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## OCCURRENCE OF GLYCOFLAVONES IN THE ACANTHACEAE

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**Key Word Index**—*Ecbolium linneanum*; Acanthaceae; glycoflavones; orientin, vitexin, isoorientin and isovitexin.

Plant. *Ecbolium linneanum* Kurz. (Syn. *E. viride* (Forsk) Merrill) (voucher specimen No. 8/74 deposited at JIPMER).

**Uses.** Medicinal [1,2]. **Previous work.** None other than phytochemical screening [3].

**Present work.** Shade-dried leaves, flowers and roots extracted separately with hot 90% EtOH and the solid residue from the concentrate purified by recrystallization from EtOAc and ethyl methyl ketone. The yellow flavonoid fraction was found to be a mixture of four flavone glycosides, (A–D) by PC which could not be purified by crystallization. However, they were separated into pure components (TLC) by preparative PC using *n*-BuOH–27% aq. HOAc (1:1). They had the following characteristics: (A) m.p. 258–60°, UV purple→yellow with NH<sub>3</sub>; resistant to hydrolysis (2 N HCl, 3 hr) and giving luteolin on refluxing with HI in phenol, was identified as orientin by *R<sub>f</sub>*, preparation of acetyl derivative and co-PC with an authentic sample (B) m.p. 250–52°, UV purple→light yellow with NH<sub>3</sub>; identified similarly as vitexin. C and D, present in traces, were identified as isoorientin (6-C-glucosyl luteolin) and isovitexin (6-C-glucosyl apigenin) as above.

**Comment.** This is the first record of the occurrence of glycoflavones in the Acanthaceae. *E. linneanum* which contains orientin, vitexin, isoorientin and isovitexin in the ratio 5:5:1:1, and it is interesting that all the parts of the plant are rich in glycoflavones and devoid of the corresponding free aglycones or their *O*-glycosides. This is not in conformity with the general flavonoid pattern in the family [4,5]. Glycoflavones may be considered to occur atypically in this genus similar to their presence in *Vitex* sp. [4] in the Verbenaceae.

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## SUCCEDANEAFLAVANONE—A NEW 6,6'-BINARINGENIN FROM *RHUS SUCCEDANEA*\*

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Previously, we reported the isolation of hinokiflavone, amentoflavone, robustaflavone, agathisfla-