

and stones), Xalallis granular peds (< 3 mm) and non-sandy soils; Tezoquitl represent the land with subangular blocky/granular peds with hard and soft consistency (< 2 cm); Tlalcoztli is a dusty yellow land of low agricultural quality; and Atoctlis and Tezoquitl/ Xalalli correspond to active and passive alluvial soils, respectively. In addition, with soil classification, local knowledge and geomorphology were possible to determine the localization of the different plots represented in the SMAC. The conclusions are that the Nahua classified their lands based on aggregate size, soil consistency, and origin (natural and artificial), and not on texture or color; and the soils correspond to Anthrosols with abundant content of ceramic (*technic*). Finally, the tepetates (*tepetatlallis*) do not correspond to indurated volcanic soils but to terraces. **Keywords:** *Ethnoedaphology, soil classification, land classes, aggregation*

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**(6475 - 1537) Genesis and classification of Gleissolos Belonging of the Meia Ponte River on the Granulitic Complex Anápolis-Itaçu, Goiás State, Brazil.**

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The Granulitic Complex Anápolis-Itaçu has predominance of igneous rocks of basic-ultrabasic affiliation. The aim of this study was to know the genesis and classification of two soil profiles adjacent to the Meia Ponte River on the Granulitic Complex Anápolis-Itaçu in the State of Goiás, Brazil. The geographic coordinates of profile 1 are: 16° 36' 03.3" S, 49° 17' 37.5" W, 711 m altitude and profile 2: 16° 35' 43.8" S, 49° 17' 24.9" W, 703 m altitude. The climate of the region is classified as type Aw, according to the Köppen classification, with a mean annual temperature of 22.5 °C and precipitation of 1,571.4 mm. Two soil profiles were selected belonging to the watershed of Meia Ponte River in the municipality of Goiânia, State of Goiás, Brazil, between the months June and July 2016, which present poor drainage conditions, characterizing them in morphological, physical and chemical properties of the soil. The soils formed in this watershed are due to the factors and processes of soil formation and the performance of alluvial and colluvial materials due to the position of the relief. For reasons of the organic carbon content and the thickness, the surface horizons of the two soil profiles were identified as A moderate horizon. Profile 1, located in area saturated in the rainy season, influenced by the water table and aluvinares materials from Meia Ponte River allows accumulation of water for a long time, favoring the development of pedogenetic process of gleation, indicated by the colors with low chroma. The set of attributes observed this profile allowed to classify as Gleissolo Háplico at the suborder level, associated with high clay activity, with base saturation greater than 50% in large groups and have a vertic character in one or more horizons up until 100 cm of the surface of the soil, allowing to classify as Gleissolo Háplico Ta Eutrófico vertissólico. The profile 2 had a high contribution of coluvial materials, due to the position in the relief, presented with similar characteristics to the P1 profile in first and second categorical levels, with low clay activity and base saturation less than 50%. In this way, it was noticed as intermediate soils for Neossolo and presence of fluvic character, being determinant to characterize as Gleissolo Háplico Tb Distrófico neofluvisólico. It is concluded that the relief and alluvium-colluvial materials were the most active factors in the genesis and classification of these soils studied.

**Keywords:** Toposequence; soil genesis; aluvio-colvionar influence.

**Financial support:** Federal University of Goiás

**(5129 - 610) Great groups of soils of the Northeast of Brazil not yet cataloged in the Brazilian System of Soil Classification**

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The improvement of the Brazilian System of Soil Classification (SiBCS) depends on its effective use in soil surveys, soil classification and correlation meetings, and researches in soil science. The objective of this work is to present taxonomic information on soil great groups not yet cataloged in the SiBCS. The study area comprises the coastal parts (Coastal Tablelands, Coastal Lowlands and surrounding areas) of seven states, amounting to an extension of 224,000 km<sup>2</sup>, of the Northeast region of Brazil. In order to accomplish the objective, it was reviewed morphological, analytical and taxonomic information of 650 soil profiles, comprising 300 soil profiles available from pedological studies published in the 70's and 80's of the past century, and 350 profiles of the reconnaissance soil survey (1:100,000 scale) under execution in Ceará State of Brazil. All these profiles were analyzed according to the methodology of Embrapa Soils, the National Soil Research Center of the Brazilian Agricultural Research Corporation (Embrapa). The analyses of the 650 soil profiles and of the current structure of the SiBCS showed the necessity of addition of five new great groups of soil to the system. They are: *Latossolos Vermelho-Amarelos Eutrocoesos* (Eutrodox), *Argissolos Vermelho-Amarelos Distrócoesos* (Kandiudults), *Luvissolos Crômicos Sódicos* (Natustalfs), *Vertissolos Ebânicos Sâlicos* (Salusterts) and *Neossolos Flúvicos Ta Distróficos* (Ustifluvents).

**Keywords:** Taxonomy of soils; tropical soils; Coastal Tablelands; Northeast of Brazil.

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**(7389 - 1841) Identification and classification of the soils of Garhwal Himalayas in India using remote sensing and GIS techniques.**

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A study was undertaken to identify and classify the soils of Tehri Garhwal district of Uttarakhand state in India using remote sensing and GIS techniques. The area falls in warm humid Garhwal region of Lesser Himalayas. It lies between 32°00' to 31°10' N latitudes and 77°55' to 79°05' E longitudes covering 3,33,000 ha area. About 70% area of the district is under forest and only 11% of the district is under agriculture which is main occupation of the inhabitants of this area. The elevation ranges from 350 to 6578 m above msl. On the basis of image data (IRS 1D LISS IV) interpretation, major physiographies viz., summits/ridge tops, side/reposed slopes, valleys and piedmonts were identified with varying degree of slopes. On the basis of field study and laboratory characterisation 17 soil series have been identified and mapped into 43 soil units as soil series association. The soils of summits/ridge tops occur on moderately steep to steep slopes and are mainly very shallow to moderately shallow, excessively drained, gravelly loam, sandy loam to loam in texture and suffer from severe to very severe erosion and stoniness. They are classified as loamy skeletal/coarse loamy Lithi/Typic Udorthents and patches of Typic Dystrudepts. Soils of side/reposed slopes occur on moderately steep to very steep slopes and are mostly very shallow to moderately deep, excessively drained, gravelly sandy loam, gravelly loam and gravelly clay loam in texture and prone to very severe erosion. They are