

# Unattached Moss Balls

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H. N. Dixon on page 122 of his "Students' Handbook of British Mosses" says of *Leucobryum glaucum*, "A curious state from Hedsor, Bucks., collected by Miss C. M. Gibbings, since found in other localities, forms spheroidal balls or cushions, entirely unattached, consisting of stems radiating outwards from a central point, and showing no lack of vigorous growth in spite of a freedom from anything like attachment which obviously must have lasted for a considerable period. I have described elsewhere a similar curious state of things in *Porotrichum alopecurum*."

On page 410 of the same work he says this latter moss "occasionally becomes detached from the soil and continues to grow in the form of a subspherical detached mass, easily blown about by the wind." B. G. Gilbert (*Bryologist* 9 (4): 72) describes similar cushions of *Leucobryum glaucum* growing on the floor of hemlock forest in Otsego County, New York, quite unattached, but lying on a matrix of its own diameter ( $3\frac{1}{4}$  inches) and about half an inch deep. W. H. Burrell (*Bryologist* 10 (6): 108) records having made a careful study of several hundreds of small cushions on the slope of a hill under beech trees in the parish of Aylmerton, in Norfolk. These were all *Leucobryum glaucum*, and showed a series of intermediates between normal plano-convex tufts firmly attached to the forest soil, and double convex, unattached discs exhibiting no distinction between base and summit. A number were lying on their convex surface with the plane surface upturned.

From his account it appears clear that cushions growing normally had been disturbed and had subsequently continued to grow, sending out numerous new branches till the double convex form resulted. Mr. Trevor Clifford of the Botany Department of the University of Melbourne informs me that similar moss balls have been obtained in Patagonia though the moss concerned is not mentioned.

During the course of my studies in Stewart Island I have come on moss balls of *Dicranoloma menziesii* varying in size up to three inches in diameter. All are doubly convex and most are subspherical. This species, though frequently a ground moss, is more often an epiphyte. It would seem that the moss becomes detached by opossums or other cause, and, falling on the convex surface, throws out a forest of new leafy branches which serve to form a second convex surface; but, as this is pure conjecture, I write to draw attention to the occurrence and to invite anyone coming on similar cushions to send me samples accompanied by as full notes as possible.

I would also draw attention to the frequency with which other mosses lie detached on the forest floor, in vigorous growth, but with-

out taking on the spherical form. Dixon, on page 249 of "Studies in the Bryology of New Zealand," says, "T. W. N. Beckett found it (*Echinodium hispidum*) in balls or bunches growing detached from the soil in damp places in forests, where it had no doubt been scratched up by the woodhen or weka."

I have seen the same moss in this condition on the damp floor of a bush remnant at Moonshine in the Hutt Valley and again in Carter's Bush, Carterton. At Invercargill, many square yards of the forest floor at the Waihopai Scenic Reserve were covered with a loose mass of *Camptochaete ramulosa*, which in normal circumstances is always an epiphyte. The attenuated form and altered habit suggested it was growing quite well in this unattached state, and on revisiting the area a year later it was still there, green and healthy.

Again on Swampy Hill, I once disturbed a couple of blackbirds scratching up a large patch of *Thuidium laeviusculum*. On examination the plants were almost all detached from the soil. In order to see whether the moss continued to grow thus detached I visited the area some three months later and found the moss quite green, and still unattached though rhizoids had apparently been thrown out from many of the branch tips. Further investigation of this feature is desirable.

## Recent Publications

- Seaweeds and their Uses*, by V. J. Chapman; Methuen and Co. Ltd.  
English price, 25/-.
- Botanical Discovery in New Zealand; The Visiting Botanists*, by W. R. B. Oliver; Post Primary School Bulletin, Vol. 5, No. 2.  
Government Printer, Wellington. 1/6.
- Mountains and Moorlands*, by W. H. Pearsall. Collins. 21/-.
- Botanical Investigations on Campbell Island*, by R. L. Oliver and J. H. Sorensen; Cape Expedition Series, Bulletin No. 7. D.S.I.R.  
Government Printer, Wellington. 4/-.
- Castle Hill*, compiled by E. C. Richards. Simpson and Williams Ltd.,  
Christchurch. 9/6.
- The Trees of New Zealand*, by L. Cockayne and E. Phillips Turner.  
1950 edition. Government Printer, Wellington. 12/-.
- New Zealand Trees*, by J. W. Matthews. A. H. and A. W. Reed,  
Wellington. 12/6.
- New Zealand Ferns*, by H. B. Dobbie; revised by M. Crookes.  
Whitcombe and Tombs, Ltd. 40/-.