

The history of plant recording in Devon

The list of Biographical Notices in the Flora (*Flora of Devon* (Martin & Fraser 1939)) includes all those who had made major contributions to the Botany of Devon and died before 1939. These notes go back to the earliest days of plant recording. The first localised Devon record appears to be of Danish Scurvy-grass *Cochlearia danica* reported from Plymouth by Thomas Johnson (ca. 1600–1644) in his edition of Gerard's Herbal published in 1633 (Johnson 1633). One of our most beautiful plants, Bastard Balm *Melittis melissophyllum*, was reported by William How (How 1650) "in Mr. Champernon's wood by his house on the hill-side near Totnes", the Champernownes lived at Dartington (Cherry and Pevsner 1989), and in many woods in the county (Gibson 1722).

Other notable early plant records were made by John Ray (1628–1705) during his excursion to Wales and Southwest England in 1662. Field Eryngo *Eryngium campestre* and Wild Madder *Rubia peregrina* found by him at Plymouth, can still be seen there today at Western King Point, and he was also the first to report *Scirpus holoschoenus* at Braunton Burrows on the authority of a Mr. Stevens published in the second edition of Camden's Britannia (Gibson 1722). Gibson also includes records for Cornish Moneywort *Sibthorpia europaea*, probably on the authority of John Ray (see Borlase 1758), Ivy-leaved Bellflower *Wahlenbergia hederacea* and Marsh St. John's-wort *Hypericum elodes*.

Pale Butterwort *Pinguicula lusitanica* published as *P. minor fl. albo* by Merret (1666) "in the mid way betwixt Oakhampton and Launeston, Cornwall", is also thought to have been contributed by John Ray. William Hudson (*Gulielmi Hudsoni* 1730–1793) in his *Flora Anglica* published in 1778 lists a number of species from Devon, including Bristle Bent *Agrostis curtisii* from Haldon "Hall Down prope Exeter", Four-leaved Allseed *Polycarpon tetraphyllum* at Lymptone and Purple Spurge *Euphorbia peplis* near Exmouth. The first records of Strapwort *Corrigiola littoralis* are also attributed to Hudson by William Withering (1787) and Polwhele (1797). There is a specimen at the Natural History Museum sent by Hudson to Sir Joseph Banks in 1784 (BM, Herb.Banks). A hand written note in a copy of Hudson's book owned by his friend Sir Francis Henry Drake (1722–1794) and subsequently by T.R.A. Briggs (Briggs 1884) supports this belief. Drake, a descendent of the more famous Elizabethan Vice-Admiral had an interest in botany. Most of his records are from the vicinity of his homes at either Buckland Abbey or Nutwell Court near Woodbury. Briggs lists over 50 of Drake's more interesting entries; his record of Lesser Water-plantain *Baldellia ranunculoides* "in the rivulet that runs thro' the bog nearest Budleigh Salterton at the lower end of the bog" should take precedence over one from Preston near Kingsteignton listed in *Flora Devoniensis* (Pike & Jones 1829) as the first Devon record. In 1829, the Rev. John Pike Jones (1790–1857) and J.F. Kingston (dates unknown) were able to publish the first full county flora. It is an excellent Flora of the period and includes records of many of Devon's most notable plants including Small Hare's-ear *Bupleurum baldense*, White Rockrose *Helianthemum appeninum*, Small Restharrow *Ononis reclinata*, Purple Gromwell *Lithospermum purpurescens* and Goldilocks Aster *Aster linosyris*.

By the mid-19th century, both visitors and local botanists were making significant contributions to *The Phytologist* from 1842 and *The Journal of Botany* from 1834. Edwin Lees (1851), visiting the county from his home in Worcestershire, writes in his 'Account of a privileged locality near Torquay, in Devonshire' of Wood Vetch *Vicia sylvatica* which "spreads most luxuriantly around, almost bathing its purple tresses in the sea" at Ansty's Cove, Torquay. A number of small Floras were published during this period. Most notable were the Rev. T.F. Ravenshaw's (1829–1882) *Flowering Plants and Ferns of Devonshire* and R. Stewart's (1811–1865) *Handbook of the Torquay Flora*, both published in 1860. These were closely followed by I.W.N. Keys' (1818–1882), *Flora of Devon and Cornwall*, published in four volumes between 1866 and 1871. Other, small, local floras included W.H. Cullen's (dates unknown) *Flora Sidostiensis*, published in 1849 and S. Hannaford's (1828–1874) *Flora Totoniensis* in 1851. The most important of the 19th century botanists in Devon were T.R. Archer Briggs (1836–1891) and his friend the Rev. William Moyle Rogers (1835–1920). Briggs published notes in *The Phytologist* and

Journal of Botany from 1861 to shortly before his death in 1891. His outstanding *Flora of Plymouth* was published in 1880. He added Plymouth Pear *Pyrus cordata*, Wavy St John's-wort *Hypericum undulatum* and Shore Dock *Rumex rupestris* to the British list together with many Bramble *Rubus* species, a genus in which he took a great interest. These include *Rubus briggsianus*, *R. briggsii* and *R. sagittarius* all named in his honour. A full account of Briggs' life written by Rogers can be found in the *Journal of Botany* (Rogers 1891). Rogers came to England from South Africa in 1862 and after holding several curacies in Wiltshire was Curate at Trusham between 1876 and 1882 and Vicar of Bridgerule from 1882 to 1885. His most important contributions to the flora of these areas, *The Flora of the Teign Basin* and *The Flora of the Upper Tamar*, were published in the *Journal of Botany* (Rogers 1882a, 1883a, 1886). Rogers was an outstanding botanologist and his *Handbook of British Rubi* was published in 1900 (Rogers 1900).

The Devonshire Association for the Advancement of Science, Literature and the Arts was advocated by William Pengelly in 1861 and established at Exeter in 1862. The Association's *Report and Transactions* have been published annually since that time. In the early volumes there are short notes on the 'Flora of the Neighbourhood of Tiverton' (F.Mckenzie 1865) and 'A list of the plants growing wild in the parish of South Molton' (Saunders 1894). Helen Saunders (1830–1914) subsequently published 'Botanical Notes' in 1898, 1901, 1906 and 1908. Botanical recording in the county was formalised in 1909 following the election of the Botanical Committee chaired by W.P.Hiern (1839–1925). The Watsonian vice counties of North and South Devon were adopted as the principal recording areas each sub-divided into a number of regions. The parish was adopted as the smallest recording area. These are all listed in Committee's second report in 1910 together with first lists of parish records (Hiern 1910). William Hiern, a mathematics graduate, took up botany when he moved to London in 1868 where he worked at Kew under Sir Joseph Hooker and Professor Daniel Oliver. Outside Devon his principal interests were in African Plants. He lived at Barnstaple from 1882, where, in addition to his botanical interests, he was a Liberal politician, one of the first Devon Aldermen and Chairman of the Education Committee. It had been expected that he would compile a Flora of Devon based on his extensive records, but his passion for complete accuracy is thought to have militated against this. His records and his plant collections held at the Royal Albert Memorial Museum (**RAMM**) are the backbone of the Flora. In addition to the biographical notes in the Flora more detail can be found in Rendle (1926a) and in the obituary notices published in the *Report and Transactions of Devonshire Association* the same year. The Flora is dedicated to both Hiern and to Clara Ethelinda Larter (1847–1936). Larter, who was born in Leeds, lived for a while in Torquay and returned there some time before 1897 having spent time in Barmouth (North Wales) and Combe Martin. Her *Manual of the Flora of Torquay* was published in 1900. She joined The Devonshire Association in 1906 and was a member of its Botany Committee from its inauguration in 1909. She acted variously as Secretary and Recorder between 1914 and 1925 and was Chairman of the newly formed Botanical Section from 1930 to 1936 and appointed Editor-in-Chief for the 1939 Flora.

The Botany Section of The Devonshire Association as we know it today was established in 1930 with the express purpose of publishing a Flora of Devon. Records in this landmark county Flora follow the pattern of botanical districts and parishes within the two Watsonian Vice-counties proposed and adopted by W.P.Hiern and the Botany Committee in 1910 (Hiern 1910). It made full use of Hiern's collections, a card index of records of all Devon phanerogams and cryptogams from the previous 100 years already prepared by R.Waterfield and hundreds of specimens of critical genera were examined by experts at the British Museum (now The Natural History Museum), The Royal Botanic Gardens, Kew and other individuals. An account of the history and preparation of the Flora is given in the authors Preface and is followed by a complete list of consultants in the Acknowledgements. Of the two authors the Rev. W.K.Martin (1877–1969) is much better known than Gordon T.Fraser (1882–1942). Martin who had a lifetime interest in natural history was the principal editor of the 1939 Flora. In addition to this his most notable work, *The Concise British Flora in Colour*, begun around 1920, was published in 1965 (Martin 1965). He also published an autobiography, *Over the Hills* (Martin 1968). He had strong Devon connections and in 1921 was offered the benefice of Haccombe and Coffinswell and in 1934 became the incumbent at Great Torrington. Martin was still performing part time clerical duties at Woodbury in the late 1960s, although he had 'retired' at the age of 72 in 1949 and he is buried there in the churchyard. Gordon Fraser was a railway engineer who had worked on, amongst other projects, the Transandine railway in Chile and Argentina and the London tube. He retired to Devon in 1934 and soon became a stalwart of the

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Botany Section. He was Botanical Recorder from 1938 to 1942, and completely reorganised the important plant collections at Torbay Museum (**TOR**). On his death in 1942, F.M.Day wrote "He found it a collection of dried plants, and left it – and in this he was ably and untiringly helped by his wife – a herbarium, well arranged and representative of the County Flora". His diligence during the preparation of the 1939 Flora, collating material, checking specimens and circulating proofs also receives fulsome praise from Keble Martin. Both the Rev. Dr. Thomas Stevenson (1865–1948) and Francis M.Day (1890–1962) made significant contributions to the Flora and both are acknowledged on the title page. Day was a school teacher at Downs School at Cotwell near Malvern but spent holidays with his sister at Berry Head House from 1932, when he joined The Devonshire Association, and continued to visit Devon until her death in 1959. He was on the Editorial Committee for the Flora and contributed the chapter on Rainfall and Temperature. Stevenson, who was born at Brackley, Northamptonshire was ordained in 1895. In addition to his clerical work he had a great interest in botany and was a leading expert of his day on orchids, particularly *Dactylorhiza* and *Epipactis*. He retired to Devon in 1932 and was resident for a while at Holsworthy before settling at Kingskerswell. As a member of the Editorial Committee for the Flora he was the referee for Orchidaceae and other phanerograms and prepared the section on grasses. A full obituary can be found in *Transactions* for 1949.

The lives of Herbert Pugsley and Elliston Wright spanned the 19th and 20th centuries and both made significant contributions to the botanical exploration of Devon. H.W.Pugsley (1868–1947) was one of the greatest amateur botanists of his time (Wilmott 1948). Born in Bristol he became a civil servant working in the Department of the Accountant-General of the Navy from 1886 to his retirement in 1928. He was an exceptional critical botanist with a particular interest in *Fumaria*, *Euphrasia* and *Hieracium* and made a significant contribution to the 1939 Flora as a referee and proof-reader. Poor health bought about by the war took him to Combe Martin in North Devon in March 1944 where he stayed until May 1945. During this period of recovery he was able to explore the area more thoroughly than had been possible for the *Flora of Devon* and, in 1946, his 'Flora of Combe Martin' was published in *Transactions* (Pugsley 1946). F.R.E.Wright (1879–1966) served for a period as Senior Ophthalmic House Surgeon at St. Thomas' Hospital, London from 1904 but moved to Braunton soon after and entered general practice. His fascination with natural history in general and Braunton Burrows in particular lead to the publication of *Braunton, a few nature notes* in 1926. He also made valuable contributions to *The Fauna and Flora of the Ilfracombe District of North Devon* (Palmer 1946). He had a particular interest in Lundy and published three articles on the flora of the island in the *Journal of Botany* (Wright 1933, 1935, 1936) and the endemic Lundy Cabbage *Coincya wrightii* was named for him (Wright 1936). Elliston Wright played a major role during the public enquiry in 1951 concerning the use of Braunton Burrows by the armed-forces and the establishment of Braunton Burrows as a National Nature Reserve has been largely credited to him (Harvey 1967).

The first 'dot-maps' based on the Ordnance Survey national grid, replaced less precise mapping methods after 1945. The Botanical Society of the British Isles (BSBI) launched a project to map the whole of the British Flora at the 10-km (hectad) level in 1954 and the results were published as *The Atlas of the British Flora* (Perring & Walters 1962). Records for Devon provided by The Devonshire Association and its members were refereed by Keble Martin. County botanical groups soon followed this with various county floras mapped at the 2-km (tetrad) level, allowing better interpretation of the plant distribution in relation to local conditions. The Devonshire Association took up the challenge in 1969 and published *The Atlas of the Devon Flora* (Ivimey-Cook 1984). In spite of its shortcomings noted in the Plan of the species accounts it, together with the 1939 *Flora of Devon*, is the bedrock of this volume. The Atlas should not be mentioned without reference to Molly Spooner who must have worked tirelessly throughout much of the county to ensure maximum coverage. She made over 95,000 individual plant records, almost 40,000 more than any other recorder.

Throughout the post-war period to the present day the Botany Section has continued to record plants and to publish records in *Transactions*. Following Gordon Fraser's death, F.M.Day (1943–1945), T.Stevenson (1946 & 1947), W.K.Martin (1948–1958), C.M.A.Cadell (1959), O.Greig (1960–1962), V.M.Wilkinson (1963 & 1964), J.J.Hayward (1965–1985) and L.J.Margetts (1986–2004) held the position of Recorder of vascular plants; since when this author has held the post.

Captain Oscar Greig (1889–1969) was a pilot observer during the 1914–1918 war. He survived being shot down by Manfred von Richthofen, the Red Baron, but was held as prisoner of war for over a year. He escaped from his final prison in Silesia, just before the war ended and made it home in thirteen days, just in time for Christmas. He worked closely with Keble Martin and, in addition to becoming a good botanist, collected a remarkable 30,000 flints (now at **RAMM**) by field walking around his home at Throwleigh. Greig collated all the records made between 1940 and 1957, following the publication of the Flora, but these exist today only as a small number of manuscript copies. Martin was of the opinion these records should have been published. Greig took his own life in 1969 but there are no obituaries from the time. He has become better known more recently following the publication of *Throwleigh: pictures and memories from a Dartmoor Parish* (Paget 2006). His war diaries are kept at the Imperial War Museum in London.

John J. Hayward (1922–2003) was Headmaster at Littleham Junior School in Exmouth for 27 years during which time he wrote books on Dartmoor and wild-flowers and ran courses for various botanical societies during school holidays. He was vascular plant recorder for The Devonshire Association for 21 years. Perhaps his most valuable contribution, beyond maintaining excellent records during his incumbency, was the development of a series of keys for the identification of wild plants during Botany Section field meetings. Gordon Waterhouse (pers. comm. 2015) writes “He worked for years at producing a plant key from his own observations and would bring the rough drafts on our botanical meetings to test them out”. These keys were eventually published (Hayward 1987). It was reprinted by the Field Studies Council in 1995 as part of their AIDGAP project and is on the highly recommended list chosen by a panel of botanists consulted by Andrew Branson (Branson 2015), particularly for its treatment of such confusing groups as forgetme-nots, bedstraws, grasses and dandelion look-alikes. His guide to Dartmoor, *Dartmoor 365* (Hayward 1991), first published in 1991, has never been out of print.

T.J. (Tom) Wallace (1912 to 2001) settled in Devon after his demobilisation early in 1946. A favourite uncle had lived at Rousdon and he quickly became well acquainted with the Axmouth-Lyme Regis Undercliffs, then always referred to as The Landslip. Little was known of the area’s biological interest even though The Landslip was about to be declared a National Nature Reserve, and he set about recording in great detail, often with the input of specialist groups that included The Devonshire Association’s Botany Section. Over the course of about half a century, Wallace was to lay the basis for our current knowledge not only of the site’s botany but of the Landslip’s ecology as a whole. Wallace took a degree in biology at Exeter University where he stayed on as a post-graduate under Professor John Caldwell, with whom he published an autecology of the Wild Daffodil (Caldwell & Wallace 1955). His work on the ecological botany of Dawlish Warren led to a wider study of the fungi of sand dunes, a field in which he was an acknowledged authority. He took up a teaching post at Allhallows School in Rousdon during the period 1957–1969 by which time he had become the first Voluntary Warden of the Undercliffs for the Nature Conservancy Council. He was a founder, first Secretary and a Council Member for 25 years of the Devon Trust for Nature Conservation and, at one time, also the Secretary of The Devonshire Association’s Botany Section and contributed a significant number of records to the Atlas of the Devon Flora.

W.H. (Bill) Tucker (1922–2009) studied classics at St.John’s College, Oxford, taught at King’s School, Rochester, Kent and, from 1956, at Shebbear College in North Devon where he stayed until his retirement in 1982. In January 1938, shortly before his sixteenth birthday he began to write a nature journal. He continued to write the journal for the next seventy years, including the time that he served in the British Army during the Second World War in North Africa and Italy. He was a very active member in the Botany Section of The Devonshire Association and acted as the Secretary from 1964 to 1971. He contributed thousands of records to *The Atlas of the British Flora* and the *Atlas of the Devon Flora* and many of his records were published in the annual Reports in the *Report and Transactions of the Devonshire Association*. He was BSBI Recorder for North Devon (VC4) from 1983 to 2001, and collated all the vice-county records for the *New Atlas of the British and Irish Flora* (Preston, Pearman & Dines 2002).

L.J. (Len) Margetts (1923–2016) moved to Honiton in Devon in 1983. By this time Len had decades of botanical experience and was one of the best critical botanists of his generation. Early experience, during the 1950s in

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Bedfordshire under the guidance of John Dony, was followed by 22 years in Cornwall where he was BSBI Recorder for VC1 (West Cornwall) from 1968. During his time in Cornwall he specialised in difficult and critical groups including *Euphrasia*, *Fumaria*, *Hieracium*, *Rubus* and *Taraxacum*. This culminated in the *Review of the Cornish Flora* 1980 which he co-authored with Dick David (Margetts & David 1981). This was followed by *The difficult and critical plants of the Lizard District of Cornwall* (Margetts 1988) and *The Cornish flora supplement* 1981–1990 (Margetts & Spurgin 1991). In Devon he took on the role as Vascular Plant Recorder for The Devonshire Association from 1986 where his critical approach had an immediate and positive impact on botanical recording in the county. In addition to his annual Reports on Botany published in Transactions he also produced the first reports on *Taraxacum* and *Hieracium* for Devon and the first report on *Rosa* in Devon that follows modern ideas. *Taraxacum margettsii*, endemic to Devon and Cornwall, was named for him by Chris Haworth (Haworth 1990), and in 2007 he named *Taraxacum ronae*, known from Cornwall, Devon and eastern Ireland, to honour his wife Rona (Margetts 2007). A more complete profile of Len's life and contributions as a botanist can be found in Spurgin (2011) when Len was made an Honorary Member of BSBI.

Laurence (Laurie) M. Spalton (1920–2011) spent a successful career as pharmacist before retiring to Budleigh Salterton in 1979. Still full of energy, he quickly developed a new interest in the local wild flowers. He was Chairman of the Botany Section from 1994 to 1996 and was BSBI Recorder for South Devon (VC3) from 1994 to 2001. His time as Recorder coincided with a period of intensive recording for the *New Atlas of the British and Irish Flora* (*ibid.*) and, together with Len Margetts, he made an overwhelming contribution to the coverage of South Devon. At the end of this project he developed a particular interest in the genus *Bromus*, corresponded with international experts and published notes and papers in BSBI News and *Watsonia*. A more detailed account of his life can be found in the BSBI Year Book for 2002.

With the exception of Pugsley (1946) *A Provisional Floral and Habitat Atlas of Plymouth* (Stevens 1990) is the only published example of a local Flora in Devon since the 19th century. All vascular plants, bryophytes and fungi and their habitats within the boundary of the city of Plymouth are mapped at the 500 metre level. The Atlas is the result of a Manpower Services Commission Community Programme, 'Habitat 87' which was based in the Department of Biological Sciences at Plymouth Polytechnic (now Plymouth University) between July 1987 and September 1988. The cost of publication was offset by the Nature Conservancy Council (now Natural England). Andy Stevens was Nature Conservation Officer in the Planning Department of Plymouth City Council.

Members of The Devonshire Association have continued to take part in all the more recent BSBI surveys including those for the *Scarce Plants in Britain* (Stewart, Pearman & Preston 1994), *British Red Data 1 Vascular Plants* (Wigginton 1999), *New Atlas of the British and Irish Flora* (*ibid.*), *Change in the British Flora* (Braithwaite, Ellis & Preston (2006) and a *Vascular Plant Red List for England* (Stroh *et al.* 2014). In addition to these, and, as noted in the 'Plan of the species accounts', there was no intention of re-recording the vascular flora at any level, but since this project was first mooted in 2004 every tetrad in the county has been visited at least once by one or more of a small number of enthusiastic Devonshire Association Botany Section members. All records have been made available to BSBI for inclusion in the next national Atlas of all British and Irish records planned for 2020.

Roger Smith