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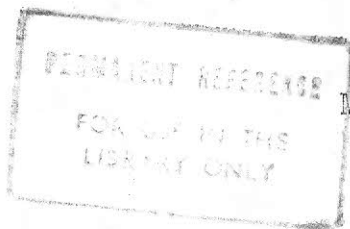
THB.

CHEMICAL INVESTIGATION OF SOME SPECIES OF  
CALOPHYLLUM, HUMBOLDTIA AND STEMONOPORUS

Presented by

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This thesis comprises of 3 parts. Part I consists of the study of the acids of seven Calophyllum species (Guttiferae). Part II consists of the chemical investigation of Humboldtia laurifolia Vahl. (Leguminosae) leaf, bark and timber while Part III consists of the study of Polyphenols of six species of Stemonoporus (Dipterocarpaceae).

In part I the acids isolated from the species of the family Guttiferae and coumarins isolated from the genus Calophyllum are given. The chemistry and the stereochemistry of acids are discussed here.

#### Calophyllum zeylanicum

A new acid identified as calozeylenic acid was isolated from the bark of Calophyllum zeylanicum. In addition Calophyllum thwaitesii bark, C. walkeri bark and pericarp yielded the same acid.

#### Calophyllum calaba

The enantiomer of apetalic acid and isoapetalic acid were isolated. Isoapetalic acid was found to be contaminated with an inseparable stereoisomer. In addition Calophyllum trapezifolium, Calophyllum bracteatum and Calophyllum soulattri had the above acid mixture in their bark.

In part II, chemistry of the species of the three genera closely related to Humboldtia, namely Baikia, Saraca and Tamarindus are given in the introduction. A new natural product 3-methoxy friedelan was isolated from the leaves.

The timber gave acetoxy oleanolic aldehyde, an ester of  $\beta$ -sitosterol, lupeol and  $\beta$ -sitosterol, while the bark gave acetoxy oleanolic aldehyde, lupeol,  $\beta$ -sitosterol, an aliphatic compound 5,7,4'-trihydroxyflavone (apigenin) and a new natural product which was identified as 3,3',5,5',7-flavanpentol.

In Part III, phenols of all types isolated from the family Dipterocarpaceae are given in the introduction.

Stemonoporus affinis

A new natural product, stemonoporol and copalliferol A were isolated from the bark. In addition four other species, Stemonoporus elegans, S. kanneliensis, and S. oblongifolius were shown to have the same two polyphenols in their bark extracts.

Stemonoporus lancifolius

Vaticaffinol was isolated from the bark. Stemonoporus cordifolius too yielded the same polyphenol from its bark.