

Checklist of snakes from Ferreira Penna Scientific Station, Eastern Amazonia, Pará State, Brazil

Lista de serpentes da Estação Científica Ferreira Penna, Amazônia Oriental, Pará, Brasil

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Abstract: Six expeditions to the Ferreira Penna Scientific Station, in Floresta Nacional de Caxiuanã, Eastern Amazonia, Pará State, Brazil, were made between September 2001 to August 2002. Three sampling methods were used: time constrained search, pitfall traps with drift fence and opportunistic sightings. We add 21 *taxa* to the current list of 42 species of snakes known from the area: *Epicrates cenchria cenchria*, *Atractus schach*, *Atractus* sp.n., *Chironius carinatus*, *Chironius exoletus*, *Chironius scurrulus*, *Dendrophidion dendrophis*, *Erythrolamprus aesculapii*, *Helicops leopardinus*, *Helicops polylepis*, *Helicops trivittatus*, *Hydrodynastes gigas*, *Oxybelis aeneus*, *Pseustes poecilonotus*, *Taeniophallus brevirostris*, *Rhinobothrium lentiginosum*, *Xenodon rabdocephalus rabdocephalus*, *Xenopholis scalaris*, *Bothriopsis taeniata taeniata*, *Micrurus hemprichii hemprichii*, and *Micrurus surinamensis surinamensis*.

Key words: Snakes. Checklist. Eastern Amazon. Caxiuanã.

Resumo: Seis expedições foram realizadas na Estação Científica Ferreira Penna, Floresta Nacional de Caxiuanã, Pará, Brasil, no período de setembro de 2001 a agosto de 2002. Foram utilizados três métodos de amostragem de serpentes: procura limitada por tempo, armadilha de interceptação e queda e encontros ocasionais. Um total de 21 *taxa* foram registradas além das 42 já listadas para esta área: *Epicrates cenchria cenchria*, *Atractus schach*, *Atractus* sp.n., *Chironius carinatus*, *Chironius exoletus*, *Chironius scurrulus*, *Dendrophidion dendrophis*, *Erythrolamprus aesculapii*, *Helicops leopardinus*, *Helicops polylepis*, *Helicops trivittatus*, *Hydrodynastes gigas*, *Oxybelis aeneus*, *Pseustes poecilonotus*, *Taeniophallus brevirostris*, *Rhinobothrium lentiginosum*, *Xenodon rabdocephalus rabdocephalus*, *Xenopholis scalaris*, *Bothriopsis taeniata taeniata*, *Micrurus hemprichii hemprichii* e *Micrurus surinamensis surinamensis*.

Palavras-chave: Serpentes. Lista. Amazônia Oriental. Caxiuanã.

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INTRODUCTION

The "Estação Científica Ferreira Penna" (ECFP) is part of the "Floresta Nacional de Caxiuanã", located between the Xingu and Tocantins rivers, in the Eastern Amazonia, Pará, Brazil. The herpetofauna has been intermittently studied since 1992, resulting in three publications, Ávila-Pires and Hoogmoed (1997), Bernardi *et al.* (2002), and Estupiñán, Bernardi and Galatti (2002; only amphibians), and two further snakes records (HOOGMOED; PRUDENTE, 2003; PRUDENTE; SANTOS-COSTA, 2004) for the area. In total, 42 snakes species have been registered in these papers. During 2001-2002 we made a more intense snake survey in the ECFP, which resulted in 21 additional records for the area. The update list is presented here with an analysis of the snake fauna of the ECFP.

MATERIAL AND METHODS

Six expeditions to ECFP were made between September, 2001 and August, 2002. Each expedition lasted 15-25 days, with intervals of 45-50 days between them, totaling 96 days of sampling effort. Three sampling methods were used: time constrained search, pitfall traps with drift fence and opportunistic sightings (FITCH, 1987; CECHIN; MARTINS, 2000). Surveys were made in an area within 36 hectares of the bases facilities of the station, located at 01°42'33"S, 51°31'45"W. This area is covered predominantly by "terra firme" forest, with patches of flooded forest (LISBOA, 1997). Collected specimens were sacrificed with Nembutal®, preserved, and deposited in the herpetological collection of Museu Paraense Emílio Goeldi (MPEG). The collecting and transportation of the snakes were made under proper authorization by IBAMA (process 02018.001404/02-83). The identification and geographic distribution following: Peter e Orejas-Miranda (1970), Duellman (1978), Cunha e Nascimento (1978, 1982, 1993), Hoogmoed (1980, 1982), Dixon and Soini (1986), Zimmermann

and Rodrigues (1990), Dixon, Wiest and Cei (1993), Machado (1993), Silva (1993), Roze (1996), Ávila-Pires and Hoogmoed (1997), Martins and Oliveira (1998), Starace (1998), Giraud (2001), Bernardi *et al.* (2002), Hoogmoed and Prudente (2003), Prudente e Santos-Costa (2004). A detailed analysis of the results of these expeditions will be presented elsewhere.

RESULTS AND DISCUSSION

The list of snakes species presently known to occur in the "Estação Científica Ferreira Penna" is presented in Table 1. Twenty-one species, including a new species of *Atractus*, is first recorded to the area in this paper. With the exception of this new species, all of them were known from Eastern Amazonia, therefore they could be expected to occur in the ECFP.

Among previously reported species, *Chironius multiventris* Schmidt and Walker, 1943, reported by Ávila-Pires and Hoogmoed (1997) for the area on basis of MPEG 18658, has been re-identified as *C. exoletus* (LINNAEUS, 1758). *Philodryas olfersii* was recorded by Bernardi *et al.* (2002) to occur in the ECFP, but we were unable to find a specimen to confirm this identification, and therefore we do not include it in the present list.

Data on snake distribution in Amazonia are still fragmentary, because snake sampling usually requires long and/or large efforts. Among the long-term study in the Amazonia region can be listed: Duellman (1978) with 50 species for Santa Cecília, Ecuador; Zimmermann and Rodrigues (1990) and Martins e Oliveira (1998) around 60 species for the Manaus region; and Cunha and Nascimento (1993) with 87 species for the East of Pará States.

ANEXO: SPECIES COLLECTION

Boidae: *Epicrates cenchria cenchria* - MPEG 20481: mature female, primary forest; MPEG 20002, 20135: mature male, primary forest; MPEG 19844: immature female, open area, near the facilities of ECFP.



Table 1. Checklist of snakes of ECFP, Melgaço, Pará, Brazil, with reference to first record for each specie.

Family/species	Avila-Pires & Hoogmoed (1997)	Bernardi et al. (2002)	Hoogmoed & Prudente (2003)	Prudente & Santos-Costa (2004)	New Records
Leptotyphlopidae					
<i>Leptotyphlops septemstriatus</i> (Schneider, 1801)	X				
Aniliidae					
<i>Anilius scytale</i> (Linnaeus, 1758)		X			
Boidae					
<i>Boa constrictor</i> (Linnaeus, 1758)		X			
<i>Corallus hortullanus</i> (Linnaeus, 1758)	X				
<i>Epicrates cenchria cenchria</i> (Linnaeus, 1758)					X
<i>Eunectes murinus</i> (Linnaeus, 1758)		X			
Colubridae					
<i>Apostolepis pymi</i> (Boulenger, 1903) (= <i>A. nigrolineata</i>)	X				
<i>Atractus</i> sp. n.					X
<i>Atractus major</i> (Boulenger, 1894)				X	
<i>Atractus natans</i> (Hoogmoed and Prudente, 2003)			X		
<i>Atractus schach</i> (Boie, 1827)					X
<i>Atractus snethlageae</i> Cunha and Nascimento, 1983	X				
<i>Chironius carinatus</i> (Linnaeus, 1758)					X
<i>Chironius exoletus</i> (Linnaeus, 1758)					X
<i>Chironius fuscus</i> (Linnaeus, 1758)		X			
<i>Chironius scurrulus</i> (Wagler, 1824)					X
<i>Clelia clelia</i> (Daudin, 1803)	X				
<i>Dendrophidion dendrophis</i> (Schlegel, 1837)					X
<i>Dipsas catesbyi</i> (Santzen, 1796)	X				
<i>Dipsas indica indica</i> Laurenti, 1768	X				
<i>Drepanoides anomalus</i> (Jan, 1863)		X			
<i>Drymoluber dichrous</i> (Peters, 1863)	X				
<i>Erythrolamprus aesculapii</i> (Linnaeus, 1766)					X
<i>Helicops angulatus</i> (Linnaeus, 1758)		X			
<i>Helicops hagmanii</i> Roux, 1910		X			
<i>Helicops leopardinus</i> (Schlegel, 1837)					X
<i>Helicops polylepis</i> Günther, 1861					X
<i>Helicops trivittatus</i> (Gray, 1849)					X
<i>Hydrodynastes gigas</i> Duméril, Bibron and Duméril, 1854					X
<i>Hydrops triangularis</i> (Wagler, 1824)		X			
<i>Imantodes cenchoa</i> (Linnaeus, 1758)	X				
<i>Leptodeira annulata</i> (Linnaeus, 1758)	X				
<i>Leptophis ahaetulla ahaetulla</i> (Linnaeus, 1758)		X			
<i>Liophis cobella</i> (Linnaeus, 1758)	X				
<i>Liophis reginae semilineatus</i> (Wagler, 1824)					
= <i>L. oligolepis</i> (Boulenger, 1905)	X				
<i>Mastigodryas boddaerti boddaerti</i> (Santzen, 1796)	X				
<i>Oxybelis aeneus</i> (Wagler, 1824)					X
<i>Oxybelis fulgidus</i> (Daudin, 1803)	X				
<i>Oxyrhopus formosus</i> (Wied, 1820)		X			
<i>Oxyrhopus melanogenys</i> (Tschudi, 1845)		X			
<i>Oxyrhopus petola</i> (Linnaeus, 1758)	X				
<i>Philodryas viridissimus</i> (Linnaeus, 1758)	X				

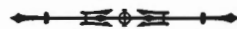


Table 1. Continuation.

Family/species	Avila-Pires & Hoogmoed (1997)	Bernardi <i>et al.</i> (2002)	Hoogmoed & Prudente (2003)	Prudente & Santos-Costa (2004)	New Records
<i>Pseudoeryx plicatilis</i> (LINNAEUS, 1758)		X			
<i>Pseustes poecilonotus polyleps</i> (PETERS, 1867)					X
<i>Pseustes sulphureus sulphureus</i> (WAGLER, 1824)	X				
<i>Rhinobothrium lentiginosum</i> (SCOPOLI, 1785)					X
<i>Siphlophis cervinus</i> (LAURENTI, 1768)		X			
<i>Siphlophis compressus</i> (DAUDIN, 1803)	X				
<i>Spilotes pullatus</i> (LINNAEUS, 1758)		X			
<i>Taeniophallus brevirostris</i> (PETERS, 1863)					X
<i>Taeniophallus occipitalis</i> (JAN, 1863)	X				
<i>Tantilla melanocephala</i> (LINNAEUS, 1758)	X				
<i>Xenodon rabdocephalus rabdocephalus</i> (WIED, 1824)					X
<i>Xenopholis scalaris</i> (WUCHERER, 1861)					X
<i>Xenoxybelis argenteus</i> (DAUDIN, 1803)	X				
Elapidae					
<i>Micrurus hemprichii hemprichii</i> (JAN, 1858)					X
<i>Micrurus lemniscatus</i> (LINNAEUS, 1758)	X				
<i>Micrurus spixii martiusi</i> (SCHMIDT, 1953)	X				
<i>Micrurus surinamensis surinamensis</i> (CUVIER, 1817)					X
Viperidae					
<i>Bothrops atrox</i> (LINNAEUS, 1758)	X				
<i>Bothrops brazili</i> (HOGE, 1954)	X				
<i>Bothriopsis taeniata taeniata</i> (WAGLER, 1824)					X
<i>Lachesis muta muta</i> (LINNAEUS, 1766)		X			

Colubridae: *Atractus* sp. n. - MPEG 20128: primary forest, flooded forest area; MPEG 19964: mature male; MPEG 19657: mature female. This specie has been described by Prudente and Santos-Costa. *Atractus schach* - MPEG 20071: mature male, primary forest, flooded forest area; MPEG 19966: immature male, primary forest. *Chironius carinatus* - MPEG 20212: immature male, secondary forest. *Chironius exoletus* - MPEG 20225: mature male, secondary forest; MPEG 18658: immature female; MPEG 20053: mature female. *Chironius scurrulus* - MPEG 20142: immature female, open area, near to the facilities of ECFP; MPEG 20052: immature male; MPEG 20227: immature male, primary forest. *Dendrophidion dendrophis* - MPEG 20446: immature female, primary forest; MPEG 20013: mature female, primary forest; MPEG 20445:

mature male, primary forest; MPEG 20072: immature male, primary forest, flooding area; MPEG 20043: mature female; MPEG 20224: mature female, primary forest; MPEG 19995: mature male, primary forest; MPEG 20046: mature male; MPEG 20198: mature male, secondary forest. *Erythrolamprus aesculapii* - MPEG 20608: mature female, primary forest; MPEG 20121: immature female, forest primary, flooded forest area; MPEG 20215: mature female, primary forest; MPEG 19034, 20607: immature male, secondary forest near to the facilities of ECFP; MPEG 19754: mature male. *Helicops leopardinus* - MPEG 19312: mature female, in "Igarapé", primary forest. *Helicops polylepsis* - MPEG 20480: immature female, in "Igarapé", primary forest. *Helicops trivittatus* - MPEG 19971, 20482: mature female, on "Igarapé",



secondary forest. *Hydrodynastes gigas* - MPEG 20018: mature female, near to the river. *Oxybelis aeneus* - MPEG 20449: mature female; MPEG 20276, 20448: mature females, secondary forest near to the facilities of ECFP; MPEG 18981: mature male; MPEG 19980: mature male, primary forest. *Pseustes poecilonotus polylepis* - MPEG 20102: immature female, primary forest; MPEG 20006: immature male, primary forest; MPEG 20056, 20078: mature females; MPEG 20308: mature female; MPEG 19955; 19954; 20238: mature males, primary forest; MPEG 20134, 20206: mature males, primary forest. *Rhinobothrium lentiginosum* - MPEG 20237: mature male, near to the facilities of ECFP and the Curuá River. *Taeniophallus brevirostris* - MPEG 20082: mature male, primary forest; MPEG 20200: mature female, primary forest; MPEG 19959: primary forest. *Xenodon rabdocephalus rabdocephalus* - MPEG 20007: immature female, flooded forest area, primary forest; MPEG 20197: mature female, flooded forest area, primary forest; MPEG 20069: mature male, primary forest; MPEG 19990: immature female, secondary forest near the Curuá river; MPEG 19961: mature female; MPEG 19969: mature female, primary forest; MPEG 20124: mature female, at the facilities base of ECFP; MPEG 20051: mature male; MPEG 20123: mature male, at the facilities base of ECFP. *Xenopholis scalaris* - MPEG 19993: immature female, primary forest; MPEG 20455: mature female, primary forest.

Viperidae: *Bothriopsis taeniata taeniata* - MPEG 20011: immature female, primary forest; MPEG 20089: immature male, primary forest; MPEG 19947: immature female.

Elapidae: *Micrurus hemprichii hemprichii* - MPEG 20221: immature male, primary forest; MPEG 20021: immature female, primary forest; MPEG 20285: immature male, primary forest, flooded forest area. *Micrurus surinamensis surinamensis* - MPEG 20083: mature male, primary forest; MPEG

20118: mature female; MPEG 20217: mature female, on the Curuá river; MPEG 20218: mature female, near to Curuá river; MPEG 19709: immature male; MPEG 20280: mature male, area flooded.

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