In this batch of R&I, the rarest of the rare is undoubtedly *Leptodontium proliferum*, which has reappeared after a lapse of 10 years. Like several other bryophytes, it must have hidden away in very low quantities, waiting for the return of favourable conditions. *Orthodontium gracile* is one species that does this (Porley & Matcham, 2003); *L. proliferum* is presumably another. Even so, the thread of its survival in the Northern Hemisphere must be tenuous. Two other exceptionally rare species were found in new localities. *Grimmia muehlenbeckii*, very poorly known to most British bryologists, was found on a characteristic substrate at a completely new locality in Ayrshire. The elusive *Orthotrichum consimile* was found at a fifth British site. It still seems to behave like an occasional stray from the European continent, but unlike *Ptilidium pulcherrimum* which does not produce capsules in southern Britain, *O. consimile* fruits freely. Perhaps it will soon be established over here.

The north-east of England is particularly well represented. Not only have John O’Reilly and co-workers found several scarce and rare species, but David Shimwell has substantially raised the altitude limit for *Ricciocarpos natans* in Weardale. Altitude limits ought not to occur near the northern limit of range, though it admittedly goes further north in Sweden.

The BBS database is at the present not too hot on records of fruiting, especially of common species that only fruit occasionally. This fact is shown up by Graham Motley’s report of fruiting *Pleurozium schreberi*. In the database, fruiting is reported only in Wales, but in the past *P. schreberi* fruited more frequently in Scotland. The scarcity of such records may be due to the season when capsules mature. Most recording in Scotland happens in the summer, so species that fruit in winter and early spring tend to be missed. No doubt the old setae are there, but most of us do not spend our short time in Scotland digging about in tufts of common pleurocarps. As a result, it is impossible to find out about good fruiting years from the database. Tom Blockeel speculates that 2011 may have been a bumper year for fruiting *Syntrichia larifolia*, but then he partially refutes his own hypothesis by noting old setae from one of his sites. *Rhytidiadelphus squarrosus* (not included in the present report) must surely have had a bumper year back in March 1980, when it fruited copiously all over the lawn of my workplace in Bangor. In the six subsequent years, I never saw a single capsule there.

An unusual report is of protonemal gemmae in the field. Those of us who go into the field with Jeff Dackett will know that in some species such as *Dicranella heteromalla* and *Orthodontium lineare*, protonemal gemmae are really abundant. Des Callaghan’s rediscovery of such gemmae in *Didymodon sinuosus* is therefore remarkable. Its
normal means of propagation has always been mysterious. It is always female and therefore presumably a single clone. (I suspect it of being an intergeneric hybrid because of its atypical axillary hairs.) Are those fragile leaves important? Perhaps not. It could have been fooling us all along by reproducing from its nether parts.

Finally, in the regionally notable records, it is good to see that Sam Bosanquet has refound Sphagnum strictum in Wales after the lapse of 45 years. Small, isolated colonies can be remarkably persistent.

Nationally rare or scarce

60.13. Scapania degeni. 66: in exceptionally species-rich calcareous grassland in flood plain, with several other arctic-alpine species, 395 m alt., Sand Sike, NY84333093, 2009, O’Reilly, conf. Long. Third record for Co. Durham, 1 km down the sike from where Martha Newton found it in 1999. These two records are the first English records since 1972.


77.3. Leptodontium proliferum. 59: on dead grass matter within inside edge of bowling green, 220 m alt., Victoria Park, Haslington, SD7860922827, 2011, Callaghan. Frequent, scattered colonies around edge of green. First record since 2000 following several previous unsuccessful searches at its only known European site.

83.4. Tortula freibergii. 58: on soft, damp sandstone blocks of dock wall near water-level, 0 m alt., Manchester Ship Canal (Runcorn Dock), SJ5017582905, 2011, Callaghan. First record from Manchester Ship Canal.


Altitude records

11.1. Ricciocarpus natans. 66c: pond, 0.5–1.0 m depth, in disused Carboniferous limestone quarry, with Lemna minor and Typha latifolia, 250 m alt., Red Vin Quarry, Wardend, NY98408, 2011, Shimwell; also in a nearby pond, 0.4 m depth, with Lemna minor, L. trisulca and Typha latifolia, 250 m alt., Ashes Quarry, NY993400, 2011, Shimwell. Altitude 100 m higher than at Paton’s flora.

Fruiting or with gemmae

22.20. Grimmia trichophylla. 26a: on siliceous stone capping of parapet on bridge over railway line, 35 m alt., near Thurston, TL055645, 2011, Fisk, conf. Porley. Capsules are rarely produced in lowland Britain, but were abundant here.

61.6. Tortula inflexa. 33b: on stones placed in spring outflow to reduce scour flowing through calcareous fen, 175 m alt., Brasseys Nature Reserve, near Upper Slaughter, SP139223, 2011, Lansdown & Meakin, conf. Blockeel. Four clumps with mature capsules on one stone, abundant on other stones, forming extensive vegetative swards. There are only two other authenticated records with capsules in Britain (Porley, 1999).

79.11. Didymodon sinuosus. 11: on mortar of bridge wall, 20 m alt., St Mawgan, SW372626 660002, 2010, Callaghan. Protonemal gemmae present and confirmed by Matcham. Neither he nor Jeff Buckett had previously seen such gemmae, although Whitehouse (1987) found them in cultivated material. However, Cortens
(1899) had reported gemmae from a Sussex plant in the late 1880s.

**89.8. Syntrichia latifolia.** 38: on Salix, mixed with *S. laevipila*, 30 m alt., Stratford, by River Avon, SP198535, 2011, Blockeel. Capsules fully exerted but not yet mature. 57: In 2011, capsules were found in three Derbyshire locations, and it is not clear whether these result from greater awareness, or from unusual environmental factors during the previous months.

1. On bole of ash tree by working limestone quarry, 190 m alt., Ballidon, SK2054, Blockeel. *S. latifolia* was abundant on trees by the quarry, but fertile plants were noted only on one tree in small quantity. Both emergent setae and the remnants of old capsules were present in mid-January, indicating that fruiting was not a one-off event at this site. (2) Base of ash tree, 25 m alt., by River Trent, near Sawley, SK478 308, 2011, Blockeel. Here in its typical river-side habitat, capsules were found on a single tree base and were fully exerted, but not yet mature in late February. (3) Base of ancient tree base and were fully exserted, but not yet mature. 188.1. Pleurozium schreberi. 35: moorland, 450 m alt., head of Nant Llanellyn, Blaenau, SO270107, 2011, Motley. With ripe capsules on 2 March 2011. The only records of fruiting *P. schreberi* in the BBS database are three post-2000 records by Motley and Bosanquet from Wales, on shaded banks with *Vaccinium myrtillus*. However, Longton & Greene (1969, 1979) found that it fruited frequently in northern Scotland but rarely in southern Britain. This was due mainly to a shortage of male plants, though the possibility that male plants are less often fertile (the ‘shy male hypothesis’) was not completely ruled out as a contributory factor.

**Unusual habitat or substrate**

30.15. *Fissidens taxifolius*. 28: epiphytic on *Castagmus monogynus*, at a height of about 1 m in scrubby woodland by side of a track, 6 m alt., Marham Fen, TF722112, 2011, Stevenson. Exceptional habitat for a genus that is occasionally epiphytic in western ravines but is almost exclusively terrestrial in the east.

**Regionally notable records**


188.1. *Pleurozium schreberi*. 35: moorland, 450 m alt., head of Nant Llanellyn, Blaenau, SO270107, 2011, Motley. With ripe capsules on 2 March 2011. The only records of fruiting *P. schreberi* in the BBS database are three post-2000 records by Motley and Bosanquet from Wales, on shaded banks with *Vaccinium myrtillus*. However, Longton & Greene (1969, 1979) found that it fruited frequently in northern Scotland but rarely in southern Britain. This was due mainly to a shortage of male plants, though the possibility that male plants are less often fertile (the ‘shy male hypothesis’) was not completely ruled out as a contributory factor.

**References**


**Contributors and checkers of records**