BIODIVERSITY OF AMPHIBIANS IN BILSA BIOLOGICAL STATION Influences on Amphibian Diversity and Abundance

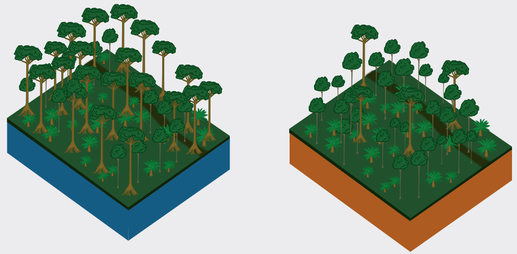
OBJECTIVE

The objective of this study was two fold. The first objective was to document the species diversity of amphibians at Bilsa Biogical Station. Over a period of nine months, amphibian diversity was recorded along transects in pristine and disturbed forest sites as well as along roads with varying levels of human activity. These recordings contribute to the first complete inventory of species in this area, which is critical to any future conservation efforts. The second objective was to gain insight of the influences on the habitats of amphibian and how it effects their diversity and abundance.

RESULTS

The results from this study show that the influence of disturbance on the diversity and composition of amphibian assemblages in the Mache-Chindul varies with habitat. Amphibian assemblages along rivers were the most diverse as well as the least impacted by human activity in the form of logging 12-18 years prior to this study. Diversity and species richness were much lower in secondary than in primary forest suggesting that amphibian assemblages in interior forest habitat are more vulnerable to disturbances caused by logging. Secondary rivers harboured the highest species richness followed by primary rivers.

FORESTS



PRIMARY

7 species **75 individuals**

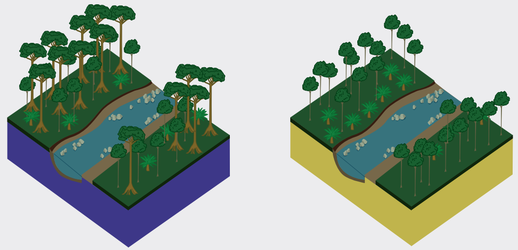
Craugastor longirostris	(1)
Epipedobates boulengeri	(1)
H. sp. nov (undescribed)	(3)
L. pentadactylus	(1)
Oophaga sylvatica	(18)
Pristimantis achantinus	(50)
Pristimantis parvillus	(1)

SECONDARY

4 **104**

Craugastor longirostris	(2)
Pristimantis achatinus	(97)
Pristimantis parvillus	(2)
Pristimantis walkeri	(3)

RIVERS



IN PRIMARY FOREST

13 **239**

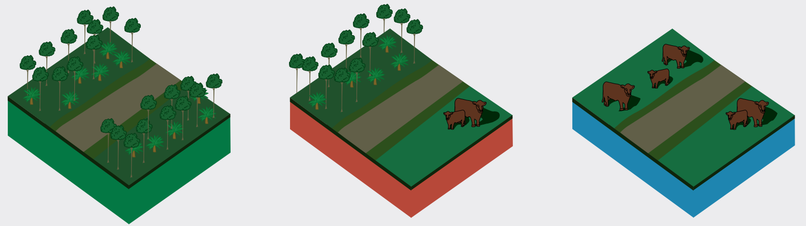
Caecilia leucocephala	(1)
Cochranella albomaculara	(2)
Cochranella Mache	(2)
Cochranella Spinosa	(1)
Centrolene prosoblepon	(23)
Craugastor longirostris	(2)
Epipedobates boulengeri	(16)
Hyloxalus awa	(79)
H.sp.nov (undescribed)	21
Hypsiboas picturata	(18)
Pristimantis achatinus	(45)
Rhinella margaritifer	(9)
Rhaebo haematiticus	(19)

IN SECONDARY FOREST

12 **195**

Bolitoglossa spp.	(1)
Cochranella albomaculata	(2)
Centrolene prosoblepon	(14)
Craugastor longirostris	(2)
Epipedobates boulengeri	(10)
Hyloxalus awa	(35)
Hyloxalus sp.Nov	(21)
Hypsiboas picturata	(30)
Oophaga sylvatica	(1)
Pristimantis achatinus	(39)
Rhinella margartifer	(28)
Rhaebo haematiticus	(12)

ROADS



SECONDARY FOREST ON BOTH SIDES

4 **119**

Chaunus marinus	(1)
Leptodactylus labrosus	(1)
Pristimantis achatinus	(114)
Smilisca phaeota	(3)

SECONDARY FOREST AND PASTURE

4 **104**

Pristimantis achatinus	(99)
Pristimantis subsigillatus	(1)
Pristimantis walkeri	(1)
Smilisca phaeota	(3)

PASTURE ON BOTH SIDES

7 **97**

Caecilia nigricans	(1)
Craugastor longirostris	(1)
Hypsiboas pellucens	(1)
Leptodactylus labrosus	(1)
Pristimantis achatinus	(91)
Pristimantis subsigillatus	(1)
Smilisca phaeota	(1)

Study designed by Gregor Jongsma
Poster designed by Alyssa Jongsma

LOCATION

Bilsa Biological Station
(79° 45′ W, 0° 22′ N, 330-730 m a.s.l) Ecuador, South America. Located in the **Mache Chindul Reserve**. Contains both Humid-Pre-Montane forest and Humid Tropical forest.