

## SUMMARY

In the island of Gran Canaria, the erosion partly due to the relief has a great influence. The primary material is of the volcanic type and is dated, the oldest belonging to the Basaltic Series I (15-16 m. a.) whilst the latest belongs to the Basaltic Series IV (recent volcanoes).

The arid and subhumid areas have been chosen for this study. The former can be found in the lowest areas along the coast-line, its thornthwaite's climatic formula being  $EdB'_3a'$ . The subhumid sector is near the central area; the climate is defined by the  $C_2S_2B'_2a'$  formula.

The object of this work is to study the genesis of these soils as well as any possibly analogies and differences between the argillic horizons in the arid and subhumid sectors.

The arid area presents red fossil soils of a porphyroskelic fabric, with a clay translocation possible containing a calcic horizon under it.

These soils are buried by basaltic flows, recorded as 2 million years old, over which red fossil sediments settle or which are directly buried by the red sediment. These soils have been enriched, in situ, by salts and carbonates.

These are paleosoils which as a general rule, have a coluvial surface with red soil pedorelicts, lithorelicts, papules and carried away calcareous nodules.

The presence of carbonate accumulation horizons and the clay mineralogy indicate a climate similar to the actual Mediterranean climate. The superior sequum is classified in the Aridisol Order according to the 7th American.

The subhumid area presents either climax soils, in situ, or paleosoils buried by coluvial material. These soils show clay translocation and hydromorphism and are classified in the Alfisol Order.

The arid sector presents red relict sediments or fossil red soils with a coluvial surface, as well as calcic horizons and a subsidiary salt and carbonate enrichment. The subhumid sector presents, as a general rule, in situ, climax soils with a biological activity which could be intense and a more or less pronounced hydromorphism.