Orthotrichum consimile: another English record and a postscript

The recent discovery of a tuft of Orthotrichum consimile Mitt., in Derbyshire was reported in Field Bryology 94 (Blockeel, 2008). One of us (CW) has now found it at a second English locality, in the East Riding of Yorkshire. Details of the collection are:

On elder, edge of Avenue Wood, Sledmere Park, SE937638 (v.c. 61), Colin Wall, 1 May 2008 (BBSUK).

The elder on which O. consimile grew was part of a ‘copse’ of around 15 well-grown specimens. Other species noted on these elders, though not necessarily closely associated with O. consimile, included O. pulchellum Brunt., which was quite common, O. affine (C. Br.) Brid., and Uloa bruchii Brid. U. phyllanthia Brid., Cryphaea heteromalla Hedw., D.Mohr and Metzgeria fruticulosa (Dicks.) A.Evans were present elsewhere in the Park.

The capsules of O. consimile were more clearly exerted than those of O. pulchellum and these drew attention to the plant as something that looked a bit different, although it was not recognized as O. consimile in the field. The setae measure about 3.5 mm, a little longer than those of the Derbyshire specimen. The identification of the new collection was confirmed by microscopic examination: the stomata are immersed and are located in the lower to middle part of the urn. Having been collected earlier in the season, the capsules are at a different stage of maturity from the Derbyshire specimen; in fact two generations are present, senescent capsules for the previous year (2007), and immature ones for the new. The peristome and lids of the new season’s capsules are not fully differentiated. In the previous season’s capsules the outer peristome teeth are pale brown, somewhat darker than in the Derbyshire specimen, perhaps because of their age. On the basis of these capsules, two further observations can be made about the differences between O. consimile and O. pulchellum.

1. The ribs of the capsule are wider in O. consimile than in O. pulchellum. Vitt (1973) indicates that that the ribs are 4 cells wide in O. consimile, 2–4 cells in O. pulchellum. However, in British specimens of O. pulchellum the ribs are normally only 2–3 cells wide. In the Yorkshire specimen of O. consimile they are (3-)4(-5) cells wide. This appears to be a good additional character separating the two species.

2. The calyptrae of the Yorkshire specimen more closely resemble those of typical O. pulchellum than those of the Derbyshire plant. They are loose fitting (perhaps because the capsules are not fully expanded), and some of them are coloured brown along the plications (which are weak), giving them a striped appearance. In the Derbyshire specimen they were close fitting, and lacked any brown colouring. The calyptrae of O. pulchellum are campanulate, with a wide base, and therefore sit very loosely on the capsule; they regularly have characteristic brown stripes along the plications. Those of O. consimile, according to the literature, have a more oblong shape, and they extend further down the capsule. However, the loose fit and brown stripes of the Yorkshire specimen obscure these differences. Further observations are needed to confirm the constancy of the character.

This second recent record of O. consimile demonstrates that last year’s Derbyshire record was not a one-off occurrence. It will surely be found at further British sites.

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Following publication of the article in FB94 reporting the discovery of Orthotrichum consimile in Derbyshire, Tom Blockeel and Colin Wall describe the latest developments concerning this species.