

Short Communications

Moss Pigments

II. The Anthocyanins of *Bryum rutilans* Brid. and *Bryum weigelii* Spreng.

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In a recent paper¹ we have reported the isolation of two anthocyanins from *Bryum cryophilum* O. Mårt., and their identification as luteolinidin-5-monoglucoside and luteolinidin-5-diglucoside. Since there are reasons to believe that the red colouration of some other closely related species of this genus is at least partly due to the presence of anthocyanins in the cell sap, we have investigated the red pigments of the species *Bryum rutilans* Brid. and *Bryum weigelii* Spreng.

Two pigments were isolated from each species and purified by repeated chromatography in different solvents on Whatman No. 3MM filter paper. The isolation and identification of the four anthocyanins were performed by means of the methods described earlier¹ and the same solvents used unless otherwise stated.

The aglycones obtained on acid hydrolysis of the four anthocyanins were identified as luteolinidin, their spectral and chromatographic properties being identical with those of a synthetic sample and when co-chromatographed with this sample only one spot was obtained. The sugars were identified by paper chromatography in ethyl acetate-acetic acid-water (3:1:1 by

vol.)² as glucose. Furthermore, two of the anthocyanins, one from each species, had the same R_F -values in five different solvents as luteolinidin-5-monoglucoside isolated from *Bryum cryophilum*. When co-chromatographed singularly, or together, with this anthocyanin only one spot was obtained. Similarly, the other two anthocyanins were proved to be identical with the luteolinidin-5-diglucoside from *B. cryophilum*.

Evidently the three species contain the same monoglucoside *viz.* luteolinidin-5-monoglucoside. It seems probable that they also contain the same diglucoside *viz.* luteolinidin-5-diglucoside, their chromatographical behavior being identical. However, owing to shortage of material the disaccharide components of the diglucosides from *B. rutilans* and *B. weigelii* have not yet been investigated.

The material of *B. weigelii* was collected in August 1962 by Prof. A. Fredga in the Sälen Mountains in the northwestern parts of the province of Dalecarlia. We express our thanks to him for this contribution. The *B. rutilans* material was collected by one of us (M.) in July 1962 in the high alpine belt on Mt. Nissontjärro in the province of Torne Lappmark, a locality which earlier has served as one of the sources of material of *B. cryophilum*.

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1. Bendz, G., Mårtensson, O. and Terenius, L. *Acta Chem. Scand.* 16 (1962) 1183.
2. Theander, O. *Private communication.*

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