

all tetrads wholly in VC12, except one, are now up to over 60% refound or new from 2000 onwards.

The exception, SU73R, is interesting. It is at Blackmoor where shoddy (soiled wool waste) used to be spread on the apple fields as a fertiliser. It had been imported from Australia, New Zealand and even South America so it contained many alien seeds. As a result of this, there are old records of a huge number of alien plants, the vast majority of which will never be re-found at Blackmoor. In fact, some of those records were not entered, as they do not appear on the MapMate taxa list. Steve Povey and I worked hard at trying to improve the refind rate in SU73R and the best we could raise it to was 49.8%, with a total of 784 taxa ever recorded.

The total of 784 taxa ever recorded is a splendid score, but the VC12 tetrad with the highest number of taxa ever recorded is SU85G, having a score of 830, with 628 of them found since 1999. This is just east of Church Crookham, but a large proportion of the records were by Chris Hall rather than me. There are eight VC12 tetrads that exceed 500 taxa found from 2000 onwards. Par for the course in more arable areas is only around 200–300 taxa since 1999 and about 300–400 ever recorded. Martin Rand mentions that it is interesting to note that in VC11 the champion tetrad (SZ19R) had 903 taxa, with 764 recorded since 2000; 70 tetrads achieved 500 or more taxa since 2000.

At 10km square level many VC12 hectads exceed 1,000 taxa ever recorded. The most diverse area is SU73 around Selborne at 1,752 taxa, no doubt helped by all the shoddy aliens once found in SU73R. For VC11 this is exceeded by 1,821 taxa found in SZ19 in the Christchurch area. Those counts are the highest at the time of writing but there could be more records still to come in.

In order to show plant distribution at national scale BSBI will only need the data aggregated to 10km scale, but all Hampshire records have been collected at least with 4-figure (1km grid) references, and records for the more uncommon species have been given 6 or 8-figure grid references. This means that there is now a wealth of records to analyse locally. The plan is to write a web-based Supplement to the 1996 *Flora of Hampshire*. Martin has already set this in motion and no doubt it will occupy much of my time in future. Others will be able to contribute text for it. Unlike the previous flora we will include records for far more aliens, and being web-based it will allow many more photographs to be included. All the extra records we now have will also allow updates to the Hampshire Rare Plant Register and Martin is streamlining ways to do this.

I think that BSBI have decided to publish a book discussing the changes in plant distributions since 2000, but the indications are that the mass of distribution maps will not be available in book form like they were for Atlas 2000 (much to my disappointment).

Finally, I want to give a great big 'thank-you' to the very large number of people who have helped by collecting plant records.

## Bryophyte Recording in Hampshire and the Isle of Wight – January 2020 update

A report by John Norton

### Hampshire Notable Bryophytes Register and website update

Since my last report in *Flora News* 55 (Autumn 2018) I have been working on a Hampshire Notable Bryophytes Register that Fred Rumsey originally produced as a rare bryophyte register and checklist in 2014. I completed version 1 of this in October 2018 and have recently been revising it again with the intention of publishing on my website later this spring. In addition to listing all bryophytes in the county which have national or international rarity or threat status, it includes a provisional assessment of county rarity status and assigns those species of conservation importance to one of three county Notable categories (denoting 'high conservation priority' species, 'medium conservation priority' species and 'other ecologically important species'). A simple scoring system has been devised so that sites with similar habitats can be evaluated and compared in terms of their conservation value for bryophytes.

I have also revamped and updated the bryology web pages on my website – now entitled 'Hampshire and Isle of Wight Bryophytes' <http://www.jnecology.uk/bryophytes/index.htm>. Species distribution maps of the Isle of Wight have been added at 5km square resolution but I have not yet been able to update the 10km Hampshire maps, which mostly only reflect data up to 2013.

### Recording activities

At the end of 2018 George Greiff and Colin Pope discovered an extensive colony of the nationally rare ephemeral moss *Acaulon triquetrum* at Culver Cliff on the Isle of Wight; in recent years known only from St Catherine's Point. I visited the site with George on 3 January 2019. The plants occur on bare, slightly calcareous soil on the cliff top, mainly around the entrances of rabbit burrows. Due to the dangerous



The nationally rare tiny ephemeral moss *Acaulon triquetrum* at Culver Cliff on the Isle of Wight, 3 January 2019 (John Norton)

situation and lack of time we couldn't do an extensive survey, but with the aid of photographs a single large colony on the side of one burrow entrance was estimated at around 8-10,000 plants (more than 200 plants per square centimetre in the densest patches). The rabbit warren here is quite large and so potentially the true size of the population at this time could have been 10 times this number. Even 8,000 plants is much higher than any previous estimate for a population in the UK. The site also supports other noteworthy bryophytes, including the declining nationally scarce moss *Pterygoneurum ovatum* and the local coastal species *Tortula viridifolia*. As *Flora News* was going to press George informed me that he had found another large colony at Freshwater.

I also joined George for a 4-day visit to the Island in the middle of March 2019. He showed me an amazing bryophyte site that he had been investigating – the coastal cliffs north of Shanklin where *Philonotis marchica* had been historically recorded (in addition to its other well known British site nearby at Shanklin Chine). The foot of the cliffs is made up of a soft, sandy material which supports extensive seepages, much of which are covered with communities of thalloid liverworts, hornworts and mosses. However, most of the slumped material at the bottom supports impenetrable willow scrub and bramble on a steep slope, with pockets of marshy ground, making access to the base of the cliffs almost impossible. We did, however, manage to get through in a few spots where we found plenty of *Philonotis*, but when checked microscopically it seemed to be a different species, also typical of this habitat, *P. rigida*. However, this could not be fully confirmed due to a lack of mature shoots and sporophytes (it was reproducing by deciduous branchlets).

*Philonotis rigida* has not previously been accepted for the Isle of Wight, though at one stage it was thought that the *P. marchica* was this taxon. Further visits need to be arranged to look for better material and to confirm that *P. marchica* or both taxa do indeed occur here. Whilst there we managed to collect male and female plants of the thalloid liverwort *Pellia neesiana*, which George had previously recorded; a new vice-county record. The seepages also support large colonies of the uncommon liverwort *Blasia pusilla* and the hornwort *Phaeoceros laevis*. Also during the trip George showed me a new population he had found of the nationally scarce liverwort *Cololejeunea rosettiana* at Bonchurch Landslip.

In February and March 2019 I continued my investigations into the distribution and abundance of ephemeral bryophytes in the New Forest, especially *Sphaerocarpos* and *Riccia* species on campsites (see previous report). *Riccia crystallina* was found at a third site (Holmsley campsite) and *Sphaerocarpos texanus* at a second site (Matley Wood campsite). Graeme Smith alerted me to the existence of an interesting campsite on Stoney Cross Plain (Ocknell Campsite) where probably both *Sphaerocarpos* species occur. Here I found a tiny *Bryum* with bulbils in the leaf axils, which turned out to be *B. gemmilucens*, a nationally rare and Near Threatened species, mainly with an eastern distribution, which



**Specimen of *Bryum gemmilucens* (centre) with *Sphaerocarpos michelii*, from Ocknell Campsite, New Forest, March 2019 – immature green bulbils are visible at the base of the plants (John Norton)**

was new for Hampshire. The old airfield here has a rich bryophyte community of calcareous grassland, and beside it there are some nice colonies of *Climacium dendroides* in wet depressions.

During the Flora Group visit to Hogmoor Inclosure in May 2019 recent wet weather had led to a flush of small annual mosses, one of which collected from disturbed ground by the lake turned out to be *Pohlia bulbifera*, new for Hampshire. This is a strongly western and northern species, with only a single record for eastern England, from north Norfolk. The latest atlas shows that the other nearest sites to Hampshire would be Dartmoor and Exmoor in Devon. A return visit by the BBS Southern Group in November 2019 refound it along with *Sanionia uncinata* in the adjacent willow carr, new for VC12. This is also a locally frequent species of northern and western Britain, but is very scattered in the south. In VC11 it was recorded in five 10km squares in the New Forest by Jean Paton in the 1950s but not since (but is very easy to overlook). We also managed to refind the S41, nationally Vulnerable and nationally scarce moss *Dicranum spurium* in a small patch of heather-dominated wet heath at the southern end of the site.

On 15 August 2019 I joined George Greiff again for a day trip to Tennyson Down on the western extremity of Isle of Wight where we had planned to carry out a survey of some potential habitat for the *Scapanietum asperae* bryophyte community. This followed our previous visit here in March 2017 where we had found some associates of the community. There appear to be two suitable areas, each around 0.3 ha in size, on the north-facing slope, one of which we looked at in detail. Due to recent drought and hot weather it was not an ideal time to look at mosses and liverworts but we did manage to find all the typical associates of the community apart from *Scapania aspera* itself, though we had previously found this flourishing in a nearby quarry. A few tiny shoots of the liverwort *Porella arboris-vitae* were found, the first record on the Island since 1964. Francis Rose coined the term 'Southern hepatic mat' for this interesting liverwort-rich

community of generally high altitude, north facing chalk slopes in southern England, but even though he explored the Isle of Wight on several occasions, including visits to Tennyson Down, he did not mention finding it. The Tennyson Down example is likely to be a drier, much more tightly grazed and therefore less typical version of the type that is well known on Butser Hill, but is still of high ecological significance. Prior to our visit, Sharon Pilkington published a summary of a study she had been carrying out on the community in Wales, where she had located further examples from as far north as Great Orme (*Field Bryology* 121, June 2019).

In autumn 2019 I turned my attention to organising meetings of the BBS Southern Group. Meetings were held monthly in October (Crockford Bridge, New Forest), November (Hogmoor Inclosure, Bordon) and December 2019 (Harting Down, West Sussex); the first of these jointly with the Wessex group and the last with the South-east Group. Reports with species lists can be downloaded from the website. Highlights included finding a few small populations of the nationally scarce wetland moss *Campyliadelphus elodes* at Crockford Bridge, the various finds at Hogmoor Inclosure mentioned above and seeing large populations of *Rhodobryum roseum* at Harting Down.

In November I visited a cemetery in Fareham with Debbie Allan to look for waxcaps and made the chance discovery of what eventually turned out to be *Acaulon mediterraneum*. This is another nationally rare ephemeral moss, but was formerly regarded as a variety of *A. muticum* and is likely to be under-recorded in the UK. The two can only reliably be separated by characteristics of their spores, but when I found it I forgot to check the spores and assumed it to be *A. muticum*, a more widespread species which I see regularly in Gosport. In December I made further collections of the Fareham colony and from my Gosport sites and sent a couple of specimens to the moss recorder, who agreed that these were 'probably' *A. mediterraneum*. Usually this species has spores with long spinules, rather than the granulose or papillose appearance of the spores of *A. muticum*. However, most of the spores from the Fareham and Gosport populations seemed to have what could be described as 'long papillae' or 'short spinules', so were apparently intermediate between the two taxa. Many of the capsules in the specimens collected were immature, so I made another visit to the cemetery in early January to collect a suitable voucher specimen, which was accepted as a new VC record. The question remains as to whether *A. muticum* actually occurs in the Gosport area, or whether all the colonies are *A. mediterraneum*.

**Stop press:** In early January 2020 a brief local walk resulted in finding large patches of the rare and declining moss *Tortula wilsonii* next to Little Anglesey lagoon in Gosport, the second record for VC11 since a record from Tanners Lane, Lymington in 1973. The Gosport colony was on bare soil on a sheltered south-facing bank, under an elm hedge. Growing with it was *Phascum cuspidatum* var. *papillosum*, also rare. These both have Mediterranean tendencies and would be more at home



**Brown shoots of the liverwort *Porella arboris-vitae* (arrowed) growing over a mat of *Ditrichum gracile* – two characteristic species of the *Scapanietum asperae*, Tennyson Down, 15 August 2019 (John Norton)**



***Acaulon mediterraneum*, Wickham Road Cemetery, Fareham, 17 November 2019 (Debbie Allan)**

on a Cornish hedge on the Lizard. Further details to follow in a future article.

### List of new VC and county records

I had mentioned in my first bryophytes article (*Flora News* 51, Autumn 2016) that *Didymodon acutus* was recorded from Portsdown Hill in December 2014, a new vice-county record for VC11. Molecular studies have now shown that most material from British localities belongs to a similar-looking taxon *D. icmadophilus*, and there are additional confusion taxa elsewhere in Europe. However, the Portsdown record was determined as true *D. acutus* by *Didymodon* specialist Jan Kučera for a workshop that was held here in 2018, one of only two confirmed British records (the other being a 1991 specimen from North Somerset, VC6).

*Ulota intermedia* has now been recorded a few times from the Isle of Wight by George Greiff and once from South Hampshire. Further to my note in the last listing that the distribution of this species appears to be mainly northern and western, it is becoming apparent that it is also widespread in southern England and may have coastal tendencies.

Details of new records are given below. These cover the period August 2018 to December 2019. Previous records were listed in *Flora News* 55 (Autumn 2018).

### Liverworts

*Pellia neesiana*, **VC10**: Shanklin Cliffs, SZ 5884 8231, 13 March 2019. G.R.L. Greiff & J.A. Norton, conf. N.G. Hodgetts. At least a few large patches of male thalli on slumped Lower Greensand material at base of cliff under willow scrub; small patches of female plants on nearby cliff face (with ripe spores). Growing with *Riccardia* sp. and various other thalloid liverworts and hornworts including more abundant *P. epiphylla*, *Phaeoceros laevis* and *Blasia pusilla*.

*Riccia cavernosa*, **VC12**: Oakhanger Pond, SU 7719 3460, 7 September 2019. I. Girvan & S. Povey, conf. F. Rumsey. A large population on drying mud of the pond. New for VC12 (see photo, p.34).

### Mosses

*Acaulon mediterraneum*, **VC11**: Wickham Road Cemetery, Fareham, SU 5802 0740, 17 November 2019. J.A. Norton, conf. T. Blockeel. Two colonies noted in one strip of fairly recently dug over sandy clay soil between memorials, the largest covering at least 10 sq cm (>2400 plants). Voucher material collected 5 January 2020. New to Hampshire.

*Bryum gemmilucens*, **VC11**: Ocknell Campsite, New Forest, 24 February & 4 March 2019. J.A. Norton, conf. D.T. Holyoak. Locally frequent in thin patches of unconsolidated silty and gravelly soil covering margins of old concrete and tarmac taxiways (former WW2 airfield); also on bare gravelly areas at edge of grassland. Noted in at least three locations including SU 2489 1203 and SU 251 118. Present alone or with other small acrocarps and occasional *Sphaerocarpos michelii*. New to Hampshire.

*Hedwigia stellata*, **VC12**: Brandy Mount, Alresford, SU 5895 3265, 18 February 2017. J. Sleath, conf. T. Blockeel. New for Hampshire.

*Pohlia bulbifera*, **VC12**: Hogmoor Inclosure, Bordon, 18 May 2019. J.A. Norton, conf. T. Blockeel. In recently disturbed soil on margin of pond, with *Juncus* spp., *Veronica scutellata*, etc. New to Hampshire.

*Sanionia uncinata*, **VC12**: Hogmoor Inclosure, Bordon, SU 7905 3466, 24 November 2019. J.A. Norton and BBS Southern Group. Small patch on base of young fallen willow in old drying carr at edge of pond; fruiting well. New to VC12.

*Ulota crispa* s.str., **VC12**: Little Hampage Wood, Winchester, SU 540 297, 13 October 2019. J. Sleath, conf. T. Blockeel. On branch of *Acer campestre*. This split now confirmed for VC12.

*Ulota intermedia*, **VC10**: Lynch Copse north, Newchurch SZ 563 856, 10 August 2019. G.R.L. Greiff. On *Salix*. **VC11**: Rockford Common, New Forest, 18 November 2018. J.A. Norton and BBS Southern/Wessex groups. New to Hampshire.

## VC11 Notes and Records

Compiled by Martin Rand November 2019

Again, non-natives tend to outnumber natives and archaeophytes in this list, which is not surprising given that several decades of intensive recording have just culminated in the huge effort for Atlas 2020. In the last decade over 1,100,000 records have been made and added to our database for the two vice-counties, which (even allowing for some duplication) is impressive. Nevertheless, it's still possible to make interesting and sometimes surprising finds, and I'll single out a few.

Given its spread in other parts of the country, it's puzzling that *Atriplex littoralis* (Grass-leaved Orache) has not made more inroads along salted roads in Hampshire, even allowing for the difficulty of identifying oraches at speed along the central reservations of our crowded main roads. Perhaps Mike Rowe's record will be the forerunner of many.

It was nice to see a new location for *Calamagrostis canescens* (Purple Small-reed), rare in the county, from the HBIC survey team – although given the site, its existence there must be fairly precarious. This is a plant that has several recorded sites on the Forest in the decades before 2000, and although it seems to have gone from at least one of them it would still be worth chasing up the others.

*Centaurea debeauxii* (Chalk Knapweed) is a plant that more people are now recording separately from *C. nigra*, although there are still surely gaps in its distribution. It's by no means confined to the chalk, as the meticulous recording by Mike Rowe in the south-west of the county (complete with phyllary measurements) shows, and it is probably the commonest segregate species in the county overall. But if you do look for it even on the chalk, you will undoubtedly find intermediates; and the perils of over-generalising were brought home to me on the coastal downs between Eastbourne and Cuckmere Haven this year. Having just had a lecture from me to the effect that the *C. debeauxii* I was holding was likely to be the only species in the area for miles, one of the party rose to the challenge and within 30 seconds found a perfect example of *C. nigra* sensu stricto, along with an intermediate and, shortly after, a plant that seemed to have some residual *C. jacea* in it!



Common Knapweed *Centaurea nigra*, Biddenfield, Shedfield (left) and Chalk Knapweed *C. debeauxii* (St Catherine's Hill, Winchester (right) (Martin Rand)