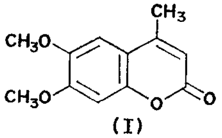
(M^+ 220), m.p. 196–197° (MeOH), is in accord with the proposed structure. In the IR (KBr) it presents the typical absorptions of coumarins at 1715, 1600 and 815 cm^{-1}, and in the UV (EtOH) at λ_{max} 235, 290 and 314 nm. The NMR spectrum shows singlets at 3·24 τ (2H, $W_{\frac{1}{2}} = 6$ Hz; aromatic protons), 4·36 (1H; H–C_3), 6·02 and 6·12 (3H each; MeO–C_6, MeO–C_7) and at 7·35 τ (3H; Me–C_4). The position of the signals for the aromatic protons and the methoxyl groups agrees with that of the 6,7-dimethoxy-coumarins.[4] On the other hand, the peaks which correspond to the H–C_3 and Me–C_4 are similar to those found for 8-methoxy-4-methyl-coumarin.[5] The MS, besides the molecular ion at m/e 220, has prominent peaks at m/e 205 (M^+–Me), 192 (M^+–CO), 177 (M^+–Me–CO), 162 (M^+–2 Me–CO), 149 (M^+–Me–2 CO), 134 (M^+–2 Me–2 CO) and 106 (M^+–2 Me–3 CO).



(I)

From the same species we also isolated a lignan of m.p. 121–123° (MeOH), $[\alpha]_D$ +72° ($CHCl_3$), NMR spectrum ($CDCl_3$): 3·08 τ (d, 6H; aromatic protons), 4·00 (s, 4H; 2 —OCH_2O—), 5·20 [d, 2H, $J = 5$ Hz; 2 —OCH(Ar)—CH<], 5·80 and 6·15 (each dd and 2H; 2>CH—CH_2—O), and 6·90 τ (m, 2H; >CH—CH<), which by its physical and spectroscopic data was identified as (+)-sesamin.[6] To our knowledge, *Sideritis canariensis* Ait. is the first Labiata from which a lignan has been isolated; moreover, the presence of coumarins is very rare in this family.

Acknowledgements—The authors thank Dr. C. Pascual, Physikalisch-chemisches Institut, Universität Basel, for the mass spectrum and Dr. R. Estévez for his helpful hints. This study was performed within the Programme concerted with the Ministerio de Educación y Ciencia.

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Key Word Index—*Sideritis canariensis*; Labiatae; coumarin; 6,7-dimethoxy-4-methylcoumarin; lignan; sesamin.

Phytochemistry, 1972, Vol. 11, pp. 2116 to 2117. Pergamon Press. Printed in England.

LECYTHIDACEAE

STEROLS FROM *CAREYA ARBOREA*

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(*Received* 11 *January* 1972)

Plant. Careya arborea Roxb. *Uses.* Medicinal.[1] *Previous work.* On seeds,[2,3] stem bark[4] and leaves.[5]

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Seeds. Preliminary chemical tests revealed the presence of saponin in the seeds. The seeds were successively extracted with light petroleum, $CHCl_3$ and EtOH. The EtOH extract was found to contain saponin. The crude saponin was hydrolysed with 5% ethanolic HCl and the acid hydrolysate on subsequent purification by chromatography yielded a number of polyhydroxy triterpenoid sapogenols. The report on the constitution of these compounds will be communicated later. The light petroleum extract on purification by chromatography over alumina was separated into two fractions: (i) The light petroleum–benzene (1:1) eluate on further chromatography followed by crystallization from acetone–MeOH mixture afforded α-spinasterol (m.p., m.m.p., $[\alpha]_D$; m.p., m.m.p. and $[\alpha]_D$ of acetate); (ii) The light petroleum eluate was purified by further chromatography and was crystallized from acetone when α-spinasterone was obtained as needles, m.p. 165–166°, $[\alpha]_D$ +24·7° ($CHCl_3$). It could be reduced to α-spinasterol by $NaBH_4$. The compound showed IR (Nujol) absorption bands at 1715 cm^{-1} (6-membered ring ketone), 1670, 845 cm^{-1} (trisubstituted double bond at C_7–C_8), 970 cm^{-1} (*trans* disubstituted double bond at C_{22}–C_{23}). The NMR spectrum ($CDCl_3$) showed a multiplet centred at δ 2·3 (4H) which may be attributed to the protons α to the carbonyl group. The methyl signals appeared between δ 0·61 and 1·12. The C_{18}-methyl appeared at δ 0·61 and that C_{19} methyl appeared at δ 1·04. The multiplet centred at δ 5·2 correspond to the three olefinic protons. The mass spectrum showed the molecular ion peak at *m/e* 410 (100%). The other major peaks were at *m/e* 367 (M^+-isopropyl fragment, i.e. mass 43, 58·9%), 298 (M^+–C_8H_{16}, i.e. cleavage at C_{21}–C_{22} bond[6] and one H, 57%), 271 (M^+–C_{10} side chain, 69%), 269 (M^+-side chain and 2 H, 87%), 244 (11·5%) and 229 (M^+-side chain and 42 mass units, 11%).

The isolation of α-spinasterone from a natural source (*Samanea saman*) has very recently been reported by Mitra *et al.*[7] Their publication has prompted us to communicate our results. The $CHCl_3$ extract on chromatography over alumina yielded α-spinasterol (m.p., m.m.p., IR and co-TLC) and Δ^{22}-stigmastenol (m.p., m.m.p., MS, IR).

Acknowledgements—We wish to thank the Director, National Chemical Laboratory, Poona for the MS and Dr. M. M. Dhar, Central Drug Research Institute, Lucknow for the NMR spectrum.

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Key Word Index—*Careya arborea*; Lecythidaceae; sterols; α-spinasterol; α-spinasterone.