



## *Riccardia pennata*

### **Common Name(s):**

liverwort

### **Current Threat Status (2009):**

Range Restricted

### **Distribution:**

Endemic. South Island, Glasgow Range

### **Features\*:**

Dioicous. Thallus flaccid, creeping, pale green. Growth indeterminate, branching simply pinnate to bipinnate with minimal tripinnate development. Thalli c.15 mm long, 760-1428 microns wide. Apices slightly cleft. Mucilage papillae 80 x 25 microns, ventral, either persisting for only a short distance or not at all. Rhizoids ventral, frequently in scattered patches. Stolons absent and gemmae not observed. Axis plano-convex with an acute, winged margins. Thallus 118-150 microns (5-6 cells) thick; cells thin walled to slightly thickened and those of ventral epidermis and sometimes the subepidermis smaller than the dorsal epidermal and internal cells. Winged margin 1 cell thick and typically 3 cells wide, cells tending to be larger than those of the dorsal epidermis, usually lacking oil-bodies and frequently chlorotic. Thallus wing obvious in younger regions of the axis but not always evident in older areas. External epidermal cell walls smooth. Dorsal epidermal cells oblong to hexagonally elongate, 44-69 x 21-29 microns, and 20-26 microns deep. Ventral epidermal cells elongate in the centre of the axis, 44-74 x 10-13 microns but becoming shorter and wider towards wing (34-53 x 12-22 microns). Dorsal subepidermal cells similar in shape to those of dorsal epidermis, 58-111 x 27-40 microns. Ventral subepidermal cells pentagonal to hexagonal, 27-41 x 15-19 microns. Internal cells 15-27 microns deep. Oil-bodies 10-18 x 7-11 microns, absent in epidermis (sometimes present in the marginal wing) and the ventral subepidermis, and frequently in the internal cells. Endophytic mycorrhizae 3-5 microns wide and numerous in the ventral epidermis. Male branches solitary, arising from the main axis or the base of side pinnae in older regions of the thallus, sessile. Antheridial cavities on the dorsal surface in 4-6 pairs separated by 1-3 cells. Female branches solitary, towards the apex of the main axis or on actively growing side branches, bearing 2-3 pairs of archegonia. Calyptra and sporophyte unknown.

### **Fruiting:**

Fruits not known

### **Threats:**

Not Threatened. Apparently a narrow-range endemic whose only known habitats occur within reserved land protected by the crown.

### **\*Attribution:**

Fact sheet prepared for NZPCN by P.J. de Lange (27 August 2006). Description adapted from Brown & Braggins (1989).

### **References and further reading:**

Brown, E.A.; Braggins, J.E. 1989: A revision on the genus *Riccardia* S.F. Gray in New Zealand with notes on the genus *Aneura* Dum. *Journal of the Hattori Botanical Laboratory* 66: 1-132.

### **For more information, visit:**

[http://nzpcn.org.nz/flora\\_details.asp?ID=5073](http://nzpcn.org.nz/flora_details.asp?ID=5073)