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SHORT COMMUNICATION

DELPHINIDIN 3-ARABINOSIDE IN THE EPACRIDACEAE

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Abstract—A new anthocyanin, delphinidin 3-arabinoside, has been isolated and identified from seven species of the family Epacridaceae.

A SYSTEMATIC investigation of flavonoids in the Epacridaceae has demonstrated the presence of delphinidin 3-arabinoside in seven species. In all cases it is accompanied by cyanidin 3-arabinoside. The latter pigment has been detected in all 27 species examined to date.

Delphinidin 3-arabinoside occurs as the dominant anthocyanin in the young twig bark of *Epacris gunnii* and *E. impressa*. It is also prominent in the young stems of *Pentachondra ericaefolia*, *Leucopogon collinus* and *L. ericoides*, and in the flowers and young stems of *Acrotriche serrulata*. It is present as a minor constituent in the fruit of *Cyathodes glauca*.

To the authors' knowledge, this is the first record of the isolation of delphinidin 3-arabinoside, although it has been reported, as a mixture with other anthocyanidin 3-arabinosides, in berries of *Vaccinium angustifolium* by Francis *et al.*[1] Its chromatographic properties are given below, in comparison with those of cyanidin 3-glucoside and delphinidin 3-glucoside obtained under the same conditions.

TABLE 1

	R_f in solvent		
	BAW	3% HCl	WAH
Delphinidin 3-arabinoside	0·18	0 02	0·09
Delphinidin 3-glucoside	0·14	0·02	0·08
Cyanidin 3-glucoside	0·22	0·05	0·15

EXPERIMENTAL

The isolation and identification of delphinidin 3-arabinoside was carried out using the procedures described by Harborne.[2] For chromatographic comparison, the pure anthocyanins were dissolved in methanol–1% HCl and spotted onto Whatman No. 1 chromatography paper (25 μl of solution, O.D.$_{max}$ = 2·0). R_f values were determined using the solvents BAW (*n*-BuOH–HOAc–H_2O, 4:1:5), 3% HCl (v/v), and WAH (H_2O–HOAc–conc. HCl, 82:15:3), by descent.

[1] F. J. FRANCIS, J. B. HARBORNE and W. G. BARKER, *J. Food Sci.* **31**, 583 (1966).
[2] J. B. HARBORNE, *Comparative Biochemistry of Flavonoids*, Academic Press, New York (1967).