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Mahanimbine and Murrayazoline from *Murraya exotica* Linn.* (Syn. *Murraya paniculata*)

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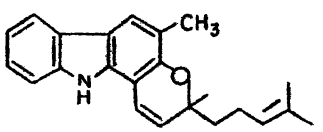
and

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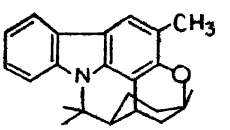
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ON chemotaxonomic considerations, we were interested to examine different species of the genus *Murraya* as one of the species *Murraya koenigii* Spreng. is the richest source of carbazole alkaloid[1]. *Murraya exotica* has been the subject of numerous investigations[2] but so far no carbazole alkaloid has been reported from it. We, now report two carbazole alkaloids, mahanimbine, $C_{23}H_{25}NO$(I), m.p. 94° and murrayazoline $C_{23}H_{25}NO$(II), m.p. 260° from it.



(I)



(II)

The neutral fraction of the petroleum ether extract of the stem bark of *Murraya exotica* gave in a very poor yield a crystalline carbazole derivative m.p, 94°. The IR spectrum of the compound (I) showed the presence of —NH and an aromatic system. (ν_{max}^{Nujol} 3359, 1647, 1613, 1575, 1493 cm^{-1}). The UV spectrum of (I) (ν_{max}^{EtOH} 223, 239, 188, 330, 343 nm with log ε 4.55, 4.06, 4.61, 3.90, 3.42) was superimposable with that of mahanimbine[3]. The compound was identified as mahanimbine by direct comparison (T.L.C. and m.m.p.).

From the petroleum ether extract of the powdered leaf of *Murraya exotica* a crystalline colourless neutral Hot-II nitrogenous homogenous compound, m.p. 260°, $[\alpha]_D$ was isolated. The IR spectrum of the compound (II) showed the presence of an aromatic system (ν_{max}^{Nujol} 162-, 1590, 1480, 1375, 1368, 852, 873 cm^{-1}). The UV spectrum (ν_{max}^{EtOH} 245, 307 nm with log ε 4,69, 4.16) was suggestive of the presence of 2-methoxy carbazole chromophore. The physical and analytical data were suggestive of the identity of the compound with murrayazoline which was confirmed by the direct comparison with pure specimen of murrayazoline[4] (mmp., TLC and UV, IR).

Though the yield of the two compounds are very poor, their occurrence in both the species (*M.exotica* and *M. koenigii*) is taxonomically interesting.

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Chemical Constituents of *Pteris longifolia*

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EARLIER communications[1,2] from this laboratory reported the isolation and characterisation of wallichoside, β-sitosteryl palmitate, β-sitosterol, Pterosin B and Pterosin C from the alcoholic and benzene extract of the rhizomes of an Indian fern, *Pteris wallichiana* (Pteridaceae) respectively. The present report deals with a thorough and systematic chemical investigations of the benzene extract of the whole plant of *Pteris longifolia* (Pteridaceae) as no phytochemical investigations on this fern have so far been reported. This fern and *Pteris biurata*[3] are the only two exceptions in this family so far

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