



△ *Tomentypnum nitens* at Helton Fell, 14th May 2010. R Corner

# Observations on fruiting populations of *Tomentypnum nitens*

**Rod Corner** reports on two rare encounters with *Tomentypnum* capsules

**F**ruiting populations of this declining relict species are classed as very rare in Britain (Finch, 1994) although occasional in Ireland (Lockhart, Hodgetts & Holyoak, 2012). It therefore seemed appropriate to contribute observations on two widely separated sites in the Eastern Lake District and the Scottish Borders where capsules are produced. On April 20th 1997 capsules were first observed in two flushes some 300 metres apart at 380m alt. on Helton Fell at the eastern fringe of the Lake District east of Ullswater in Westmorland (v.c. 69). It occurred to me that it would be worth checking a site at Whitehaugh Moor north west of Hawick at 260m alt. in Roxburghshire (v.c. 80) where *Tomentypnum nitens* (Hedw.) Loeske is especially abundant and known to me since 1967. So on a visit on May 15th 1997 I was pleased to find shrivelled empty capsules and red setae at one small area of this site.

Since 1997 the Helton Fell plants have

produced healthy capsules regularly in the same populations in each year of observation up to 2012, with a maximum count of c. 165 in 2009, whereas at Whitehaugh Moor often a large percentage of capsules were abortive. For example, in 2010 only 30 out of c. 250 capsules appeared to be fertile and no capsules were seen in 1998 and 2003. I believe the drying of the habitat in this part of the mire is responsible as small willow bushes have colonised the site of an old ditch and *Carex paniculata* tussocks are invading. The lower rainfall here of 890mm (35 inches) per annum compared to the 1520mm (60 inches) per annum at Helton Fell may be another factor affecting sporophyte production.

The biomass of *T. nitens* at Whitehaugh Moor is impressive with dominant “islands” standing proud from the pools and covering several square metres but it is of note that no sporophytes have ever been seen where it plays such a conspicuous part of the mire. Another

species of note here is *Cinclidium stygium* which forms easily the largest cushions I have seen, in a strip 12m x 2.5m unassociated with *T. nitens* and which fruits on occasion. Other fruiting mosses seen here have been *Aulacomnium palustre*, *Calliergon giganteum*, *Calliergonella cuspidata*, *Campylium stellatum* in considerable abundance, *Rhizomnium pseudopunctatum*, *Scorpidium cossonii* and *S. scorpioides*. Other non-fruiting species present are *Bryum pseudotriquetrum*, *Dicranum bonjeanii*, *Moerckia flotoviana* (1967 and last seen in 1997), *Philonotis calcarea*, *P. fontana*, *Plagiomnium elatum*, and *Sphagnum contortum*. In neighbouring mires peat composed of *Paludella squarrosa* has been found to occur not far beneath the surface (Tratt, 1997) but the hope that it might possibly survive as living material in the area has not been realised.

The rather uninteresting low relief acid moorland of Helton Fell looks to have little of interest bryologically. However it possesses a number of basic springs and flushes derived from the underlying Borrowdale Volcanic series, although Carboniferous limestone does outcrop to the north. *Tomentypnum nitens* occurs on domed spring heads and as lawns extending down the slope from them until the basic conditions are neutralised by the run-off from surrounding acid moorland. *Philonotis calcarea* with occasional *Leiocolea collaris* and *L. bantriensis* are present here and *L. rutheana* was probably collected from such a habitat in 1995 but not identified until 3 years later and despite searches, not refound. During such searches Gordon Rothero and David Long have added *Jamesoniella undulifolia*, *Barbilophozia kunzeana*, and *Meesia uliginosa*. *Hamatocaulis vernicosus* has been found to have several good colonies but *Moerckia flotoviana* is rare. Over the last decade I have seen *Bryum weigelii* near its lowest altitudinal limit here become extinct as the more

acidic springs have become invaded by *Juncus acutiflorus* due to the absence of grazing ponies. A good colony of *Cinclidium stygium* has also been lost in this way and is just hanging on in small quantity elsewhere.

Although *T. nitens* is quite widespread in the Helton Fell area being present in 6 contiguous monads with some quite large populations, I have not seen any further fruiting plants nor have I seen them elsewhere in the Borders sites. Boyd (1872) reported it in "fine fruit" in a bog, Hetton Hall, Northumberland, but it is long extinct at this site near Wooler. Over the past 20 years it is good to report that *T. nitens* appears to be holding its own generally at these sites and I see no reason why it should not continue to produce capsules at Helton Fell. However its ability to continue to produce healthy capsules at Whithaugh Moor in the long term remains in doubt.

#### Acknowledgment

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#### References

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