

**Division of the Amazon Ecosystem by Rivers that Flow Along Fault Zones**

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The study of the neotectonics of Amazonia revealed that the most important aspect of the Modern Amazon Neotectonic System (dextral transcurrent) provides the bases for the separate divisions of the Amazon Ecosystem, through the demarcations of great geologic fault zones.

At this moment this affirmation refers to the central region of the Amazonia, or the sedimentary basin (about 1.300.000 square km in size), coinciding with the Amazon structural province, where the great rivers of the Amazon fluvial system develop.

This study was elaborated by remote sensing (satellite and radar images) interpretation, and analysis of structural features in the field. In all examined cases, the structural control of the Amazon biome by neotectonic fault zones was confirmed. These faults make up natural more or less distinct limits.

*Key words: Amazonia, great rivers, neotectonic, ecosystem, fault zones.*

**Xingu River Floodplains: A Cartographic Essay.**

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Located in the central portion of South America, Xingu River cross Parecis Plateau flowing from South to North and creating a very complex floodplain system. This system presents straight, meandering, anastomosed and barred types of channel and their correlative flooded areas. Our paper presents a cartographic approach of this system and makes some interpretations about the relationship between channels and floodplains. The cartographic approach is based on satellite pictures that were used to make sketches of the main features occurred in this area. Xingu River Basin has approximately 170.000 km<sup>2</sup> in the section upstream Von Martius Falls, with a perimeter of 2.460 km and the floodplains occurs approximately and 820 km from its source. The medium discharge between 1970-1980 was 4.320 m<sup>3</sup>/s, with 1.609 and 13.281 m<sup>3</sup>/s of low and high discharges respectively. Von Martius Waterfalls marks in the river the contact of Parecis Plateau with Neopleistocenic Planation Surface. Xingu River upstream from the waterfalls shows the biggest system of floodplains out of Amazon Basin lowlands. These floodplains are 280-300 meters above sea level, and extended for 400 km to south following Xingu and its tributaries.

*Keywords: flooded areas, geomorphological maps, channel patterns.*

**Correlations Between Pleistocene Polycyclic Geomorphogenesis and Palaeoclimatic Fluctuations in the Central Siberian River Valleys, Russia**

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Pleistocene terraces in the Siberian river valleys (Yenisei, Ob and East-Siberian rivers) are polycyclic ones. They were formed during simultaneous alluvial accumulation on the different height terraces. Terrace sections of the higher and middle height complexes contain sediments of at least 2 glaciations and of 10-12 sedimentological cycles. Palynologically phases of an active sedimentation are indicating by low spore-pollen content: *Larix sibirica*, *Pinus sibirica*, *P.sylvestris*, *Betula* sect. *Nanae*. Late Pleistocene sedimentation occurred between (IRSL/TL dates) 18.0-23.0/18.0-24.0, 28.7-29.0/28.7-30.0 and 43.4-69.0/44.6-72.4 ka (Frechen and Yamskikh, 1999). The stage 5 interglacial occurred in between 89.1/115.6/103.7-1-17.1 ka. Palaeosol complex is indicated by the forest vegetation expansion: *Abies sibirica*, *Pinus sylvestris*, *Picea obovata*, *Betula* sect. *Albae*. However indicators of cold conditions are preserved: *Betula* sect. *Nanae* and *Larix sibirica*. Absence of broad leaf vegetation pollen (which was wide spread during Neogene) is considered to be as one of the indicators of generally cold Pleistocene climate in Siberia.

*Key words: Siberia, Pleistocene, sedimentation, soil formation, palaeoecology.*

**RECENT GEOMORPHIC AND SEDIMENTARY PROCESSES OF THE  
PURUS RIVER , SW AMAZONIA (BRAZIL)**

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The Purus river is a typical lowland river of southwestern Brazilian Amazonia with its headwaters to less than 500 m a.s.l., therefore without contact with the Andes. The section of the upper Purus river upstream of Boca do Acre city was studied. Results of paleogeographical studies documented the big palaeohydrological changes in this area during the Late Pleistocene and the Holocene. Facies analysis of the recent alluvia was carried out. The present river has confined meanders with point bars and side bars. The banks of the river channel are 10-12 m high and the river cover the floodplain only during the summer catastrophic floods (e.g. 1997th March). More than 98% of the sedimentary load is carried as suspended load.

Alluvia along the channel was dated at the last 1 ka BP. Rapid changes in age along the banks on short distances and also in one profile could indicate that sediments temporarily redeposited during the large floods. Trees fall inside the channel is current. However, accumulation of trees occur only on the erosional banks and not on the point bar. Therefore the trees, not cover by sediments, are consequently destroyed.

*Key words: Purus, Amazon basin, Geomorphology, Sedimentology*