



There has only ever been one record of *Bartleya ohioensis* in Britain – in Dorset – and an uncertain one at that. But is this even a true species, or just a confusing form of a *Dicranella*? **Sam Bosanquet** takes a closer look.



△ Fig. 1. *D. cerviculata* at Carmel, Carmarthenshire (top, habit; bottom, capsules). Kath & Richard Pryce

Attentive readers of *Mosses and Liverworts of Dorset* (Hill & Edwards, 2003), will have seen reference to a British record of *Bartleya ohioensis* Robins. in almost the last paragraph of the book (p. 170). This moss was collected by Humphry Bowen at Dungy Head (SY8179) in 1996, and the name

# *Bartleya* in Britain: a brief look at a confusing plant

*B. ohioensis* was first suggested for it by Jan-Peter Frahm. It grew in dense turfs by a spring on a clayey undercliff, but despite return visits it has never been seen again.

Part of the specimen was lent to me by Mark Hill, and its appearance is certainly striking. Its densely packed shoots are roughly 25 mm long, and are mostly dull brown, with dead-looking brown leaves. Only the apical 2 mm of each shoot has fresh, brighter green leaves. Each leaf has a broad costa and a tapering limb, essentially the same shape as certain *Dicranella* species.

The dense patches of the Dorset moss were brought to mind when I found similar-looking patches at Carmel (SN5815) in Carmarthenshire in December 2011 (Fig. 1). These were very dense, 18–25 mm deep, and had fresh, green leaves in the apical 3 mm. However, they sported abundant sporophytes with a yellow seta and distinct struma, marking them as *Dicranella cerviculata*. A similarly densely cushioned form of *D. cerviculata* was noted at nearby Cross Hands (SN5613) in 2002, growing in an identical habitat of very wet Coal Measures shale on the side of a ditch.



<img alt="arrow icon" data-bbox="725 165 735 175"/> Fig. 2. Leaf, leaf base and a section through the costa of *D. cerviculata* from Carmel, Carmarthenshire. S.D.S. Bosanquet

*B. ohioensis* was described in 1966 by H. Robinson, based on a non-fertile collection from wet ledges and dripping cliffs at Buckeye Furnace, Ohio; further collections were made soon after along the Little Coal River in West Virginia. It was transferred to *Dicranella* by H.A. Crum in 1969 because the only significant difference between the genera was the absence of stereids in *Bartleya* (Crum & Anderson, 1981). Crum & Anderson (1981) later placed *D. ohioensis* into synonymy with *D. cerviculata* 'with some confidence' because of the similarity of their gametophytes, considering it 'an aberrant expression of that species developed on wet ledges'.

The Carmarthenshire plants (Fig. 2) very closely match the illustrations in Crum &

Anderson, with no sign of stereids except in the oldest leaves, where there are only a few per leaf, a broad costa and subulate leaves. The Carmarthenshire plants are therefore considered to represent the '*B. ohioensis*' expression of *D. cerviculata*, and because of their sporophytes provide additional evidence for the synonymization of the two species. It is interesting to consider that the West Virginia and Carmarthenshire collections came from coal-bearing rocks, with perhaps a similar geological make-up.

The Dorset specimen (Fig. 3) lacks stereids and has a broad costa, but its leaves are very much more gradually tapering than those of the Carmarthenshire *D. cerviculata*. It does appear to belong to the genus *Dicranella*, rather than



◁ Fig. 3. Leaf, leaf base and a section through the costa of the '*B. ohioensis*' material from Dungy Head, Dorset. S.D.S. Bosanquet

*Campylopus* as suggested by Hill & Edwards (2003), because of its narrow, rectangular lamina cells and lack of auricles. Identification to species is more problematic, but the leaf shape is very different to that of *D. cerviculata* – referral there does not seem to be correct – and J.-P. Frahm said as much when he commented on the specimen; it is thus not the true *B. ohioensis*. However, *Bartleya* appears to be a growth form of *D. cerviculata* that is caused by very wet conditions and perhaps seasonal growth which causes annual growth rings. The Dorset plant is therefore most likely to be a '*Bartleya*' expression of another *Dicranella* species, perhaps *D. howei* on the basis of its broad, ill-defined costa and gradually tapering leaves, or *D. varia* given that *D. howei* has not been officially recorded yet

in Britain. Other British bryologists may find it useful to be aware of this unusual *Dicranella* growth form when recording.

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#### References

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