



Raised fields in the Llanos de Moxos, Bolivia - description and analysis of their morphology

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The disturbance of Pre Columbian populations on Amazonian ecosystems is being actively debated. The traditional view of amazon being an untouched landscape because of its poor soils and harsh climate has been challenged and the extreme opposite idea of highly modified landscapes with complex societies is growing. Recent research has led to new impulses and issues requesting about the agricultural strategies people developed to survive in this climate.

The Llanos de Moxos, situated in the Bolivian Lowlands in south-eastern Amazonia is one important region which was densely altered and where a great variety of earthworks can be found. One of the most impressive earth works are the raised fields, which are earth platforms for cultivation of differing shape and dimension that are elevated above the landscapes natural surface. In contrast to the “terra preta” formation where artefacts and amendments like charcoal and kitchen waste have been clearly identified, raised fields have shown to be artefact poor and studies up till now couldn't find any evidence of additional amendments which could have improved soil quality in the long term. As a result the function and productivity of raised fields is still not well understood and is being actively discussed. Detailed investigations on raised fields located in the indigenous community of Bermeo, in the vicinity of San Ignacio de Moxos provides data showing a novel explanation of the Pre-Columbian management of raised fields, and a chronological sequence of their utilization and abandonment. OSL dating has shown that the raised fields had been in use since as early as 600 AD. Comparison of Geochemistry with a reference profile, away from raised fields, showed that there is no evidence for manure amendments deriving from kitchen waste or animal residues suggesting a rather extensive use of those fields. Complementary the description of intern morphology and laboratory analysis of this raised fields, combined with radiocarbon dating of charcoal, points towards separate periods of management and use, indicating temporarily cultivation similar to shifting cultivation. This finding supports the idea that the construction of raised fields in the llanos de Moxos could have resulted from the need to extend the cultivation ground by draining land which is flooded during the rainy season.