Recording

Bryophyte recording in Hampshire – past, present and future

An article by John Norton

As many of you will already know I have become more interested in bryophytes in recent years and took over from Rod Stern as VC11 (South Hants) recorder for the British Bryological Society (BBS) in April 2013. Fred Rumsey is the VC12 (North Hants) recorder, and together with June Chatfield we organise meetings of the Southern Group of the BBS each winter (details are given below).

Although Hampshire is a relatively warm, dry and flat county it has a relatively rich 'bryoflora'. The county supports about 502 recognisable taxa, made up of 125 liverworts, 3 hornworts and 374 mosses. Excluding varieties and subspecies, the total of about 482 distinct species amounts to 45% of the British flora of 1069 species, as covered by the 2014 *Atlas of British & Irish Bryophytes*. The species richness of the flora is helped especially by the extensive areas of wet heath and bog in the New Forest where several species have been recorded that are more at home in the wetter west and north of Britain, here occurring well outside their main ranges. The New Forest also has the largest population of the British Red Data moss *Zygodon forsteri* which is epiphytic on old Beech trees. Away from the Forest the most important habitat is the Chalk, on which there are several quite different communities, including one on warm, exposed substrates with species such as *Weissia condensa* and *Abietinella abietina* and another on cooler, higher altitude grassland, notable here for the calcicole liverwort *Scapania aspera*. A small but apparently thriving population of the Red Data liverwort *Cephaloziella baumgartneri*, a limestone-loving species, was discovered at Netley Abbey by Phil Budd and myself in March 2013. Other species in Hampshire with significant populations in a Britain and Ireland context include the liverworts *Targionia hypophylla* and *Pallavicinia lyellii*, and the heathland mosses *Dicranum spurium* and *Hypnum imponens*.

Rod Stern, who is no longer active due to ill heath, thinly spread his recording activities across several counties, but did undertake a systematic survey of VC11 between 2000 and 2008, often accompanied on his outings by Francis Rose and Howard Matcham. Prior to Rod's survey most of our bryological knowledge of South Hants was based on the records of liverwort specialist Jean Paton, dating mainly from 1957-1960, when she was working at Southampton University. Other contributions have come from people such as Neil Sanderson who has lived and worked in the New Forest for many years, but there are relatively few historical records for the vice-county prior to the 1950s. Paton also probably did most of her recording in the New Forest, but also visited other parts of VC11 and published a flora of the vice-county in 1961. Rod Stern compiled all of Paton's records and the results of his more recent survey into the '*Atlas of the bryophytes of South Hampshire*', published in 2010, which mapped records on a 5 x 5km basis. His book also usefully includes a copy of Paton's paper. In VC12 most past recording work was carried out by the late Alan Crundwell in the 1980s and more recently by the current recorder.

Therefore, although some progress has been made in the last few decades to document the county's bryophytes, the net recording effort in recent years has effectively been negligible, compared to that for higher plants. Furthermore, bryophytes are not easy to record in the first place, due to their small size, propensity for inhabiting inhospitable or inaccessible places and the fact that they are sometimes only present in small quantity. Recording is also made more difficult because many species dry up or die back in the dry, summer season and there are also a great many species that are true ephemerals, identifiable only for a short period when fruit are present, typically in autumn or winter. Refinding bryophytes can also be difficult, unless the original finder has provided detailed notes on their location (even 10-figure grid references can sometimes be useless).

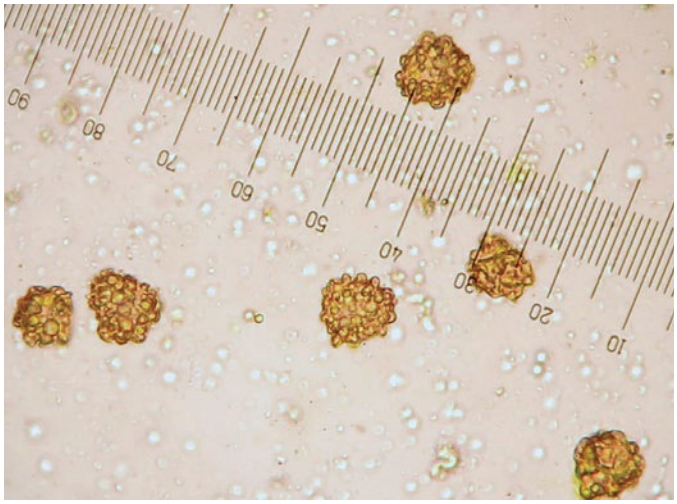
I have come to realise that there is a great deal of skill involved in bryophyte recording, much more so that looking for vascular plants. I am now beginning to learn the search image for species in both wet and dry state and also getting to know the microhabitat preferences of each species and appreciate the large range of different microhabitats that should be searched when out recording bryophytes.

To publicise recording of bryophytes in Hampshire I have set up some pages on my web site: **http://www.jnecology.com/bryophytes/index.htm**. These include a calendar of Southern Group meetings, but at the time of writing we have yet to sort out anything for 2016/17. The first meeting of the season is usually a combined one with the Wessex Group in the New Forest, likely to be the last weekend of October. I have also uploaded 10km dot maps of all the main taxa in the county to illustrate where there are significant gaps in recording. It would take another long article to explain fully, but there are big problems with the Hampshire bryophyte data because much of it has been input only at 5km or 10km resolution for a notional date (usually 1980 in South Hants). This means that it is impossible to create maps showing the distribution based on more recent records (most of the records mapped in the recently published BBS atlas fell into an older date class as a result).

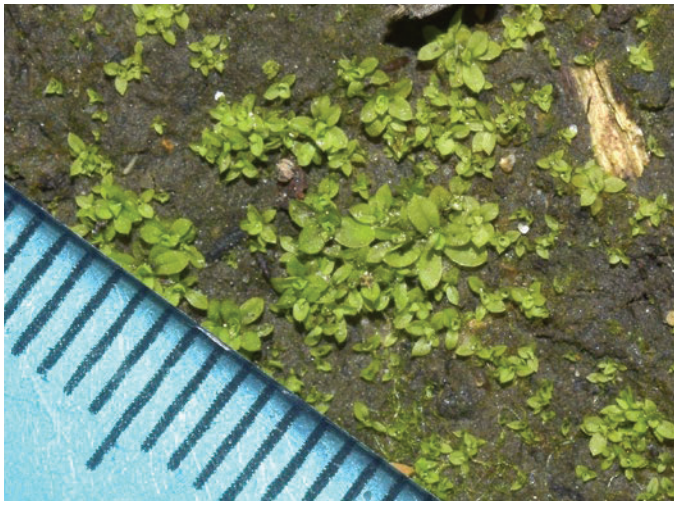
For the future I will being doing what I can personally or with the Southern Group to record under-explored or not-recently-visited parts of the county with potential bryophyte interest. I have spent some time looking at chalk grassland sites, such as Portsdown Hill (which has proved to be exceptionally rich in county terms) and will continue to look at some other sites this coming winter. However, I am still rather poor on Sphagna and 'brown mosses' so also intend to spend more time in the New Forest this winter. There are several species recorded

there in the past, including some from Paton's time, which have not been seen since. Fred Rumsey has put together a red data list of Hampshire bryophytes which we are in the process of updating as a list of Notable species, to be exchanged in due course with HBIC.

In addition to *Cephaloziella baumgartneri*, other new VC11 records since Rod Stern's atlas have been *Microbryum starckeanum* (30 October 2014), *Didymodon acutus* and *Encalypta vulgaris* (both 13 December 2014), all from the slopes of Portsdown Hill below Fort Widley. These are strongly calcicole mosses and not unexpected finds here. *Encalypta vulgaris* was recorded in an earlier census catalogue but was later deleted due to the lack of any specimen. I have also found a *Hennediella* species (either *H. macrophylla* or *H. stanfordensis*) at Pook Lane, Emsworth, which would be new to the county, but so far the poorly developed material has not allowed confident identification or acceptance by the national referee. Both are introduced species and *H. macrophylla* is rapidly increasing in eastern England and has been recorded in parks in Chichester, so this is the most likely of the two.



The distinctive 'sack of potatoes' spores of *Microbryum starckeanum* (divisions = 2.5 microns) *(John Norton)*



***Hennediella* sp. (with mm ruler)** *(John Norton)*

Please contact me at **web@jnecology.com** if you would like to come along to a bryophyte meeting this winter, or would like to be put on the e-mail mailing list.

Hampshire Lichen Report 2015-16

By Neil Sanderson

INTRODUCTION

For the past few years my lichen surveying in Hampshire has concentrated on a systematic survey of the New Forest heathlands. This was concluded in 2015 and the report is in the last stages of review and will be released soon. After so long on the heaths I have made a point of getting back into searching the New Forest woodlands. This has produced an interesting crop of new records, showing that these amazing woods continue to surprise. The most interesting recent records and some other noteworthy records are discussed below. A list of abbreviations (which follow the species names) are given at the end of the report.

MOST INTERESTING RECORDS

Calicium diploellum CR (NR/IR/BAP): Great Stubby Hat, Busketts Wood, SU 307 109, 24/3/2016; Matley Wood, Busketts Wood, SU334 076 & 332 076, 30/3/2016 & 1/4/2016, N.A. Sanderson. A tiny pin head lichen found on lignum exposed within lenticels on old Hollies. Remarkable new records for England of a species otherwise recorded from old Hollies in hyper-oceanic climates, with one site in western Scotland and a few in western Ireland. Searches of several other woods with old Hollies in the New Forest have not yet found further sites, so the species is not general in the Forest. The habitat of *Calicium diploellum* is the same as in Ireland; the species is invariably found in lenticels, or damaged bark, where the non-lichenised fungus *Mycoporum lacteum* NT (NS) dominates. The reason seems to be quite simple; *Mycoporum lacteum* appears to be a bark chloroplast parasite; a fungus that lives like a lichen, but rather than developing a mutualistic relationship with an alga, it simply parasitises the chloroplasts in the bark of the Holly. For this reason *Mycoporum lacteum* avoids overgrowing the chloroplast free exposed lignum in the lenticels. This leaves the lignum habitat free for *Calicium diploellum*.

***Calicium diploellum* habitat, on an old Holly in Great Stubby Hat** *(Neil Sanderson)*