contained fatty and resin acids in the proportion 2:1 and with similar constituents as found for the free acids. The unsaponifiable part (5·2 g) was analysed by TLC (preparative and analytical). Fatty alcohols, sterols (mainly β-sitosterol) and terpene aldehydes (mixture of abietinal and dehydroabietinal according to NMR) were detected.

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PODOCARPACEAE

ANTHOCYANINS FROM FIVE SPECIES OF THE PODOCARPACEAE

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Abstract—Cyanidin 3-glucoside has been identified in five species of Podocarpaceae. In addition, pelargonidin 3-glucoside was isolated from *Microcachrys tetragyna* Hook., and cyanidin 3-rutinoside from *Podocarpus lawrencii* Hook.

THE DISTRIBUTION of anthocyanins in the Gymnospermeae has not been widely reported. Santamour[1] has demonstrated the presence of cyanidin and delphinidin 3-glucoside and cyanidin 3-rhamnoside in conelets of Pinaceae species, and Lowry[2] has recently reported the occurrence of delphinidin 3,5-diglucoside in young leaves of *Podocarpus polystachus* (Podocarpaceae).

We have investigated the distribution of anthocyanins in five Tasmanian species of the Family Podocarpaceae. Our results are set out in Table 1.

The family Podocarpaceae is represented in the Tasmanian flora by five species distributed amongst the three subfamilies, Phyllocladoideae, Pherosphaeroideae and Podocarpoideae, the former two being monogeneric. Only in the subfamily Podocarpoideae was any significant variability in anthocyanin content encountered. Thus (including Lowry's data)[2] anthocyanin structures based on the three common non-methylated anthocyanidins, and with both 3- and 5-substituted glycosides have now been identified in this subfamily.

EXPERIMENTAL

Isolation and identification of anthocyanins was carried out using the procedures described by Harborne.[3] Characterization of purified compounds was confirmed by co-chromatography with authentic reference compounds.

[1] F. S. SANTAMOUR, *Forest Science* **12**, 429 (1966); Morris Arboretum Bulletin **17**, 50 (1966); *ibid.* **18**, 41 (1967).

[2] J. B. LOWRY, *Phytochem.* **7**, 1897 (1968).

[3] J. B. HARBORNE, *Comparative Biochemistry of Flavonoids*, Academic Press, London (1967).

TABLE 1. ANTHOCYANINS IN SOME MEMBERS OF THE PODOCARPACEAE

Plant	Anthocyanins	Organ
Subfamily Phyllocladoideae	Cyanidin-3-glucoside	present in cones and young leaves
**Phyllocladus asplenifolius* Labill		
Subfamily Pherosphaeroideae	Cyanidin-3-glucoside	cones only
**Microstrobos niphophilus* Gardner & Johnson		
Subfamily Podocarpoideae	Cyanidin-3-glucoside	cones only
**Dacrydium franklinii* Soland.		
**Microcachrys tetragyna* Hook.	Cyanidin-3-glucoside, Pelargonidin 3-glucoside (major), + unidentified pelargonidin derivative (trace)	cones only
Podocarpus lawrencii Hook.	Cyanidin-3-glucoside,	cones and young leaves
	Cyanidin-3-rutinoside (major) + two unidentified cyanidin derivatives (traces)	cones only

* Endemic to Tasmania.

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ANGIOSPERMAE DICOTYLEDONAE

ACANTHACEAE

SCUTELLAREIN 7-RHAMNOSYLGLUCOSIDE FROM *BARLERIA PRIONITIS*

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Plant. Barleria prionitis L.

Source. Collected locally in Pondicherry.

Uses. Leaves and roots used medicinally.

Previous work. None.

Present Work. On flower pigment.

A flavonoid, m.p. 230–235°, was isolated from EtOAc fraction of a MeOH extr. of fresh flowers. It had λ_{max}^{MeOH} 277, 333; $\Delta\lambda$ NaOEt + 54; $\Delta\lambda$ $AlCl_3$ + 26 nm; no shifts with NaOAc and $AlCl_3$. Acid hydrolysis gave rhamnose and glucose in approx. 1:1 ratio and