

Complementing the article by Sam Bosanquet on p. 3 of this issue, **Tom Blockeel** describes the key field i.d. points for *O. scanicum*, recently reported as new to Britain in *Journal of Bryology*.

Identifying *Orthotrichum scanicum* in the field

Orthotrichum scanicum was found recently for the first time in Britain growing on a sallow (*Salix*) in Derbyshire. A formal description has already appeared in *Journal of Bryology*, accompanied by line drawings (Blockeel, 2012). Spores of *O. scanicum* are probably blown to Britain on winds from continental Europe and it is very likely to occur in further localities (see the article by Sam Bosanquet on p. 3). It can be identified provisionally in the field, at least while the capsules retain their lids and calyptrae.

O. scanicum belongs to the group of *Orthotrichum* species that have ribbed capsules with immersed stomata and a recurved peristome, normally occurring as epiphytes on trees. The more common species of this group in Britain are *O. diaphanum*, *O. stramineum*, *O. tenellum* and *O. pulchellum*. In size *O. scanicum* is similar to these species or a little larger, like the more compact forms of *O. affine*. Its most distinctive features are best observed when the capsules are approaching maturity. The calyptra is very pale, has a few sparse hairs, and is slightly darker at the apex, but not conspicuously so (never showing the distinctive reddish-brown apex of *O. stramineum*). When it reflects light it can appear

whitish and this can be distinctive in the field, as shown at 'A' in Fig. 1).

However, the most useful field character is the shape of the capsule lid. In most species of *Orthotrichum* the lid is flat or slightly convex around its rim, and meets the mouth of the capsule at an angle. In *O. scanicum* the lid takes the shape of a dome and its sides are more or less vertical at the point where it joins on to the capsule ('B' and inset in Fig. 1). The lid also lacks the distinctly reddish or orange rim seen in other epiphytic *Orthotrichum* species.

After the capsules have lost their calyptrae and lids, *O. scanicum* is less easy to recognize. It resembles *O. tenellum* and *O. affine* in having cylindrical capsules that are only slightly contracted below the mouth when dry. As the capsules age, the 8 outer peristome teeth tend to split into separate halves, a character not found in our other common epiphytic species, except sometimes in *O. pulchellum* and *O. affine* (in *O. striatum* the outer peristome consists of 16 independent teeth). The capsules are partly raised clear of the leaves, but less obviously so than in *O. pulchellum*.

The leaf apices are distinctive, but vary even on one stem. They lack the hyaline points of *O. diaphanum*. Typically they are slightly toothed from projecting cell walls, though this is difficult

to see in the field. Often the extreme leaf tip is channelled, and this can be seen with a good lens. This is another point of similarity with *O. tenellum*, which often has a channelled or slightly hooded leaf apex and exceptionally may have indistinct teeth.

Specimens suspected of being *O. scanicum* should be checked microscopically. *O. affine* is immediately separated by its superficial stomata. *O. tenellum* differs in the position of the stomata at the base of the urn (in the middle of the urn in *O. scanicum*). *O. stramineum* has long hairs on the sheath at the base of the seta, and the capsule becomes strongly contracted below the mouth after the fall of the lid. *O. pulchellum* has orange peristome teeth and the capsule is raised above the leaves on a long seta. *O. scanicum* differs from all the British epiphytic species with ribbed

capsules except *O. pulchellum* in having its ribs composed of only 2–3 rows of cells (4 or more cells wide in the other species; occasionally only 3 cells in places).

I urge bryologists to look out for *O. scanicum*. The best time to find it is in late spring and early summer. On the basis of the Derbyshire population, capsules ripen in June, so that May and June may be the best months to spot the species in the field.

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Reference

Blockeel, T.L. (2012). *Orthotrichum scanicum* Grönvall in Derbyshire: an epiphytic moss new to Britain. *Journal of Bryology* 34, 55–59.

▽ Fig. 1. *O. scanicum* at Morton Colliery, Derbyshire, June 2011, with mature capsules, some still with calyptrae (A), some with intact lids (B) and others with the lids fallen. The two capsules and curly-leaved shoots at the bottom of the picture belong to *Ulota crispa* s.l. Inset: Domed shape of the capsule lid. Tom Blockeel

