S and 43° 29' 17.3" W). MNRJ 10956 – Projeto SEMEAR property (Anthropic area, 36 m a.s.l.); 2003; J.A.L. Pontes and J.P. Figueiredo; adult female (708 mm TTL; 585 mm SVL; 94 g), moving on ground (22° 50' 17.3" S and 43° 29' 59.1" W). MNRJ 10975 – Caixinha road, near the entrance (Secondary forest, 62 m a.s.l.); 27 November 2003, 4:50 PM; J.A.L. Pontes and J.P. Figueiredo; adult female (817 mm TTL; 675 mm SVL; 162 g), moving on ground (22° 50' 22.9" S and 43° 29' 91.3" W). MNRJ 12507 – margin of the Guandu do Sena road (Anthropic area, 26 m a.s.l.); 04 December 2004, 11:15 AM; J.A.L. Pontes and R.C. Pontes; adult female (628 mm TTL; 508 mm SVL; 120 g), moving on ground (22° 50' 37.5" S and 43° 29' 97.7" W). MNRJ 13110 – rural property, Guandu do Sena road (Anthropic area, 30 m a.s.l.); 21 April 2005, 12:30 PM; J.A.L. Pontes and R.C. Pontes; adult female (801 mm TTL; 715 mm SVL; 198 g), moving on ground (22° 51' 15.0" S and 43° 28' 45.0" W). MNRJ 14083 – margin of the Guandu do Sena road (Anthropic area, 38 m a.s.l.); 25 September 2005, 10:00 AM; J.A.L. Pontes and R.C. Pontes; adult female (829 mm TTL; 690 mm SVL; 134 g), moving on ground (22° 50' 37.5" S and 43° 29' 22.6" W). MNRJ 14084 – margin of the Guandu do Sena road (Anthropic area, 26 m a.s.l.); 25 December 2005, 11:00 AM; J.A.L. Pontes and R.C. Pontes; adult female (826 mm TTL; 672 mm SVL; 147 g), moving on ground (22° 50' 25.0" S and 43° 30' 02.0" W).

Liophis poecilogyrus (Wied, 1835). MNRJ 10950 – Projeto SEMEAR property (Anthropic area, 36 m a.s.l.); 2003; J.A.L. Pontes and J.P. Figueiredo; adult female (792 mm TTL; 650 mm SVL; 80 g), moving on ground (22° 50' 17.3" S and 43° 29' 59.1" W). MNRJ 14080 – margin of the Guandu do Sena road (Anthropic area, 36 m a.s.l.); 04 January 2006, 2:00 PM; J.A.L. Pontes and R.C. Pontes; adult male (584 mm TTL; 464 mm SVL; 52 g), moving on ground (22° 50' 17.0" S and 43° 29' 16.1" W).

Oxyrhopus petola (Linnaeus, 1758). MNRJ 10943 – rural property, Bica do Padre (Anthropic area, 65 m a.s.l.); 08 April 2003, 12:30 AM; J.A.L. Pontes and J.P. Figueiredo; adult female (843 mm TTL; 675 mm SVL; 80 g), moving on ground (22° 50' 10.9" S and 43° 30' 12.1" W). MNRJ 10950 – Projeto SEMEAR property (Anthropic area, 36 m a.s.l.); 2003; J.A.L. Pontes and

J.P. Figueiredo; female juvenile (310 mm TTL; 242 mm SVL; 7 g), hidden under vegetation (22° 50' 17.3" S and 43° 29' 59.1" W). MNRJ 13179 – margin of Guandu do Sena road (Anthropic area, 36 m a.s.l.); 27 June 2005, 9:00 PM; J.A.L. Pontes and R.C. Pontes; adult female (867 mm TTL; 700 mm SVL; 76 g), moving on ground (22° 50' 30.0" S and 43° 29' 22.5" W).

Philodryas olfersii (Lichtenstein, 1823). MNRJ 12506 – rural property, Bica do Padre (Anthropic area, 65 m a.s.l.); 29 September 2004, 12:30 PM; J.A.L. Pontes and R.C. Pontes; female adult (979 mm TTL; 705 mm SVL; 110 g), on wooden structure (22° 50' 48.1" S and 43° 29' 17.3" W). MNRJ 14063 – margin of the Guandu do Sena road (Anthropic area, 26 m a.s.l.); 25 November 2005, 2:00 PM; J.A.L. Pontes; adult female (305 mm TTL; 913 mm SVL; 150 g), moving on ground (22° 50' 17.0" S and 43° 29' 16.0" W).

Spilotes pullatus (Linnaeus, 1758). MNRJ 10977 – margin of Caixinha road (Secondary forest, 62 m a.s.l.); 22 August 2002, 1:15 PM; J.A.L. Pontes and J.P. Figueiredo; adult female (1900 mm TTL; 1367 mm SVL; 950 g), moving on ground, body temperature 28.6 °C (22° 50' 22.9" S and 43° 29' 91.3" W). MNRJ 10983 – rural property, Bica do Padre (Secondary forest, 62 m a.s.l.); 22 April 2003, 12:00 PM; J.A.L. Pontes and J.P. Figueiredo; adult male (1928 mm TTL; 1396 mm SVL; 1225 g), attempting to enter a poultry-gard (22° 50' 10.9" S and 43° 30' 12.1" W).

Thamnodynastes hypoconia (Cope, 1860). MNRJ 10952 – near the park's head office (Secondary forest, 70 m a.s.l.); 01 February 2003, 9:30 AM; J.A.L. Pontes and J.P. Figueiredo; adult female (472 mm TTL; 354 mm SVL; 16 g), moving on ground (22° 50' 08.3" S and 43° 29' 92.8" W). MNRJ 10963 – born in box (Head office, 70 m a.s.l.); 22 September 2002, 9:30 AM; J.A.L. Pontes and J.P. Figueiredo; juvenile (201 mm TTL; 149 mm SVL; 5 g) (22° 50' 08.3" S and 43° 29' 92.8" W). MNRJ 13911 – margin of the Fundão river (Secondary forest, 75 m a.s.l.); 08 September 2005, 1:40 PM; J.A.L. Pontes (178.2 mm TTL; 132 mm SVL; 2 g) (22° 50' 11.2" S and 43° 20' 93.2" W). MNRJ 14081 – margin of the Guandu do Sena road (Anthropic area, 36 m a.s.l.); 14 December 2005, 11:00 AM; J.A.L. Pontes and R.C. Pontes; adult male (774 mm TTL; 586 mm SVL; 57 g), moving on ground (22° 50' 17.0" S and 43° 29' 16.1" W).

Uromacerina ricardinii (Peracca, 1897). MNRJ 10948 – near park's natural pool (Secondary forest, 70 m a.s.l.); 22 May 2002, 1:00 PM; J.A.L. Pontes and J.P. Figueiredo; juvenile female (283 mm TTL; 162.5 mm SVL; 5 g), moving on ground, after rain (22° 50' 12.3" S and 43° 29' 93.5" W).

Xenodon newwiedii Günther, 1863. MNRJ 10962 – near park entrance (Secondary forest, 70 m a.s.l.); 16 July 2002, 12:00 PM; J.A.L. Pontes and J.P. Figueiredo; adult female (835 mm TTL; 714 mm SVL; 130 g), moving on ground (22° 50' 08.0" S and 43° 29' 92.8" W). MNRJ 10982 – Bica do Padre (Secondary forest, 68 m a.s.l.); 16 July 2002, 12:00 PM;

J.A.L. Pontes and J.P. Figueiredo; adult female (771 mm TTL; 649 mm SVL; 120 g), moving on ground (22° 50' 10.9" S and 43° 30' 12.1" W). MNRJ 10974 – Area of the Projeto SEMEAR (Anthropic area, 36 m a.s.l.); 2003; J.A.L. Pontes and J.P. Figueiredo; adult female (825 mm TTL; 710 mm SVL; 101g), hidden under vegetation (22° 50' 17.3" S and 43° 29' 59.1" W). MNRJ 10971 – playground (Secondary forest, 72 m a.s.l.); 24 December 2003, 7:30 AM; J.A.L. Pontes and J.P. Figueiredo; juvenile female (208 mm TTL; 171 mm SVL; 3 g), moving on ground (22° 50' 11.4" S and 43° 29' 92.4" W). MNRJ 13180 – margin of Caixinha road (Secondary forest, 36 m a.s.l.); 02 July 2005, 1:15 PM; J.A.L. Pontes and R.C. Pontes; adult female (802 mm TTL; 678 mm SVL; 130 g), moving on ground, attempting to prey on a toad, *Bufo ornatus* (22° 50' 17.3" S and 43° 29' 59.1" W).

ELAPIDAE

Micrurus corallinus (Merrem, 1820). MNRJ 10971 – park entrance (Secondary forest, 70 m a.s.l.); 26 March 2003, 10:15 AM; J.A.L. Pontes and J.P. Figueiredo; juvenile male (286 mm TTL; 255 mm SVL; 7 g), moving on ground (22° 50' 16.5" S and 43° 29' 93.9" W). MNRJ 10964 – trail of Bica do Padre (Secondary forest, 60 m); 28 April 2003, 11:00 AM; J.A.L. Pontes and J.P. Figueiredo; juvenile female (239 mm TTL; 210 mm SVL; 6 g), moving on ground (22° 50' 10.9" S and 43° 30' 12.1" W). MNRJ 10969 – Projeto SEMEAR property (Anthropic area, 36 m a.s.l.); 2003; J.A.L. Pontes and J.P. Figueiredo; adult male (459 mm TTL; 395 mm SVL; 11 g), hidden under vegetation (22° 50' 17.3" S and 43° 29' 59.1" W). MNRJ 10947 – parking lot (Secondary forest, 70 m a.s.l.); 03 April 2004, 12:00 PM; J.A.L. Pontes; juve-

nile (186.6 mm TTL; 166 mm SVL; 2 g), moving on ground (22° 50' 16.5" S and 43° 29' 93.7" W). MNRJ 13910 – rural property, Furnas road (Secondary forest, 225 m a.s.l.); 20 August 2005, 3:00 PM; J.A.L. Pontes (622 mm TTL; 568 mm SVL; 36g), moving on ground (22° 50' 00" S and 43° 31' 52.5" W). MNRJ 13912 – Projeto SEMEAR property (Anthropic area, 36 m a.s.l.); 29 September 2005, 3:00 PM; J.A.L. Pontes; adult male (720 mm TTL; 624 mm SVL; 70 g), moving on ground (22° 50' 17.3" S and 43° 29' 59.1" W). MNRJ 14085 – rural property, Bica do Padre (Secondary forest, 63 m); 04 January 2006, 15:00 h; J.A.L. Pontes and R.C. Pontes; adult female (840 mm TTL; 767 mm SVL; 114 g), moving on ground (22° 50' 10.9" S and 43° 30' 12.1" W).

VIPERIDAE

Bothrops jararaca (Wied, 1824). MNRJ 10965 – rural property, Bica do Padre (Secondary forest, 63 m a.s.l.); 11 June 2003, 11:00 AM; J.A.L. Pontes and J.P. Figueiredo; adult male (680 mm TTL; 589 mm SVL; 50 g), resting on ground (22° 50' 10.9" S and 43° 30' 12.1" W). MNRJ 10957 – Projeto SEMEAR property (Anthropic area, 36 m a.s.l.); 2003; J.A.L. Pontes and J.P. Figueiredo; adult male (1100 mm TTL; 960 mm SVL; 189 g), hidden under vegetation (22° 50' 17.3" S and 43° 29' 59.1" W). MNRJ 13108 – near the area of the Projeto SEMEAR (Anthropic area, 36 m a.s.l.); 17 April 2005, 10:10 AM; J.A.L. Pontes and R.C. Pontes; female adult (972 mm TTL; 831 mm SVL; 107 g), basking on ground near a residence (22° 50' 17.3" S and 43° 29' 59.1" W).

Bothrops jararacussu Lacerda, 1884. MNRJ 10972 – Bica do Padre (Secondary forest, 72 m a.s.l.); 19 October 2003, 1:15 PM; J.A.L. Pontes and J.P. Figueiredo; adult female (1426 mm TTL; 1280 mm SVL; 680 g), resting on ground (22° 50' 02.2" S and 43° 30' 15.1" W).