

Bryum capillare with deciduous shoots – a means of asexual propagation?

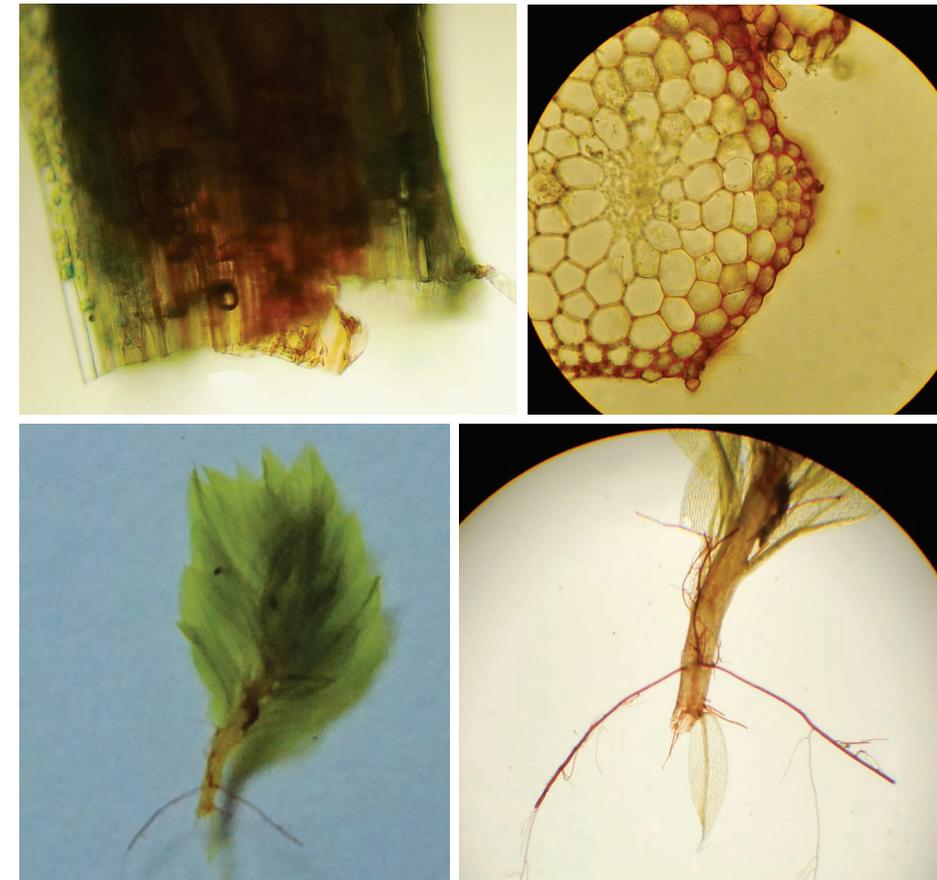
Martin Godfrey demonstrates that with careful observation even one of our most common mosses can reveal unexpected traits

In February 2013 I found some small patches of *Bryum capillare* with what appeared to be deciduous shoots, growing on soil by a track leading from the Shropshire Union canal to Loynton Moss Nature Reserve (SJ78972464) in Staffordshire, VC39. The moss was growing in small mounds approximately 15 cm across which had broken off shoot tips scattered across their surface (Figs. 1 and 2). Microscopic examination of the broken surface of the shoot tips (Figs. 3 and 4) gave no indication of disease

or specialised deciduous tissue although the cell walls exhibited rather darker pigmentation.

I visited the site several times between February 2013 and December 2015 to study the phenomenon further and to see if it was just a one-off event. It became apparent quite quickly that this was a common occurrence; deciduous shoots were produced each year, being scarce in the summer and rather more frequent in the autumn and winter. The process involved some of the shoots growing taller than the rest of the

▽Fig: 1: The cushion of *Bryum capillare*. M. Godfrey. ▽Fig: 2: Close up of the plant showing deciduous shoots. M. Godfrey



△Clockwise from top left: Fig: 3: Fractured stem of shoot. Fig: 4: Stem section. Fig: 5: Rhizoids. Fig: 6: Whole shoot. M. Godfrey

cushion. The stems of these would then fracture a short distance (> 4 mm or so) behind the growing tip with the resultant deciduous shoot remaining on the surface of the colony. Within about a week these shoots developed rhizoids at their bases (Figs. 5 and 6) indicating that they might be a means of asexual propagation.

Although production of these shoots seems to be a natural phenomenon rather than a product of disease, and is not uncommon in bryophytes as a group, I can find no reference in the literature to its occurrence in *B. capillare*. David Holyoak (pers. comm.) has also not found or heard of deciduous shoots as a means of propagation in *B. capillare* but has seen this phenomenon in *B.*

pallens and *B. marratii*.

Given that *B. capillare* is extremely common I cannot imagine that this is a single occurrence, although I suspect perhaps quite rare, so would be interested to hear of any other instances which people may find.

Martin Godfrey

6 Darnford Close, Parkside, Stafford, ST16 1LR

e martinandrosie@aol.com

* Since writing the above I have found two further patches with deciduous shoots in Staffordshire along a lane bank about 75m apart at SJ793306.