

Archaeological Black Earth: Products of Humid Climate over Pre-historic and Historic Human Settlements

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Several sites with Archaeological Black Earth (ABE) have been recorded in the Amazon region since the turn around of the last century, when the region were visited by many naturalists. Although each site of ABE occupies small areas, the ABEs are very common and located close together. They present a deep A-soil horizon bearing fragments of ceramic and lithic artefacts and display a deep black colour coming from their high content of decomposed organic matter. The A-horizons were developed over B-horizons of latosols and podsols. Besides organic matter they contain large quantity of quartz and kaolinite, some goethite and hematite. The ceramic fragments show high content of phosphor as amorphous phosphate. The soils display a characteristic geochemical signature, P-Ca-Mg-Sr-Ba-Mn-Zn-Cu, incompatible with the common soil of the Amazon region. This signature detaches the contribution of organic matter used and discarded continuously by pre-historic and historic human occupation of the area. The strong humid tropical climate established in the region during the Holocene and the immediate retaken of the site area by the rain forest after the human occupation which grew up very quickly, as a consequence, contributed to the formation of the deep black soil, called Archaeological Black Earth. The time needed to form this soils seems to be small (some hundred of years), since there are examples of ABE developed after arriving of European settler. Even in the interior of the Amazon region, in places occupied and abandoned by *caboclos*, a successor of the European settler and Indians, black earth are forming, promoted by the intense actual humid climate.