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CHEMICAL INVESTIGATION OF  
*CITRUS* AND OTHER RUTACEOUS PLANTS

A THESIS SUBMITTED BY

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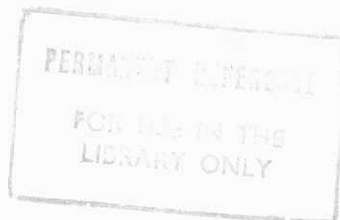
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ABSTRACT

The thesis consists of three parts. The first part describes the Chemical Investigation of Euodia lunu-ankenda (Sinh. Lunu-ankenda). Three furo-quinoline alkaloids, evolitrine, skimmianine and  $\gamma$ -fagarine were present in the stem bark together with two new chromans, sitosterol, the flavone luteolin and probably elemental sulphur, while its leaf contained three alkaloids together with evolitrine and kokusaginine. These three alkaloids together with evolitrine and dictamine, the terpenoid lupeol, the coumarin bergapten and three new phenylethanones were isolated from E. lunu-ankenda root bark. The chromans were shown to have the structure 6-acetyl-5-hydroxy-[2,3-h]- (6',6'-dimethyl)-pyrano-2',2'-diethyl-3,4-dihydro-[2H]-1-benzopyran and 6-acetyl-5-hydroxy-[2,3-h]-trans-5',5',8'-trimethyl](4'H)-1'-perhydrobenzopyrano-2,2-dimethyl-3,4-dihydro-(2H)'-1-benzopyran, using chemical and spectroscopic techniques.

The Second part deals with a study of the Chemical Constituents of Acronychia pedunculata (Sinh. Ankenda). Its stem bark contained the two furoquinoline alkaloids, evolitrine and kokusaginine together with the terpenoid  $\beta$ -amyrin and the polyphenol acrovestone. The root bark of A. pedunculata contained three furoquinoline alkaloids, dictamine, skimmianine and kokusaginine and the phenolic compounds acrovestone and acronylin, the terpenoid  $\beta$ -amyrin and the coumarin bergapten.

The third part describes work on Citrus reticulata (Sinh. Jambu Naran or Hin Naran) leaf. The leaf oil contained d-limonene and methyl-N-methylantranilate as its major constituents while two flavones, 5-hydroxy-6,7,8,4'tetramethoxyflavone and 5-hydroxy-6,7,8,3',4'-pentamethoxyflavone were present in the residue.

