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SOILS OF DERED KRIAN NATIONAL PARK: PRELIMINARY ASSESSMENT ON THE MORPHOLOGICAL AND SELECTED PHYSICOCHEMICAL PROPERTIES

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Abstract

Implementation of effective soil conservation management is vital to manage degraded limestone forest land in the tropics. For the humid tropics of Sarawak, extensive information on soil characteristics of degraded limestone forest lands are essential and required as a guideline for future forest management programmes. Thus, a preliminary assessment on the morphological and selected physicochemical properties was conducted to describe the different major soil types along with various selected trials at Dered Krian National Park, Bau, Sarawak. The review of this preliminary study was based on the general properties of the soils namely; morphology and selected soil physicochemical properties. Our findings indicated that based on the in-situ morphology observations during a soil survey showed the variety of soils occur within the limestone forest sites. According to Sarawak Soil Classification system, the morphological properties in the studied sites resemble of Meluan soil series and were classified under Skeletal soils group due to their geographical distribution and pedological significance. Nonetheless, the soils are discussed with special reference to their classification, site, parent material, morphological and physicochemical properties. Association between the soil physicochemical characteristics has been highlighted in the concluding section of this paper.

Keywords: *Conservation, limestone forest, soil morphological and physicochemical properties, Sarawak*

Introduction

Limestone hills in Sarawak are elements of karst landscapes, which are characterized by a distinctive topography that develops as water dissolves soluble calcareous rock. They are characterized by extremely slow soil formation from the underlying limestone, very shallow and patchy soils with low water-retention capacity, and highly porous underlying limestone rock (Liu *et al.*, 2015). The conservation of the limestone hill in tropical region is