# NATURAL HISTORY REPORTS

## VASCULAR PLANT REPORT 2011

An appreciation of the local, regional and national distributions of plant species – and how these distribution patterns are changing – is vitally important to those researching or conserving our flora, the composition of which is constantly changing at every scale. Many alien species common today, for example *Matricaria discoidea* (Pineapple-weed) and *Senecio squalidus* (Oxford Ragwort), were rarities a century ago; some native species, such as *Cochlearia danica* (Danish Scurvy-grass) and *Geranium rotundifolium* (Round-leaved Crane's-bill), have also been extending their distributions in recent decades. The expansion of the range of *C. danica*, formerly restricted to the coast, has been particularly dramatic, chiefly due to our use of salt for de-icing roads in winter. In Somerset, its distribution map is now almost a map of major roads in the county! For many other native species, of course, the trend has been in the opposite direction. Plants once considered commonplace are becoming increasingly hard to find and, unsurprisingly, habitat loss is often the main reason for such disappearances. The decline of many grassland species is familiar to all, with the agricultural 'improvement' of once flowery meads. *Anacamptis morio* (Green-winged Orchid), for example, was regarded by Murray (1896) as 'Common, and generally distributed throughout the county' and by Swete (1854) as 'Frequent in meadows' within five miles of the centre of Bristol. This species thrives in old species-rich, unimproved grassland, with a sward kept short by grazing or mowing. The drastic reduction in the number of agriculturally unimproved meadows and pastures in the last 70 years has resulted in the dramatic decline of this species – and many others – both nationally and locally.

It is essential that we maintain an up-to-date audit of the county's flora, no matter how insignificant our records might seem at the time, since an understanding of changes in species' distributions is vital for conservation. In Somerset there are several active recording groups, and field botanists working alone, who together make tens of thousands of plant records each year. These are then collated, either by the Local Record Centres or the vice-county recorders of the Botanical Society of the British Isles (BSBI), ultimately to be added to the national database administered by the BSBI and appearing as updated 'dots' on the latest distribution maps. But while *all* records are clearly important, this report, like its predecessors, concentrates on some of the more unusual records in 2011, whether of new plants to the county or species known to be either declining nationally or rare in one or both of our vice-counties.

In a well-botanised area such as ours the discovery of a new native species is a rare event indeed. One way in which a new species might be found to occur in a county is when advances in taxonomy result in two or more species now being recognised where previously there was thought to be only one: two examples occurred in 2011. In a study of the Club-rush genus *Bolboschoenus*, Hroudová *et al.* (2007) described five species in Europe, and it is now realised that in Britain we have more than the single species *Bolboschoenus maritimus* (Sea Club-rush) listed by Stace (2010).

A second species, *B. laticarpus*, is now known to occur in the British Isles, and indeed in Somerset, where it has already been recorded in both vice-counties. Specimens in the major herbaria are being examined: so far the earliest Somerset specimens thought to be *B. laticarpus* are from Berrow (VC6) and from a ditch near Long Load (VC5), collected in 1881 and 1891 respectively, by R.P. Murray (Fred Rumsey, pers. comm.). Records for *B. maritimus* at both of these sites are included in Murray (1896) under the earlier name of *Scirpus maritimus*. It is suspected that inland sites at which *B. maritimus* has been recorded, particularly on the Levels, may be found to have *B. laticarpus* instead. In 2011, *B. laticarpus* was found at West Sedgemoor and North Moor in VC5 and at Southlake Moor, Walton Moor and Butleigh Moor in VC6.

A group of plants which has suffered a confusing array of taxonomic treatments is the Scaly Male-ferns (*Dryopteris affinis* agg.). Stace (1997) recognised three subspecies within the species *D. affinis*; however with no available key, many botanists understandably recorded the species and left it at that. More recently, the *D. affinis* aggregate has been shown to consist of four separate species in Britain, three of which have now been found in Somerset. Two species, *D. affinis* (Golden-scaled Male-fern) and *D. borreri* (Borrer's Male-fern) are not scarce in either vice-county, whereas the third, *D. cambrensis* (Narrow Male-fern), appears to be rare in both VC5 and VC6. In 2011 it was found for the first time in VC6, near Penselwood, thus adding a completely new native species to the vice-county list. In VC5 it was first found in 2007 and is still only known from one site.

Perhaps just as exciting as the discovery of a new native species is the reappearance of a species thought to be extinct in the county. *Fumaria reuteri* (Martin's Ramping-fumitory) is a Nationally Rare species which, although formerly recorded in about ten localities in southern England and the Channel Islands, had long been reduced to just two sites: in Cornwall and on the Isle of Wight. In the last two years, however, this species has suddenly turned up at several new sites, including one in Somerset. *F. reuteri* had been recorded once before in Somerset, by Noel Sandwith who found it in a potato field in Bath in 1920. It has recently appeared in a garden on the other side of Bath (Fig. 1), the identity confirmed by the national referee for *Fumaria*, Rose Murphy.

Another species recently feared extinct in Somerset was *Pimpinella major* (Greater Burnet-saxifrage). It was previously known from only one

*Fig. 1* Fumaria reuteri *in a garden in Bath*

site in the county, Chapel Cross in VC6; however no plants have been seen there since 2000, despite diligent searches. In 2011, this species was found at a completely new site, at Walton, near Glastonbury. Nationally, *Pimpinella major* has an oddly disjunct distribution, with its stronghold stretching from south-east England, through the Midlands to north England, but with sites also in south Devon and south-east Cornwall, and south-west Ireland. The nearest populations to our own plants are thus 100km to the south-west or north-east.

Arable 'weeds', as a group, have suffered disastrous declines in the last century, many once-common species having become critically endangered or even extinct. It is heartening, then, that in 2011 there were several significant records made for some arable species in Somerset, all of them amongst our rarest species. *Centaurea cyanus* (Cornflower) and *Glebionis segetum* (Corn Marigold) are hardly ever seen except as garden escapes or within deliberate 'wildflower' planting schemes. Both were discovered in arable fields in 2011. A star plant of the year was *Anagallis arvensis* subsp. *foemina* (Blue Pimpernel), which turned up at a number of new sites in the county. *Scandix pecten-veneris* (Shepherd's-needle), named for the unique long needle-like projections on the seeds, was once a noxious weed, and often so abundant that it impeded mechanical harvesters. Murray (1896) regarded it as 'common, and generally distributed throughout the county'. However, it declined dramatically with the introduction of broad-spectrum herbicides and was described by Green *et al.* (1997) as 'very rare'. It is Critically Endangered on the GB Red List (Cheffings and Farrell 2005). In 2011 this species

was recorded in 'infestation proportions' in a field at Cary Fitzpaine, and also at a new site at Socombe Hill. Another rare arable species, *Polygonum rurivagum* (Cornfield Knotgrass), was found at a new site at Combe.

Inevitably, the majority of new county records and several other interesting records were for alien species. Two conspicuous garden escapes, *Hieracium lanatum* (Woolly Hawkweed) and *Yucca gloriosa* var. *gloriosa* (Spanish-dagger), were recorded in the wild for the first time in 2011, whilst Canary Clover (*Dorycnium hirsutum*), a southern European species, appeared on a pavement in Beckington, its second site in Somerset. Trends in alien species recorded often mirror changes in fashion in gardening or commodities. Two species found this year, *Lappula squarrosa* (Bur Forget-me-not) and *Abutilon theophrasti* (Velvetleaf), were both formerly seen more frequently as so-called 'wool aliens'. The days of wool tips and the use of shoddy are largely over, and it is likely that these new occurrences have arisen as contaminants of bird seed.

Unless stated otherwise, records included in this report were made in 2011 and fall into one of the following categories:

- A taxon recorded for the first time in the wild in Somerset (Watsonian vice-counties 5 (South Somerset) and 6 (North Somerset)), ie *a new county record*
- A taxon recorded for the first time in the wild in one of the vice-counties, either VC5 or VC6, ie *a new vice-county record*
- Other records of particular interest, for example second or third vice-county records, species re-found after a long absence, or newly discovered populations of nationally rare or threatened species.

Within each category, records are listed alphabetically by 'taxon', which may be a species, microspecies, subspecies, variety or cultivar. Both native and introduced species are included, with more recently introduced taxa ('neophytes') being distinguished by an asterisk before the name. Nomenclature follows Stace (2010) for all taxa included in that work. The vice-county is given for each record; the boundary between VC5 and VC6 follows the River Parrett/River Yeo/A303.

The names of contributors not printed in full are abbreviated as follows: Helena Crouch (HJC); Ian Green (IPG); Simon Leach (SJL); John Martin (JPM); Liz McDonnell (EJMcD); Stephen Parker (SJP); John Poingdestre (JP); Rob Randall (RDR); Gill Read (GHR); Fred Rumsey (FJR); Somerset Botany Group (SBG); Somerset Rare Plants Group (SRPG).

## New county records

***Bolboschoenus laticarpus*** – Southlake Moor (ST36973061), 5 Jun, in field ditch W of Short Drove, Botanical Society of the British Isles, VC6; West Sedgemoor (ST356247), 12 Jun, in ditch on both sides of Swell Drove, Wild Flower Society, VC5; North Moor (ST33123109 and ST32753130), 23 Jul, drove-side rhynes, SRPG, VC5; Butleigh Moor (ST455345), 25 Jul, N side of Fisher's Drove, SJP, VC6; Walton Moor (ST45753475), 31 Aug, ditch on E side of lane and (ST45633385), 31 Aug, ditch on S side of drove leading to Decoy Pool, HJC, VC6.

****Hieracium lanatum*** (Woolly Hawkweed) – Kingston St Mary (ST22332972), 22 May, a few plants naturalised on Church Lane, SRPG, VC5.

****Lemna turionifera*** (Red Duckweed) – Barrington Court (ST396182), 6 Apr, brick-lined ornamental pond within the walled garden, Richard V. Lansdown, VC5. First described in 1975, first recorded in Europe in 1986 and first found in Britain in 2007, this species is now known from five vice-counties but is possibly overlooked.

***Ophrys apifera*** var. ***botteronii*** (a Bee Orchid) – Ubley Warren, 26 Jun 2008, one plant, Simon Mackie, VC6. New for Britain. A single plant was found nearby in 2009 and one in 2011. (See *Journal of the Hardy Orchid Society* 8, 79-83.)

****Yucca gloriosa*** var. ***gloriosa*** (Spanish-dagger) – Sand Bay (ST33156527), 4 Jun, one large rosette on dunes at N end of bay, JPM (det. HJC), VC6.

## New vice-county records

***Dryopteris cambrensis*** (Narrow Male-fern) – Pen Ridge, Stourhead Estate (ST75033279), 5 May, one large plant on S side of old hedgerow, to E of road, just E of large oak, HJC & FJR, VC6.

***Epipactis leptochila*** (Narrow-lipped Helleborine) – Forches Corner (ST184172), 15 Aug 1993, a single plant beneath beech trees next to a telegraph pole marked '22', on roadside bank on E side of lane N of Forches Corner, Keith Gould (provisional det. A.J. Richards and I. Taylor, from photographs, requires confirmation), VC5.

**Other interesting Somerset records**

***Abutilon theophrasti*** (Velvetleaf) – Chew Valley Lake (ST57946038), 23 Sept, one plant at top of drawdown zone, HJC & IPG, VC6. First record for Somerset since 1999.

***Allium oleraceum*** (Field Garlic) – Southstoke (ST747603), 9 Apr, few plants amongst *Ornithogalum pyrenaicum* on roadside verge between Combe Hay Locks and lane to Southstoke, RDR, VC6. First record for this site and 10km square since 1907.

***Anagallis arvensis*** subsp. ***foemina*** (Blue Pimpernel) – Thurlbear (ST26542027), 3 Jun, edge of arable field, SJL, VC5, new site; Wembdon (ST285375), 15 Jun, several plants in garden, EJMcD, VC5, possibly first record for 10km square ST23; Somerton (ST49592662), 25 Jun, at edge of weedy bean field and (ST49272686) at edge of wheat field, JP, VC6, new sites; Lytes Cary estate (ST53472739 and ST53502749), 10 Jul, five plants at margin of wheat field, SRPG, VC6; Hatch Hill (ST49823344), 23 Oct, small patch, Anne T. Cole, VC6, first record for 10km square ST43 since 1996.

***Atriplex portulacoides*** (Sea-purslane) – Sand Bay (ST32956564), 23 Aug, a 2m x 2m patch in middle of saltmarsh, at edge of small creek, HJC & SBG, VC6. New site for this locally scarce species.

****Berberis wilsoniae*** (Mrs Wilson's Barberry) – Sand Bay (ST329659), 4 Jun, one bush in scrub beside steps near toilet block, JPM, VC6. Second record for VC6.

***Carex divulsa*** subsp. ***leersii*** (Grey Sedge) – Langridge (ST73596998), 18 Jul, one clump on S-facing slope, HJC & FJR (det. FJR), VC6. A new 10km square for this taxon, now known from only one other site in Somerset.

***Centaurea cyanus*** (Cornflower) – Lower Failand Farm (ST517742, ST518746, ST519746, ST519747), 12 Jul, abundant in many species-rich weedy field margins on organic farm, JPM, VC6; Beer Field, High Ham (ST418306), 25 Jul, single plant in flower in cornfield, JP, VC6. Only recent VC6 records for genuine cornfield Cornflowers, in both cases growing with other interesting arable weeds.

****Colutea arborescens*** (Bladder-senna) – Porlock Weir (SS8647), 4 Oct 2010, by car park, Caroline Giddens, VC5. Second record for VC5 and first since 1975.

****Cyclamen repandum*** (Spring Sowbread) – Vobster (ST705496), 29 Mar, one plant in shade beneath ash trees behind main gate to diving centre, JP, VC6. Third record for VC6.

****Digitalis lutea*** (Straw Foxglove) – Leighwoods (ST558730), 18 Jun, in flower on wall of former botanic gardens, JPM, VC6. Second record for VC6 and third for Somerset.

****Dorycnium hirsutum*** (Canary Clover) – Beckington (ST80355205), 8 Aug, four plants in cracks at kerb edge of pavement, HJC & GHR, VC6. Second record for VC6 and Somerset.

***Drosera rotundifolia*** (Round-leaved Sundew) – North Hill, Priddy (ST54095115), 27 Sept, several plants in glorious bog near top of field on SW side of hill, HJC & FJR, VC6. First record for Priddy area since 1861; otherwise now restricted in VC6 to a few sites on the peat moors.

***Dryopteris*** x ***deweveri*** (*D. carthusiana* x *dilatata*) – Gasper Common (ST763322), 27 Mar, one plant in damp open glade with both parents, HJC & FJR, VC6; Catcott (ST40674117), 8 Sept, one plant on N side of Higher Ropes Drove, HJC & FJR, VC6. Fourth and fifth records for VC6 but no details of other records in Floras.

****Euphorbia oblongata*** (Balkan Spurge) – Felton Common (ST51616560), 13 Jul, one by hedge at side of path, Margaret A. Webster (det. FJR), VC6. Third record for VC6.

***Festuca brevipila*** (Hard Fescue) – Mount Pleasant, Crewkerne (ST44560989), 8 Oct, one stiff-leaved clump on pavement at base of wall, on N side of road, SRPG (det. HJC), VC5. Second record for VC5.

***Fumaria reuteri*** (Martin's Ramping-fumitory) – Bath (ST722655), June, several plants in vegetable garden in Newbridge Gardens, Wendy Lambson (conf. Rose Murphy), VC6. (Fig. 1). Known here for last three years. Second record for Somerset and VC6, the only previous record being from Bath in 1920.

****Gazania rigens*** (Treasureflower) – Minehead (SS975464), 29 Oct, single plant with three flowers, to seaward of sea-wall in area of accreting sand/shingle, SJL, VC5. Second record for VC5 and Somerset.

***Glebionis segetum*** (Corn Marigold) – Lower Failand Farm (ST51957470), 12 Jul, one plant in species-rich weedy field margin on organic farm, JPM, VC6. Only recent VC6 record for a genuine cornfield Corn Marigold, growing with other interesting arable weeds.

***Hypericum hircinum*** (Stinking Tutsan) – Newton St Loe (ST706648), 3 Aug, single plant on roadside, Dave Green (det. N.K.B. Robson), VC6. First record for VC6 since 1905.

***Lappula squarrosa*** (Bur Forget-me-not) – Charlton Musgrove (ST73083059), 20 Jul, large patch in vegetable garden, HJC & GHR, VC6. First record for VC6 since 1987.

***Parentucellia viscosa*** (Yellow Bartsia) – Yarty Moor (ST235164), 30 Aug, three or four plants in wet area in central part of reserve, SBG (det. David Tattersall), VC5. Second record for VC5 and first since 1993.

***Pimpinella major*** (Greater Burnet-saxifrage) – Walton (ST45233690), 16 Jul, seven plants in flower on verge opposite the entrance to Whitley Farm and some young plants present, Sharon Pilkington, VC6. A new 10km square for this taxon and fourth record for VC6 and Somerset. Last seen in Somerset in 2000 and believed lost from the only other recently known site.

***Polygonum rurivagum*** (Cornfield Knotgrass) – Combe (ST415287), 31 Jul, about 80 small erect plants with *P. aviculare* in corner of arable field to E of lane, JP (conf. John R. Akeroyd), VC6. Third recent record for VC6 and a new site.

***Potamogeton perfoliatus*** (Perfoliate Pondweed) – Bath (ST707660), 24 Sept, on the sheltered side of a bend near where cycle track crosses river, RDR, VC6. First record for River Avon since 1992 and only second recent record for VC6.

***Rorippa islandica*** (Northern Yellow-cress) – Hawkridge Reservoir (ST21103643), 24 Sept, seven plants on top of dam wall, SRPG, VC5. Third site for VC5.

***Scandix pecten-veneris*** (Shepherd's-needle) – Socombe Hill (ST38403790), 10 Jun, thinly scattered amongst *Torilis arvensis* along S boundary of arable field, JP, VC6. First record of this Critically Endangered species in this 10km square since 1959 and only second recent record for VC6, the other being at Cary Fitzpaine, where JP reported 'infestation proportions' in 2011!

***Senecio* x *ostenfeldii*** (*S. jacobaea* x *aquaticus*) – Hawkridge Reservoir (ST20523606), 24 Sept, one plant at edge of reservoir, SRPG (det. Crinan Alexander), VC5. Second record for VC5 and first record for Somerset since 1958.

The BSBI vice-county recorders in Somerset are: Stephen Parker and Simon Leach in VC5, and Helena Crouch and Rob Randall in VC6. There is also an active recording group, the Somerset Rare Plants Group (SRPG), which holds an annual programme of field meetings, winter talks and identification workshops. The vice-county recorders and the SRPG are presently undertaking a major project to compile a detailed inventory of the county's rare, scarce and threatened vascular plants. Further information on the SRPG and the list of species included in the Somerset Rare Plant Register can be found at www.somersetrareplantsgroup.org.uk.

We would be delighted to receive records for possible inclusion in future reports; these should be submitted to one of the 'receiving recorders', as follows:

VC5 Stephen Parker, 26 Laburnum Road, Wellington, Somerset, TA21 8EL

VC6 Helena Crouch, Bronwen, Farrington Road, Paulton, Bristol, BS39 7LP

**References**

Cheffings, C.M., and Farrell, L. (eds), 2005. 'The vascular plant red data list for Great Britain', *Species Status*, 7, 1–116, Joint Nature Conservation Committee, Peterborough.

Green, P.R., Green, I.P., and Crouch, G.A., 1997. *The Atlas Flora of Somerset*, Wayford and Yeovil, privately published.

Hroudová, Z., Zákravský, P., Ducháček, M. and Marhold, K., 2007. 'Taxonomy, distribution and ecology of *Bolboschoenus* in Europe', *Annales Botanici Fennici*, 44, 81–102.

Murray, R.P., 1896. *The Flora of Somerset*, Taunton, Barnicott and Pearce.

Stace, C., 1997. *New Flora of the British Isles*, 2nd edn, Cambridge.

_____ , 2010. *New Flora of the British Isles*, 3rd edn, Cambridge.

Swete, E.H., 1854. *Flora Bristoliensis*, London.

HELENA J. CROUCH

# FIRST FLOWERING DATES 2011

In last year's *Ecology in Somerset* a study was published of first flowering dates (FFDs) in the Taunton area for 339 species during the period 2008–10 (Leach 2011). In 2011 FFDs were once again recorded for these species and can be compared with those of the previous three years, and with the 'average first flowering times' recorded by Walter Watson in the first half of the 20th century (Watson 1949). Recording methods and sites visited were as far as possible the same as those outlined in Leach (2011). A summary is also given here of the main features of the weather in winter (December–February), spring (March–May) and early summer (June) 2011, based on personal observations and regional (south-west England and south Wales) data and analyses available on the Met Office website (http://metoffice.gov.uk/climate/uk/). Records of air frosts and ground frosts were from my back garden in Taunton.

## The weather

The winter period was one of huge contrasts, bitterly cold at the start and unseasonably mild by the end. December 2010 will be engraved on many people's memories as one of the coldest on record – possibly the coldest for 140 years – with daily mean temperatures an astonishing 5.1°C below the regional 1971–2000 average, and snow falling in Taunton on four days and 'lying' on 13 mornings. There were 26 days with frost, and on seven of these even the day-time maximum temperature failed to rise above freezing. A thaw towards the end of the month was followed by a January that seemed positively 'balmy' in comparison, but still 0.7°C below average, with 15 'frost-days' and snow falling (but not settling) on one day at the beginning of the month. February was much warmer, with just four 'frost-days' and temperatures 2.2°C above average; considerably milder than in the three previous years. Indeed, by the middle of the month there was a distinct feeling of spring in the air, with numerous sightings of Buff-tailed Bumblebees (*Bombus terrestris*) from the 11th onwards, and flower-bees (*Anthophora plumipes*) on back-garden lungworts (*Pulmonaria* spp) from the 27th.

March too had above-average temperatures, along with much higher than normal sunshine levels; as a result, early appearances of many insects continued, including the first bee-flies (*Bombylius major*) on the 20th and orange-tip butterflies (*Anthcharis cardamines*) from the 24th – a remarkably early first date for the latter species. But, weather-wise, the most extraordinary month of the lot was April: extremely dry, sunny and warm, with temperatures 3.8°C above the long term average and the warmest April for at least a century (0.5°C warmer than the record-breaking April of 2007). In central England it was the warmest April for at least 350 years. With May also having temperatures slightly above average, and rainfall totals again lower than normal, the spring of 2011 proved to be the warmest, driest and sunniest since 1893. In contrast, June marked (once again) the start of a rather disappointing summer, with below-average temperatures and sunshine levels.

## First flowering dates

The FFDs for 2011 are shown in Fig. 1. It appears that the prolonged spell of cold weather in December had little effect on the FFDs of early-flowering species. Hazel *(Corylus avellana*), for example, was first seen in flower on 13 January, admittedly 1–2 weeks later than in 2008 and 2009 but still nine days earlier than in 2010; while Winter Heliotrope (*Petasites fragrans*), Purple Dead-nettle (*Lamium purpureum*) and Groundsel (*Senecio vulgaris*) were amongst the usual collection of species found to be flowering on New Year's Day. A few early-flowering species, such as Snowdrop (*Galanthus nivalis*) and Lesser Celandine (*Ficaria verna*), did have slightly delayed FFDs, but others – perhaps surprisingly – were observed starting to flower *earlier* than in previous years. These included Common Whitlowgrass (*Erophila verna*) on 7 February (previous earliest was 15 February in 2008) and Opposite-leaved Golden-saxifrage (*Chrysosplenium oppositifolium*) on 6 February – more than three weeks earlier than in previous years. For a few species, one couldn't help wondering whether – despite January also having below-average temperatures – the end of such a prolonged spell of extreme cold in the last days of December had acted as an earlier-than-usual 'trigger' to flowering.

As can be seen in Fig. 1, the most remarkable feature of the FFDs in 2011 was the early flowering

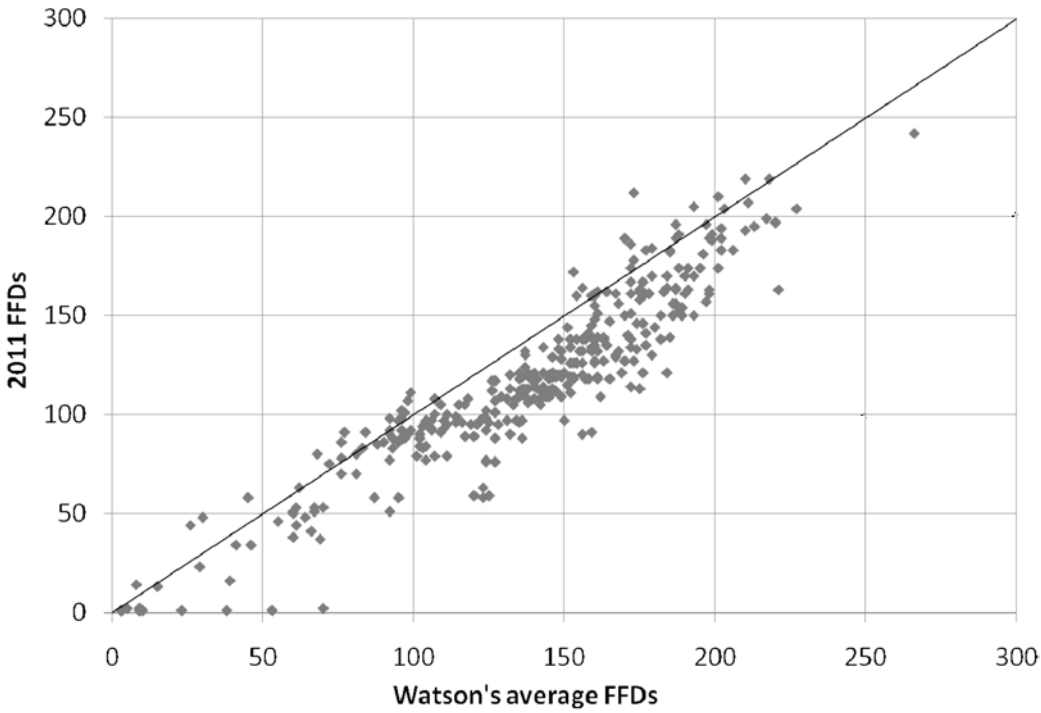


*Fig. 1 First flowering dates (FFDs) for 339 species in 2011, plotted against 'average first flowering times' given by Watson. Dates are shown as day numbers. (day 1 = 1 January). The diagonal line marks the line along which the data-points would lie if 2011 FFDs were identical to those given by Watson; above the line the 2011 date is later than Watson's date, below the line earlier*

of many late spring and summer-flowering species: notice how the species for which Watson's average FFDs were between day 100 (10 April) and 150 (30 May) all fall *below* the diagonal line, meaning that they were, without exception, coming into flower in 2011 earlier than the dates given by Watson. The extent to which FFDs of summer-flowering species were relatively earlier in 2011 than in 2008-2010 is highlighted in Table 1, which shows that species with 'Watsonian' FFDs falling between May and August commenced flowering, on average, at least 7–12 days earlier than in 2008–10 and 3–4 *weeks* earlier than the dates given by Watson. Some species were extraordinarily early. White Bryony (*Bryonia dioica*) (Fig. 2), for example, for which Watson's average FFD was 24 June – and my own previous earliest date was 10 May – was first seen in flower on 23 April. In the case of Zigzag Clover (*Trifolium medium*) (Fig. 3), the FFD in 2011 was 7 May – 23 days earlier than my earliest FFD in the previous three years, and 46 days earlier than Watson's date.

TABLE 1: DEVIATION (IN DAYS) BETWEEN MONTHLY AVERAGE FFDS IN 2008–11 AND THOSE CALCULATED FROM THE AVERAGE DATES GIVEN BY WATSON

| Month | 2008 | 2009 | 2010 | 2011 | n |
|---|---|---|---|---|---|
| Jan | -10.5 | +0.1 | +7.5 | -1.7 | 12 |
| Feb | -17.9 | -17.6 | +1.7 | -18.4 | 7 |
| Mar | -14.8 | -8.0 | +14.8 | -10.1 | 27 |
| Apr | -21.4 | -10.8 | +3.3 | -13.3 | 55 |
| May | -11.4 | -16.5 | -3.7 | -28.1 | 89 |
| Jun | -9.6 | -13.5 | -7.0 | -23.1 | 93 |
| Jul | -6.9 | -13.7 | -11.2 | -20.1 | 49 |
| Aug | -8.0 | -10.3 | -11.3 | -21.9 | 7 |

Note
The 339 species are divided into monthly groups using Watson's average ffds. Negative values indicate earlier flowering than Watson's dates, positive values later flowering. The number of species (n) comprising each monthly group is also given

*Fig. 2 White Bryony (*Bryonia dioica*), Kingston St Mary*

*Fig. 3 Zigzag Clover (*Trifolium medium*), Pridley Plantation, near Staple Fitzpaine*

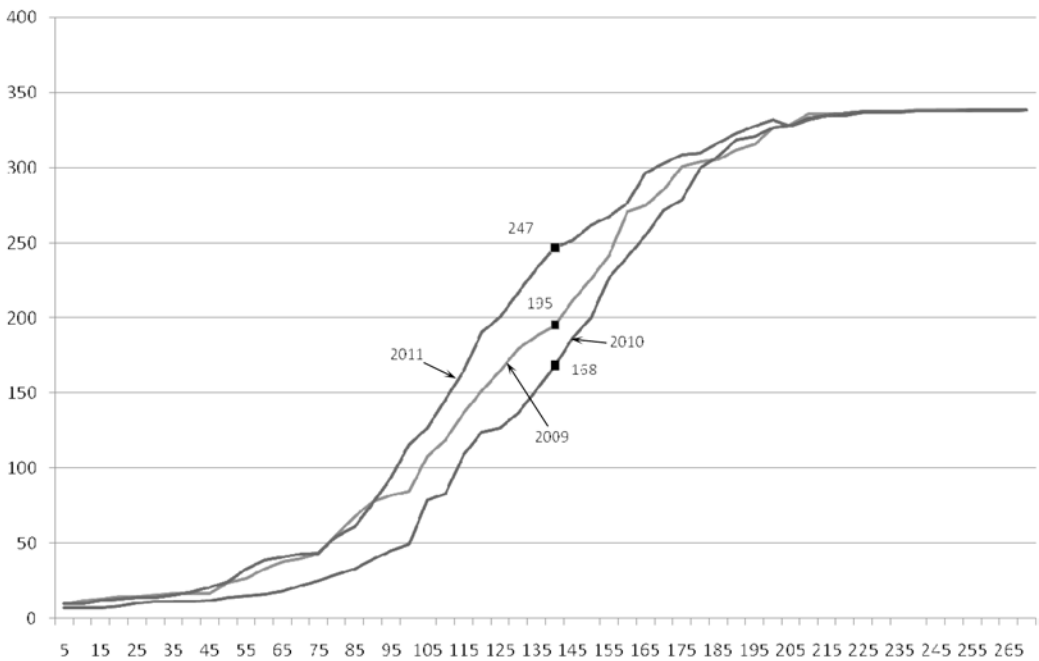


*Fig. 4 A cumulative plot showing, for 2009, 2010 and 2011, the number of species that had come into flower by any particular day (day 1 = 1 January). Example shows how many species had come into flower by day 140 in each year: ie 195 in 2009, 168 in 2010 and 247 in 2011*

The difference between years is also highlighted in Fig. 4, which shows for 2009, 2010 and 2011 the number of species that had come into flower by any particular date. The amount of difference between the three years is considerable, as illustrated by the figures shown for day 140 (20 May): 195 species in 2009 (a 'middling' year in terms of spring temperatures), 168 in 2010 (a relatively cold spring), and 247 in 2011 (an exceptionally warm spring).

Taking all species combined, FFDs in 2011 were an average of 20.3 days earlier than those recorded by Watson, compared with 12.2 days

earlier in 2008, 12.9 days earlier in 2009 and 2.7 days earlier in 2010 (Leach 2011). The timing of first flowering of many species in 2011 was clearly determined by the extremely warm, dry and sunny spring weather, particularly in February and April. On the other hand, the record-breaking cold weather in December and the (once again) below-average summer temperatures appeared to have little effect.

My own findings are very much in line with those of the UK Phenology Network 'Nature's Calendar', which showed that across the UK as a whole April and May-flowering species came into flower in 2011 relatively much earlier than those flowering between January and March (Sparks *et al.* 2012, table 1). Indeed, for several species, such as Dog-rose (*Rosa canina*) and Hawthorn (*Crataegus monogyna*), the mean UK FFDs in 2011 were the earliest on record. The early emergence of Orange-tip butterfly was also a nation-wide phenomenon, Sparks *et al.* (2012) reporting a mean UK emergence date of 13 April – the earliest of the 78 years for which the Phenology Network has data for this species. It was, by any standard, a most unusual spring.

**References**

Leach, S.J., 2011. 'How do first flowering dates today compare with those recorded by Walter Watson in the first half of the 20th century?', *SANH*, 154, 259–70.

Sparks, T., Lewthwaite, K., and Atkinson, S., 2012. 'Phenology in 2011: an unusual year?', *British Wildlife*, 23, 252–5.

Watson, W., 1949. 'The average times of first flowering of Somerset's plants', *SANH*, 93 (1947), 108–28.

SIMON J. LEACH

## ADDITIONS TO THE LIST OF SOMERSET BEETLES 2011

This note gives details of beetles newly added to the Somerset list in 2011. Most of the following records were made by James McGill (JAM), but for an additional record we are grateful to Mark Telfer (MGT). It should be noted that records listed here are largely unchecked and, unless explicitly confirmed by an authority, have yet to be authenticated.

The format of the list is the same as that adopted in last year's report (Boyce and McGill 2011), itself based on that used by Duff (1993) and Duff and Boyce (2010): for each record we give 10km square, site name, date(s) and recorder's initials. The emboldened Red Data Book and Nationally Scarce categories given in square brackets after the species names are explained below. They are taken from the national Coleoptera review prepared by Hyman and Parsons (1992; 1994).

- **RDBK** – Red Data Book Category K – Insufficiently Known. Taxa suspected of belonging to one of the other Red Data Book categories, but for which there is currently a lack of information.
- **Na** – Nationally Scarce, Category A. Taxa thought to occur in 16 to 30 10km squares of the GB National Grid.
- **Nb** – Nationally Scarce, Category B. Taxa thought to occur in 31 to 100 10km squares of the GB National Grid.

**Order COLEOPTERA**

*Dactylosternum abdominale* (Fabricius)
**ST 32:** Swell Wd., x 2011 (JAM)

*Dasygnypeta velata* (Erichson)
**ST 51:** Sutton Bingham Reservoir, v 2011 (MGT)

*Oxytelus migrator* Fauvel
**ST 22:** Thurlbear, ii 2011 (JAM)

*Ochthephilus andalusiacus* (Fagel)
**ST 12:** Hele, i 2011 (JAM)

*Dendrophilus pygmaeus* (Linnaeus)
**ST 46:** Urchin Wd., iii 2011 (JAM)

*Agrilus viridis* (Linnaeus) **[Na]**
**ST 44:** Shapwick Hth., v 2011 (JAM)

*Glaphyra umbellatarum* (von Schreber) **[Na]**
**ST 31:** Merryfield Airfield, vi 2011 (JAM)

*Atomaria zetterstedti* (Zetterstedt) **[RDBK]**
**ST 44:** Shapwick Hth., iv 2011 (JAM)

*Chaetocnema picipes* Stephens
**SS 91:** Hurlstone Pt., v 2011 (JAM)

*Zacladus exiguus* (Olivier) **[Nb]**
**ST 22:** Shoreditch, vi 2011 (JAM)
**ST 31:** Merryfield Airfield, v vi 2011 (JAM)
**ST 32:** Fivehead Arable Fields, v 2011 (JAM)

With the addition of the above species, the list of Somerset beetles stands at 2464 species of Coleoptera and three species of Strepsiptera recorded in the last two centuries, plus 74 species of subfossil Coleoptera.

**References**

Boyce, D., and McGill, J.A., 2011. 'Additions to the list of Somerset beetles 2010', *SANH*, 154, 294–5.

Duff, A.G., 1993. *Beetles of Somerset: their status and distribution*, Taunton.

Duff, A.G., and Boyce, D., 2010. 'Additions and corrections to the list of Somerset beetles', *SANH*, 153, 247–62.

Hyman, P.S., and Parsons, M., 1992. *A Review of the Scarce and Threatened Coleoptera of Great Britain*, Part 1, Peterborough, Joint Nature Conservation Committee.

_____ , 1994. *A Review of the Scarce and Threatened Coleoptera of Great Britain*, Part 2, Peterborough, Joint Nature Conservation Committee.

DAVE BOYCE AND JAMES McGILL
dave@dboyce.co.uk and j.a.mcgill@btinternet.com

## HOVERFLY REPORT 2011

This was quite a good year for hoverfly recording, despite strange and extreme weather conditions. A record-breaking mild spring, particularly so in April, was followed by another rather disappointing summer and then an autumn which was drier and milder than most of us can recall; this encouraged prolonged flowering (or a second surge of flowering) of many plant species, especially in the hedgerows and verges. As a result, it was another busy year for recording hoverflies, with a total of 33 survey-days across 17 sites between April and the end of November; and once again including visits to our study areas at Pink Wood, Aller Marshes and Long Sutton. Taking all sites combined, 98 species were recorded – a decent total for the year, although none were new to the Somerset list.

We are grateful to R. Williams and Barrie Widden for their records and to Chris Iles for his lists that contain records going back to 2005, including several at new sites and some useful and interesting records of the bumble-bee mimics *Volucella inanis, V. zonaria* and *V. inflata*. It should also be noted that two exceptional Somerset records were briefly mentioned in the *Bulletin* of the Dipterists' Forum (No. 73, Spring 2012): *Pocota personata* was taken at Chew Valley Lake on 31 May 2010, while *Eoseristalis similis* – new to the county list – has been confirmed from a specimen taken several years ago, although we suspect there may well be specimens in other collections that are being overlooked due to misidentification.

Returning to 2011, the following records, encompassing 26 species, were the most interesting for the year. They include records of eight species listed by Falk (1991) as being nationally 'Notable', at that time thought to occur in fewer than 100 10km squares in Great Britain; in the following list these are highlighted with an asterisk before the species name.

*Anasimyia lineata* – Little Norton 24 May.
*Chalcosyrphus nemorum* – Otterhead Lakes 10 August.
*Cheilosia antiqua* – Pink Wood 16 April.
**Cheilosia carbonaria* – Great Breach Wood 29 June. An uncommon woodland species, generally thought to be a good 'ancient woodland' indicator, though not confined to such sites.
*Cheilosia latifrons* – Bickham Wood 20 April.
**Cheilosia soror* – Great Breach Wood 23 July; Pink Wood 30 July; Ham Hill 14 September.
*Chrysogaster virescens* – Ringdown Somerset Wildlife Trust nature reserve 14 May.
*Chrysotoxum festivum* – Yeovil garden 19 May.
**Criorhina asilica* – Marston Wood 11 May. A scarce species generally associated with calcareous soils.
*Criorhina floccosa* – Yeovil garden 19 May; Little Norton 24 May.
*Dasysyrphus tricinctus* – Long Sutton 24 August.
**Eupeodes bucculatus* – Great Breach Wood 23 July. A scarce species nationally, but possibly overlooked.

*Ischyrosyrphus laternarius* – Pink Wood 24 June; Great Breach Wood 29 June; Otterhead Lakes 6 July and 10 August.
*Meligramma cincta* – Bickham Wood 20 April.
**Myolepta dubia* – Long Sutton 25 June. A Red Data Book species, recorded from widely scattered sites across southern England, from Somerset and Dorset to East Anglia; in Somerset we are at the western edge of its British range.
*Neoascia aenea* – Westhay NNR 24 April.
**Neoascia obliqua* – Little Norton 24 July.
*Neocnemodon pubescens* – Great Breach Wood 29 April.
*Parasyrphus punctulatus* – Bickham Wood 20 April.
*Platycheirus splendidus* – Bickham Wood 20 April. A hoverfly that was only described in 1998, so its national distribution currently imperfectly known – but probably widespread and frequent.
*Platycheirus tarsalis* – Great Breach Wood 29 June.
*Sericomyia lappona* – Bickham Wood 20 April.
*Sphaerophoria interrupta* – Aller Marshes 5 August; Ham Hill 14 September.
*Sphaerophoria rueppelli* – Long Sutton 24 August.
**Sphegina verecunda* – Pink Wood 24 August.
**Volucella inanis* – Bath Golf Course 28 July. A bumble-bee mimic.

**Reference**

Falk, S.J., 1991. *A Review of the Scarce and Threatened Flies of Great Britain*, Research and Survey in Nature Conservation, No 39, 194 pp. Nature Conservancy Council, Peterborough.

E.T. & D. A. LEVY

## DRAGONFLIES IN SOUTH SOMERSET (VC 5) IN 2011

Most dragonfly recording in 2011 was done in lowland Somerset, which is experiencing considerable change in its dragonfly fauna. Four species have arrived in South Somerset in the last couple of decades. Brown Hawker (*Aeshna grandis*) and Red-eyed Damselfly (*Erythromma najas*) have been here the longest, and this year saw both species being reported more than in all previous years put together and also expanding their range within the vice-county. Brown Hawker is now widely distributed in lowland Somerset and Red-eyed Damselfly is starting to spread out from the Levels. Scarce Chaser (*Libellula fulva*) arrived in 2008 but has expanded its range this year, now occurring from Langport to Bridgwater. The most recent arrival is Small Red-eyed Damselfly (*Erythromma viridulum*). First recorded in Britain, in Essex, as recently as 1999, it was found in South Somerset for the first time this year when at least ten individuals were seen on a large farm pond near Yeovil. Given the number of individuals recorded, it seems likely that the species has been present at this site for a year or two.

White-legged Damselfly (*Platycnemis pennipes*), last recorded in the vice-county in 1997, was found at several locations, and appears to be fairly widespread in lowland Somerset, and by no means confined to the Levels. Whilst closely associated with rivers, it does wander and was photographed investigating British Dragonfly Society member Neil Galton's pond (Fig. 1) – one of twelve species to appear at a pond only dug in autumn 2010.

*Fig. 1 White-legged Damselfly (*Platycnemis pennipes*) at Long Load, 14 July 2011 (Photo: Neil Galton)*

Less recording was done in upland areas. South West Water are supporting a mire restoration project on Exmoor which is creating good amounts of bog pool habitat suitable for dragonflies. Black Darter (*Sympetrum danae*) and Common Hawker (*Aeshna juncea*) are making use of these habitats, with particularly large numbers seen this year at Blackpitts near Simonsbath. Fewer records were made of our species of upland streams, Beautiful Demoiselle (*Calopteryx virgo*) and Golden-ringed Dragonfly (*Cordulegaster boltonii*), although a record of the latter by Adrian Bicker from between Crewkerne and Chard was interesting – this is not upland habitat and the species has not been recorded here for 30 years, but a sequence of historical records for this area suggests it may well be breeding somewhere in this part of the county.

Mike Parr ran two successful field trips to Thorney Lakes near Langport, on which 17 species were seen, including Scarce Chaser, Brown Hawker, Red-eyed Damselfly and Hairy Dragonfly (*Brachytron pratense*). An unusual sighting was made on the July field trip – Mike and I both caught glimpses of a brown hawker-type dragonfly with clear wings. Could this have been an aberrant Brown Hawker, or possibly a migrating Norfolk Hawker (*Aeshna isosceles*) which I understand appeared elsewhere in southern England in 2011? We will never know.

The unusually warm spring led to ten species having their earliest ever records. These were all early-emerging species, seven of which were damselflies, whereas species on the wing later in the year appeared to have emerged at their usual time.

Much of the vice-county is still not thoroughly recorded – South Somerset is a large area with few active recorders – but this is especially true of the upland areas, particularly Exmoor and the Blackdown Hills. Keeled Skimmer (*Orthetrum coerulescens*) was formerly known to occur on the Blackdowns, but its haunts have not been recorded since the 1950s; could it still occur at, for example, the Somerset Wildlife Trust nature reserves at Ringdown, Yarty Moor or Brimley Hill? Its former sites on Exmoor around Withypool and Landacre Bridge, also, have not been visited for many years.

This is the final year of recording for the British Dragonfly Society's new national atlas, due for publication in 2013. I would very much welcome any records, both historic and from 2012, for both vice-counties. These would quite likely be very useful as, away from the Bristol area, Somerset is very patchily recorded with large areas lacking records of even the common species, and it would be very helpful to have a better picture of the distribution of the county's local species, some of which are scarce nationally.

CHRISTOPHER ILES
[redacted]
British Dragonfly Society