

## '*Bartramia stricta*' in Sussex in the 1860s

**Brad Scott** tracks down a letter detailing the precise location of this rare moss

The moss long known to us as *Bartramia stricta* is rare in Britain with only a handful of sites recorded. It still occurs at Stanner Rocks in Radnorshire and in the Channel Islands, and was once found in Scotland in 1965. Its first record in Britain was in Sussex.

The plant was originally collected by the French naturalist Philibert Commerson (1727–1773) from the Straits of Magellan during Bougainville's voyage in the 1760s, though it was not published until 1803, when Commerson's specimen was described by Samuel Elisée Bridel (1761–1828) in his *Muscologia recentiorum*. Recent genetic work has demonstrated that the South American populations of *Bartramia stricta* are distinct from plants so-named in the northern hemisphere, so Damayanti *et al.* (2012)

proposed that the collections from California, the Mediterranean region and Stanner Rocks be named *B. rosamrosiae*. Frank Müller (2014) has suggested that this be synonymised with an earlier name, *B. aprica*, based on a nineteenth century collection from northern Sudan, but even more recent sequencing work indicates that these two species are in fact distinct, and *Bartramia rosamrosiae* is the British species (see Hodgetts *et al.*, 2020).

Interestingly, the locations of '*Bartramia stricta*' known over the last 120 years from elsewhere in the country are all from bryologically rich sites, but what do we know about the earlier Sussex location?

The plant was reported from Sussex in 1861 by George Davies (1834–1892) in a single paragraph

<Fig. 1. George Davies' collection of '*Bartramia stricta*' from Maresfield in March 1861, most likely the first specimen found in Britain (BM). Len Ellis.

in *The Phytologist*, noting that he had found the moss "in March this year, at Maresfield, Sussex" (Davies, 1861; Fig. 1). He added:

"From *B. pomiformis* this Moss may be known by its smaller habit, rigid and appressed leaves, never crisped, and the fruit-stalk is erect; the leaves also have aristate points. (I depend on Mr. Mitten's authority for the correctness of the species.)"

Davies was a Brighton-based botanist who had been taught by the great William Mitten (1819–1906) who lived just the other side of the South Downs in Hurstpierpoint. Davies specialised in bryology, also collecting in Devon and Cornwall, as well as in the south of Europe (Smith, 1892). His herbarium of some 20,000 specimens is now in the Natural History Museum (Anon, 1892).

Ron Porley (2013) notes that Davies collected the *Bartramia* each year through to 1865, at the same site. But where exactly was it? Happily, some correspondence at the Linnean Society of London enables us to pin it down.

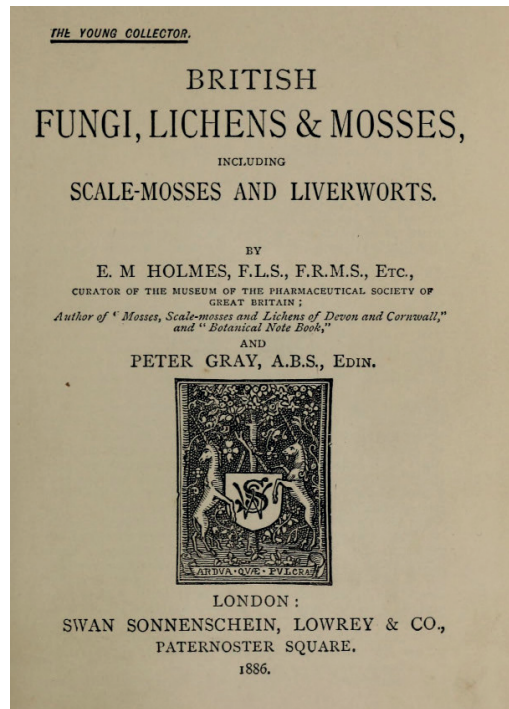
The pharmacist William Mitten spent much of his spare time describing bryophytes from all over the world, mostly sent to him by William Jackson Hooker and his son Joseph Dalton Hooker at Kew (Scott, 2019). Alongside his international correspondence, he also wrote to many botanists in and around Sussex, one of whom was Edward Morell Holmes (1843–1930), also a pharmacist. Holmes taught medical botany, and was curator of the museum of materia medica at the Pharmaceutical Society. He wrote extensively on botanical topics, especially algae, lichens and bryophytes, was the author of a popular introduction to cryptogamic botany (Holmes & Gray, 1886; Fig. 2), and lived in Sevenoaks in

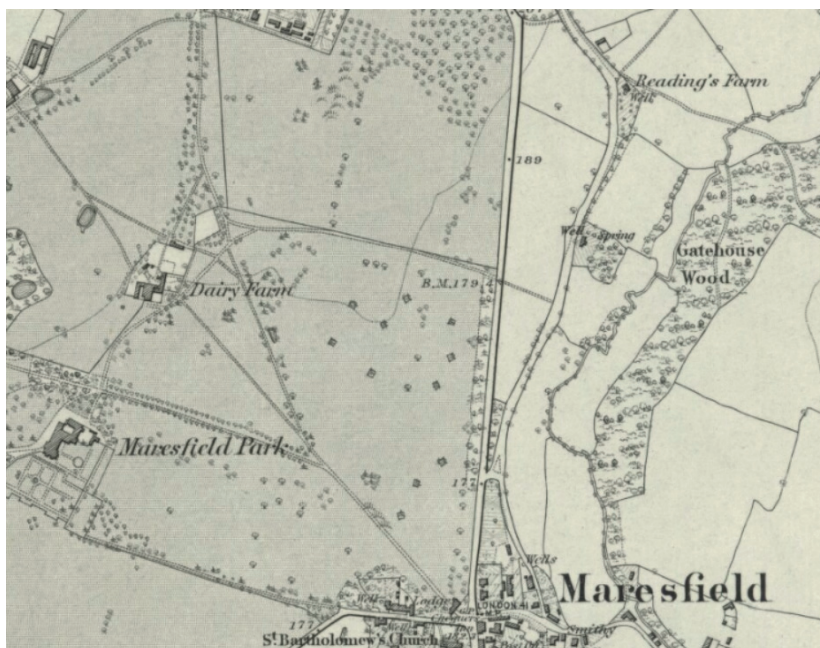
Kent (Lawley, 2008).

On 6 January 1899, the 79 year old William Mitten wrote to Holmes remembering the occasion of observing the plant nearly forty years earlier, and his subsequent attempts to revisit the site with his daughter Flora and Christopher Parker Smith (1835–1892), another Brighton bryologist:

"I went with Davies to see the spot where he had found a small colony of *Bartramia stricta* at Maresfield — I saw it again some time after when I walked down from Forest Row to Maresfield and passed the spot with Smith when he I and Flora walked from Buxted to Hartfield[.] this time we could not exactly hit the spot from the growth of herbage &c

▽Fig. 2. E.M. Holmes' introduction to cryptogamic botany. Biodiversity Heritage Library.





△ Fig. 3. The area north of Maresfield. Ordnance Survey Six Inch map, Sussex XXVII, surveyed 1874.

“Going North from Maresfield on the way to Nutley after leaving the houses the wide road is bordered on the right and left by boundary hedges quite straight ending I think in open forest[.] it was about half way along this road between the hedges in a ditch on the right hand side — ditch may have been two feet deep had been fresh cut a year or two so not then overgrown[.] with the *Bartramia* was *Tortula cuneifolia* also very scarce inland[.] this hedge bank looked towards the road therefore faced west, I think. the place is high ground and I conclude there must be more of the *Bartramia* somewhere about for there was

only about a square yard where it appeared.”  
(Linnean Society, MS/235b)

This gives us excellent detail about the location of this rare plant (and of the *Tortula cuneifolia*), allowing us to identify precisely where Davies found it (Fig. 3). From the church, heading north up the road called Straight Half Mile, the road is still much as Mitten described it, though is more developed along its length. The margin is now very overgrown, and the road is very likely to have been widened a bit, but the remnants of a ditch can still be seen about half way along beneath the undergrowth (Fig. 4). Realistically, the *Bartramia* must have disappeared a very



Fig. 4. The ditch area, looking south. Brad Scott.

▽Table 1. Currently-known specimens collected at Maresfield. The herbaria are Royal Botanic Garden, Edinburgh (E) and Natural History Museum, London (BM).

Date	Collector	Herbarium	Notes
1861	G. Davies	E	E0124393. Confirmed by David Long
March 1861	G. Davies	George Davies, BM	BM000676068
March 1861	G. Davies	Wilson, BM	
April 1861	G. Davies	BM	
December 1861	G. Davies	Wilson, BM	
March 1862	W. Mitten	Hooker, BM	BM000676176
1865	G. Davies	Wilson, BM	
1865	G. Davies	Hunt, BM	

long time ago, but at least we can map it more precisely to roughly TQ466244.

The underlying geology along the road is Lower Tunbridge Wells Sand, and nowadays the bryoflora is not especially remarkable. By contrast, a few hundred metres further north the geology shifts to Wadhurst Clay and then to Ardingly Sandstone in Rock Wood and Furnace Wood where Tom Ottley has recorded more noteworthy species, such as *Barbilophozia attenuata*, *Cephalozia lunulifolia*, *Heterocladium heteropterum*, and *Sematophyllum substrumulosum*.

Though *Bartramia rosamrosiae* may no longer occur in Sussex, it is valuable to know more precisely where it occurred, and that it was most likely a casual. There are several known specimens from Maresfield, most collected by Davies (Table 1). Presumably Mitten returned all the original collection to Davies after having identified it since there is no Maresfield plant in the Mitten herbarium in New York. Curiously, BM also has a Sussex specimen collected by Davies “near Brighton” in July 1863. Though this is probably just an imprecisely located collection, it is anomalous that it is not described as from Maresfield, which is not near Brighton at all. There is perhaps a small possibility that this could be a hitherto unknown location; if that is so maybe some other correspondence will enable us to determine its site too.

#### Acknowledgements

Thanks to Chris Preston and Tom Blockeel for comments on an earlier draft, to Dietmar Quandt for clarifying the nomenclatural change for the British plants, and to Sally Rae and David Long (E), Len Ellis (BM), and Laura Briscoe (NY) for looking for Maresfield specimens in their collections.

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