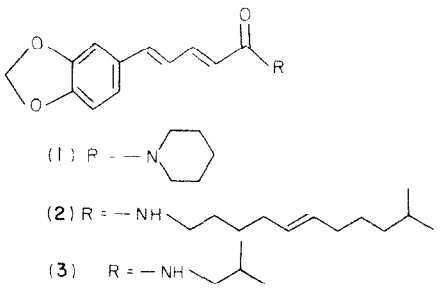
(I I) eluates furnished the third alkamide piperlonguminine[4] (**3**), crystallizing in fine needles (400 mg) from $CHCl_3$–petrol., m p 167–8°. This constitutes the first report of the occurrence of sylvatine and piperlonguminine in this plant.



The alkamides piperine, sylvatine and piperlonguminine were identified by direct comparison (m m p., PMR, IR, UV and co-TLC) with respective authentic samples.

Voucher specimen No. P C (r) has been preserved in our laboratory This was collected by Home-O-Flora, Calcutta, and identified by Botanist Dr P C Dutta Department of Botany, Calcutta University, Calcutta

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[4] CHATTERJEE, A. and DUTTA, C. P. (1967) *Tetrahedron* **23**, 1769

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5,7-DIHYDROXYCHROMONE FROM *POLYGONUM PERSICARIA* SEEDS

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Key Word Index—*Polygonum persicaria* L., Polygonaceae, 5,7-dihydroxychromone, quercetin-3-galactoside, kaempferol-3-galactoside, quercetin, kaempferol, sitosterol

Plant Polygonum persicaria L. *Source.* Piedmont, Italy

Previous work Flavonoids from leaves [1] *Part examined* Seeds

Present work Air dried seeds (2 2 Kg) were ground and extracted with light petroleum (b p 40–70). The extract was concentrated and chromatographed on alumina column using successively for elution light petrol., CCl_4, C_6H_6, Et_2O and EtOAc The ethyl acetate fractions gave after purification on a second column and crystallization from EtOH sito-

[1] MUKHAMED'YAROVA, M. M. (1968) *Khim. Prir. Soedin.* **4**, 131

sterol (0·3 g) m.p. 139° (lit.[2] m.p. 139–140°). M^+ *m/e* 414 and CH analysis. The mass, NMR, IR spectra were indistinguishable from those reported earlier.[3–5] Acetate m.p. 123° (lit.[2] m.p. 120–1°). A further extraction of the residue with 90% EtOH, followed by concentration of the extract and extraction with EtOAc gave a residue which was dissolved in 50% MeOH and the solution washed with CCl_4. The solvent was removed and the residue chromatographed on polyamide. Elution with 20% MeOH gave a crystalline compound (0·14 g, pale yellow prisms from EtOH–H_2O) m.p. 275° (*d*), molecular formula $C_9H_6O_4$ (M^+ *m/e* 178); λ_{max}^{MeOH} 252, 259, 296, 320 sh, nm; $\lambda_{max}^{MeOH+AlCl_3}$ 266, 310, 366 nm; $\lambda_{max}^{MeOH+AcONa}$ 267, 333 nm; IR. ν_{max}^{KBr} 3300–2500 (br.), 1640, 1608 cm^{-1}, NMR (acetone *d*). τ 1·96 (1 H, *d*, *J ca* 6 Hz), 3·59 (1 H, *d*, *J ca* 1·5 Hz), 3·78 (1 H, *d*, *J ca* 1·5 Hz), 3·80 (1 *H*, *d*, *J ca* 6 Hz). These data are in excellent agreement with those of 5,7-dihydroxychromone [6–8] Synthetic 5,7-dihydroxychromone[8] proved to be identical (m.p., IR, UV, NMR) to that isolated from the seeds.

Further elution of the polyamide column gave: kaempferol-3-galactoside, quercetin-3-galactoside, kaempferol and quercetin all identified with the procedures outlined by Mabry *et al*[9]

As far as we know, 5,7-dihydroxychromone has previously been isolated only from *Arachis hypogoea*[6] and *Mentha longifolia* Hudson.[7]

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[2] BERSIN, TH and MULLER, A (1952) *Helv Chim Acta* **35**, 1891
[3] KNIGHTS, B A (1967) *J Gas Chromatogr* **5**(6), 273
[4] YAMAGUCHI, K (1970) *Spectral Data of Natural Products*, Vol 1, Elsevier, London
[5] JONES, N R, and ROBERTS, G (1958) *J Am Chem Soc* **20**, 6122
[6] RATNA PENDSE, RAMA RAO, A V and VENKATARAMAN K (1973) *Phytochemistry* **12**, 2033
[7] BOURWILG, D, JANISTYN, B, STOCKER, M and POHL, R (1974) *Arch Pharm* **307**, 131
[8] NARASIMHACHARI, N, RAJAGOPALAN, D and SESHADRI, T R (1953) *J Sci Ind Res* **12**, 287
[9] MABRY, T J, MARKHAM, K R and THOMAS, M B (1970) *The Systematic Identification of Flavonoids*, Springer, Heidelberg

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ALKALOIDS FROM *FAGARA MAYU* BARK

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Key Word Index—*Fagara mayu*, Rutaceae, alkaloids, cantin-6-one, dictamnine, chelerithrine, γ-fagarine; skimmianine, magnoflorine

Plant. Fagara mayu (Bert. ex Hook. et Arn.) Engler. Voucher specimen deposited in the Museo Nacional de Historia Natural (Santiago, Chile). *Source.* Isla Mas-a-Tierra, (Juan Fernandez) Chile. Material collected in February 1973 (summer).