

PRELIMINARY CHECKLIST OF THE HERPETOFAUNA OF THE UPPER RIO URUCU, AMAZONAS, BRAZIL

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ABSTRACT. Thirty-three species of anuran amphibians and 22 species of reptiles were found in 9 days and nights of sampling in an unexplored region of Central Amazon. The community is characterized by typical lowland Amazonian species. The relatively short sampling time and high number of species caught indicates that this region probably has very high species richness.

KEY WORDS. Checklist, herpetofauna, Rio Urucu, Amazonas, Brazil

A few herpetofaunal communities in the Amazon are relatively wellknown; Belém, Brazil (CRUMP, 1971), Manaus, Brazil (HODL, 1977; ZIMMERMAN; RODRIGUES, 1990); Madeira and Purus rivers, Brazil (HEYER, 1977); French Guiana (LESCURE, 1976, 1986), Panguana, Peru (TOFT & DUELLMAN, 1979), Santa Cecília, Ecuador (CRUMP, 1974; DUELLMAN, 1978). However, on the whole very little of the Amazon has been surveyed, and it is specially true for the Brazilian Amazon (CRUMP, 1971; ZIMMERMAN & RODRIGUES, 1990). Outside Brazil, many more Amazonian sites have been surveyed (see DUELLMAN, 1988 for review). Detailed biogeographic analysis of herpetofaunal community composition will require surveys at a large number of additional sites throughout the Amazon.

Herein, we report the results of a survey of a herpetofaunal community for one site in the Brazilian Amazon located in a large unexplored region of the Amazon (DUELLMAN, 1988). The data are valuable although only part of the herpetofaunal community of that region is explored. Because of the difficulty of sampling reptiles, this sample is obviously not representative of the whole community found at that site. Therefore, discussion in this paper will be limited to the amphibian data although the species list includes all herpetofauna for reference purposes.

MATERIAL AND METHODS

Field work was carried out in primary tropical forest, 3km south of the headwaters of the Urucu river (4°60 S, 65°30 W) along a small tributary of the

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Solimões, south of Tefé. The forest in this area is typical "terra firme" forest (forest not subjected to periodic flooding). The area surveyed comprised approximately 200 hectares of smooth rolling hills with many 1st order streams (PERES & WHITTAKER, in press). One large stream (8 meters wide) cut the area toward the western side. Many stream-side ponds are associated with the numerous streams especially along the large stream bank. The stream-side ponds are either periodically flooded by the overflowing streams or are filled by heavy rains. Very few isolated forest pools were found.

Sampling was done by day and night and all herpetofauna encountered was collected. Interesting sites were noted and night visits were made to those sites. Also, choruses were located and calls of those species were recorded and individuals collected. Sampling was done over 9 days and nights (from 14-V-1989 to 22-V-1989) totaling 110 man-hours of survey (36 by day and 74 by night) and 30km of trails walked (10 by day and 20 by night).

All material collected is deposited either in the National Museum of Rio de Janeiro (MNRJ) or at the Instituto Nacional de Pesquisas da Amazonia (INPA). Appendix 1 gives the museum numbers for the collected material. *Phrynohyas* sp. and *Hyla boans* were identified only from calling individuals.

RESULTS

Thirty-three species of frogs of six different families were collected (Table I). Hylids were the most common frogs with 15 species (46% of all species collected) followed by leptodactylids with 8 species (24% of all species). Five dendrobatid species were collected (15%). Finally, 3 Bufonidae (9%), 1 Pipidae (3%) and 1 Microhylidae (3%) complete the species list.

Sites adjacent to the large stream were the only ones where *Hyla boans* and *Phrynohyas* sp. were heard calling. The most common species calling was *Leptodactylus wagneri* which was omnipresent. Although *Osteocephalus taurinus* was not heard calling it also was collected over most of the area.

DISCUSSION

Almost all species found are typical lowland Amazonian species with wide rangers (FROST, 1985). Although only a relatively short time was spent surveying the study site, sampling was intensive. The fairly high number of species of frogs caught (33) in such a short period of time probably reflects very high species richness in that area (Table II). The only other study for which detailed capture rates of species is available (ZIMMERMAN & RODRIGUES, 1990) shows that after 110 man-hours that survey had encountered less than 20 species whereas this study has found 33 species. Also, only primary forest was surveyed in this study whereas in many of the other studies the surveys included primary forest areas and various other types of habitats: secondary forest and swamp area in TOFT & DUELLMAN (1979), secondary forest as well as large river areas in CRUMP (1971), swamp areas as well as nearby agricultural lands

Table I. Preliminary species list of the upper Urucu river.

SPECIES	SPECIES (continued)
HYLIDAE	Bufo sp.
Hyla calcarata	PIPIDAE
Hyla fasciata	Pipa pipa
Hyla geographica	MICROHYLIDAE
Hyla lanciformis	Chiasmocleis sp.
Hyla leucophylata	TEIIDAE
Hyla parviceps	Alopoglossus angulatus
Hyla boans	Ameiva ameiva
Hyla sp.1	Leposoma percarinatum
Hyla sp.2	SCINCIDAE
Hyla sp.3	Mabuya bistrriata
Ololygon rubra	IGUANIDAE
Ololygon sp. grupo <i>rubra</i>	Anolis chrysolepis
Osteocephalus taurinus	Anolis fuscoauratus
Phrynohyas sp.	Anolis ortonii
Phyllomedusa vaillanti	Anolis punctatus
LEPTODACTYLIDAE	Anolis cf. punctatus
Leptodactylus wagneri	Anolis sp.
Leptodactylus pentadactylus	Uranoscodon superciliosus
Leptodactylus rhodomystax	GEKKONIDAE
Adenomera andreae	Coleodactylus amazonicus
Physalaemus petersi	COLUBRIDAE
Eleutherodactylus fenestratus	Atractus sp.
Eleutherodactylus sp.1	Leptodeira annulata
Eleutherodactylus sp.2	Oxyrhopus cf. melanogenys
DENDROBATIDAE	Rhadinaea sp.
Colostethus sp. grupo <i>marchesianus</i>	Xenodon severus
Epipedobates femoralis	Xenopholis scalaris
Epipedobates pictus	VIPERIDAE
Epipedobates trivittatus	Bothrops atrox
Epipedobates quinquevittatus	Bothrops brazillii
BUFONIDAE	BOIDAE
Bufo marinus	Corallus caninus
Bufo typhonius	Corallus enydris

Table II. Species richness of various amazonian primary forest sites.

Site	Reference	Species richness	Sampling effort	Area
BRAZIL				
Rondônia	Vanzolini, 1986	70	80 days	3500 km of transects
Manaus	Zimmerman & Rodrigues, 1990	42	400 hours	3000 ha
Belém	Crump, 1971	37	—	—
Uruçu	This study	33	110 hours/30km trails	200 ha
ECUADOR				
Santa Cecilia	Crump, 1974	81	23 months	300 ha
PERU				
Panguana	Toft & Duellman, 1979	53	1969-1975	—
Panguana	Aichinger, 1987	46	12 months	200 ha
FRENCH GUIANA				
	Lescure, 1976	57	—	—

in CRUMP (1974), nearby cleared areas in AICHINGER (1987). The actual primary forest species richness in those studies would therefore be lower than the values given in table II.

Results from this study stress the importance of additional surveys of herpetofaunal communities especially in the Brazilian Amazon. More detailed knowledge of species distribution and areas of high species richness and endemism will greatly aid in attempts to conserve high species diversity of this vertebrate.

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