A SOIL SKETCH OF MOÇAMBIQUE

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The following classification of the soils of Moçambique, already described in « Esboço de Reconhecimento Ecologico-Agricola de Moçambique, IV — Os Solos », by D.H.G. Gouveia and A.L. Azevedo, Lourenço Marques, 1955, is still at a provisional stage, since it was based only on the morphology of the soils.

A. LEACHED SOILS (Pedalfers)

1. Red ferralitic soils, without or with iron concretions (laterite may occur).
2. Orange, pale-orange and yellow ferralitic soils, without or with iron concretions (laterite may occur).
3. Reddish brown, brown and yellowish brown ferralitic soils, without or with iron concretions (laterite may occur).
4. Grey ferralitic soils generally with iron concretions (laterite may occur).
5. Macondes soils.
6. Urrongas red soils.
7. Inhaminga soils.
8. Coastal sand belt soils.

B. NON-LEACHED SOILS (Pedocals)

1. Tropical black and grey earths.
2. Guijá grey soils.
3. Tropical chestnut soils.
4. Tropical brown, greyish brown and reddish brown soils.

C. CALCIMORPHIC SOILS

D. HALOMORPHIC SOILS

E. HYDROMORPHIC SOILS

1. Bog soils.
2. Machongos.
3. Vlei soils.
4. Dambos soils.
5. Bottom clays.

F. LITHOSOLS

G. REGOSOLS

H. ALLUVIAL SOILS

The general distribution of the main great soil groups of Moçambique is shown in fig. 1. This sketch is based on the Provisional Soil Map of Moçambique, scale 1 : 2 000 000, included in the above mentioned « Esboço ».

C.R. du 3e Congrès de la P.I.O.S.A., Tananarive 1957, section D.

Catenary and non-catenary complexes were used as soil mapping units.

Catenas predominate in the granitic-gneissic planaltic region, under gently undulating to rolling slopes. The soils are associated topographically : red soils on high, well drained areas ; orange and pale-orange soils on slopes ; yellow soils bordering the depressions ; and grey soils in the depressions. In some places, instead of the above mentioned, a catenary succession of red, reddish brown, brown, yellowish brown and grey soils is found.

The soils of the planaltic zones are, as a rule, ferralitic.

The friable red ferralitic soils, shown in the sketch by dense diagonal lines, do not show, with a few exceptions, iron or lateritic concretions and/or laterite.

In the granitic-gneissic, humid, mesothermal to tropical plateau, the characteristic soil association is the catena, whereas in the subplanaltic and low areas it is the non-catenary complex. In the first case the topography and in the second case the parent material are the main factors of soil differentiation.

The pedocalic soils of Moçambique occur, as a rule, on the areas of the non-catenary complexes with low rainfall (less than 800 mm per annum) over parent materials derived from calcareous or lime rich sedimentary rocks. These soils are sometimes associated with others such as Guijá grey soils in the Guijà and Maxaila complexes, brown and reddish brown soils in the Maxaila, Alto Limpopo and Chemba complexes, black earths and brown soils in the Lower Shire. Sometimes the pedocalic soils predominate (ex : black earths of Kissanga and Porto Amélia).

The soils derived from non-calcareous sedimentary rocks are generally sandy in texture (ex : Macondes soils, the regosols of Machaze and Maxaila, etc.).

Calcareous sedimentary rocks give origin either to pedocalic or to calcimorphic soils.

Red ferrallitic soils are however found over the crystalline limestones of the primitive systems (ex : Namapa, Corrane).

Over basaltic rocks, in well drained areas of humid regions such as Namialo — Metocheria, Naguema, Boila, Namaacha, etc., are found red soils associated with very dark grey soils (in bottom lands), both ferralitic.

Red and black clays in catenary association are developed in the semi-arid regions of Moamba and Baixo Mossurize, over Stormberg basalts. These soils, as a rule, show no iron concretions ; lime nodules generally occur in the black clays.

The brown soils of semi-arid regions of Tete, Chemba, and Alto Limpopo show lime concretions in the lower horizons. This is also true speaking of the brown soils of Lower Shire, but as one gets close to the granitic-gneissic areas, still under the same climate and similar landscape, brown soils occur with similar features but in which no lime concretions are seen. These brown soils are provisonally named non-calcareous brown soils.

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