

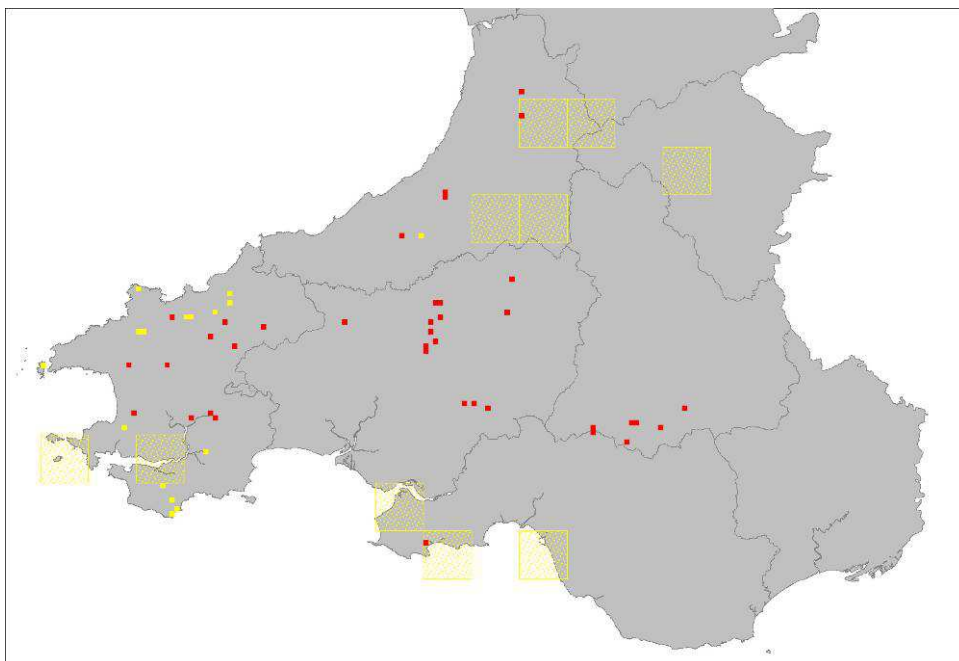
## *Usnea articulata* in Wales: a rare species on the move

Sam Bosanquet

The beard-lichen *Usnea articulata* is both very rare and very distinctive, making it one of the higher profile lichens on the Section 42 list. Indeed its long-pendant thalli – hanging or snagged among twigs – are noticeable even from a moving car. Its identification and historic range in Wales are detailed on <http://wales-lichens.org.uk/species-accounts/usnea-articulata> and are repeated below.

Most of the Welsh population of *Usnea articulata* is in Pembrokeshire, but even there it is sparsely distributed and seldom encountered. At least 10 colonies were thought to be extant in the county by 2010, including those at Stackpole NNR and Llangloffan NNR that include two or three separate sub-colonies. The BLS database also includes undated older records from SM70 and SM90. Three Glamorgan sites were known when the *Glamorgan Flora* was written in 1994: at Whiteford Burrows, Pennard Burrows and Kenfig Burrows. The Cardiganshire population at Hafod was last seen in the 18<sup>th</sup> century, and other colonies in SN55, SN65, SN75 and SN87 have also been lost, as has the only Radnorshire population in SO06. These inland losses are thought to result from Sulphur Dioxide pollution, although some may have been small and/or transient if the current situation is anything to judge by. *Usnea articulata* has been included on Section 42 of the NERC act, making it a species of “principal importance for conservation of biological diversity in Wales”, because of its rarity in Wales and the significant loss of historic sites.

Set against these losses, the discovery of more than 30 new sites for *Usnea articulata* in the last five years is little short of astonishing. Almost half come from the under-worked county of Carmarthenshire, with others in Pembrokeshire, Glamorgan, Cardiganshire and Breconshire. The new easternmost sites in southern Breconshire are very close to the industrial valleys of south Wales and are surely an indication of new colonisation rather than being relicts, whilst the reported population at Penllergaer is within a stone’s throw of Swansea, although it may be the result of a typing error (see below). The new colonies are mostly in windy, exposed situations on hillsides or in open valleys, albeit mostly on the leeward sides of trees; a few are more sheltered. Their distribution seems relatively random, albeit with clusters in Brechfa Forest (where SB lives), on the Carmel ridge, and in the southern Brecon Beacons. At the same time, Bob Haycock (pers. comm.) reports that *U. articulata* is “doing well” on roadside trees in the Martletwy area of Pembrokeshire (SN00) and is also seen regularly on Hawthorn in north Pembrokeshire, so the core population seems to be increasing. The discovery of further populations seems almost inevitable, although it is not really practical to actively search for *U. articulata* because it is so localised and so unpredictable: it is better just to remain ever-vigilant and to keep scanning tree-tops.



Details of the populations are given below, with new colonies in black font and known ones in grey

Glamorgan (v.-c. 41): SS 4 9, Whiteford Burrows, *Flora of Glamorgan* record, details unknown.

Glamorgan (v.-c. 41): SS 5 8, Pennard Burrows, terricolous in dune system, *Flora of Glamorgan* record, recorded until at least 1979.

Glamorgan (v.-c. 41): SS 50358 87551, Oxwich Middle Pond, 2 tufts on Alder, Sam Bosanquet 2011.

[Glamorgan (v.-c. 41): SS 628 983, Penllergaer Valley Woods, Kevin Davies 2009/2010. It is very peculiar that *U. articulata* is included in the list of species recorded, but no reference is made to it anywhere in the text despite a full paragraph on the importance of *U. florida*, and it is not included in any of the target notes. Thus there is considerable doubt over the accuracy of this record, which may just result from its accidental inclusion whilst typing up the species list.]

Glamorgan (v.-c. 41): SS 7 8, Kenfig Burrows, *Flora of Glamorgan* record, recorded until at least 1985.

Breconshire (v.-c. 42): SN 85410 10973, Gors Llwyn Onllwyn SSSI, 10cm tuft on Willow (photo below left); SN 85474 11025, Gors Llwyn Onllwyn SSSI, 20cm tuft on Willow (photo below right); SN 85504 11046, Gors Llwyn Onllwyn SSSI, 15cm tuft on Willow, Sam Bosanquet 6<sup>th</sup> June 2012.



Breconshire (v.-c. 42): SN 9237 0840, Craig y Ddinas, large weft 3m up Hawthorn, Graham Motley 28<sup>th</sup> November 2012 (photo below left); SN 92360850, Craig y Ddinas, a few tufts among other *Usnea* species ca. 2.5 m up Larch by forest ride, Graham Motley 28<sup>th</sup> November 2012 (photo below right).



Breconshire (v.-c. 42): SN 93 12 to SN 94 12, Gwaun Hepstre (near Ystradfellte), Jon Hudson & Nick Hudson 21<sup>st</sup> October 2012 and Sam Bosanquet & Graham Motley 1<sup>st</sup> November 2012.

SN 9342 1256	20cm tuft snagged in Hawthorn below Larch	SB & GM
SN 9367 1279	15x15cm tuft on Larch on NW edge of plantation (photo below left)	JH & NH
SN 9392 1243	30cm tuft snagged 5m up Larch on edge of plantation	SB & GM
SN 9401 1239	100cm strip 30 cm long on lower branch of Larch on SE edge of plantation (photos below right)	SB & GM
SN 9410 1211	20cm tuft snagged on Larch	SB & GM
SN 9411 1210	10cm tuft on Larch	SB & GM



Breconshire (v.-c. 42): SN 991 117, Taf Fawr Forest (Sycamore Grove), 1 tuft 2.5m up Larch, Graham Motley, 27<sup>th</sup> November 2012.

Breconshire (v.-c. 42): SO 047 159, Pont y Llwyn, Taf Fechan Forest (just north of Pentwyn Reservoir), 20cm tuft on lowest branch of Larch near edge of mixed broadleaved/conifer plantation, Graham Motley, 6<sup>th</sup> November 2012.

Radnorshire (v.-c. 43): SO 0 6, BLS database record, details unknown.

Carmarthenshire (v.-c. 44): SN 339 334, Pant-y-pedyll, Maudland, 3 tufts on roadside Hawthorn, Alison Wheeler 24<sup>th</sup> February 2013 (photos below).



Carmarthenshire (v.-c. 44): SN 5018 2803, Maes-y-pant, 5 tufts on Hawthorn in middle of field opposite Maes-y-pant track, Sam Bosanquet 6<sup>th</sup> February 2013.

Carmarthenshire (v.-c. 44): SN 5043 2731, Mynydd Bryn-bugail, 30cm tuft on roadside Hawthorn, Sam Bosanquet 13<sup>th</sup> November 2012 (photos below).



Carmarthenshire (v.-c. 44): SN 5109 3155, Brechfa Forest above Cnwc-y-llwyn, 25cm tuft in roadside Oak, Sam Bosanquet 2010 (photos below).



Carmarthenshire (v.-c. 44): SN 5181 3398, Pant-y-Rhyg, Brechfa, 1 tuft in roadside Rowan, Sam Bosanquet February 2012.

Carmarthenshire (v.-c. 44): SN 5262 2907, above Gilfach-y-rhiw, Horeb, 5 tufts on roadside Hawthorn, Sam Bosanquet 5<sup>th</sup> November 2012 (photos below); SN 5265 2917, above Gilfach-y-rhiw, Horeb, 1 tuft on roadside Hawthorn, Sam Bosanquet 2<sup>nd</sup> February 2013 (photos below).



Carmarthenshire (v.-c. 44): SN 52 37, Cwm Blotweth, on 7 Hawthorns, Alison Wheeler, February 2013.



- |            |              |  |
|------------|--------------|--|
| Location 1 | SN 5287 3729 | On Hawthorn                                      |
| Location 2 | SN 5290 3721 | On Hawthorn                                      |
| Location 3 | SN 5292 3740 | On Hawthorn                                      |
| Location 4 | SN 5292 3741 | On Hawthorn                                      |
| Location 5 | SN 5292 3746 | 10+ large tufts in windy Hawthorn (photos above) |
| Location 6 | SN 5307 3755 | On Hawthorn                                      |
| Location 7 | SN 5309 3728 | On Hawthorn                                      |

Carmarthenshire (v.-c. 44): SN 537 346, Esgair-ffynwent, Gwernogle, 20+ tufts in windy Hawthorn bushes, Michelle Hanna det. Sam Bosanquet 11<sup>th</sup> February 2012 (photo below).



Carmarthenshire (v.-c. 44): SN 5693 1501, Llyn Llech Owain SSSI, one large tuft and a few scraps on one Willow, Sam Bosanquet 28<sup>th</sup> August 2013 (photo below).



Carmarthenshire (v.-c. 44): SN 58 16, Pwll Edrychiad, Carmel, on 6 Hawthorn bushes, Jamie Bevan 2006 & 2012 (photos below).

Location 1	SN 5844 1617	Numerous large tufts on old Hawthorn (photo below left)
Location 2	SN 5837 1621	2 large tufts on old Hawthorn
Location 3	SN 5839 1618	ca. 20-30 cm tuft on old Hawthorn
Location 4	SN 5837 1617	ca. 20-30 cm tuft on old Hawthorn
Location 5	SN 5833 1616	ca. 20-30 cm tuft on old Hawthorn
Location 6	SN 5834 1611	ca. 20-30 cm tuft on old Hawthorn (photo below right)



Carmarthenshire (v.-c. 44): SN 606 166, Pant-y-llyn, 1 tuft on Hornbeam, Nigel Stringer.

Carmarthenshire (v.-c. 44): SN 639 151, Glynhir Mansion walled garden, 2 tufts in Apple trees, BLS October 2010.

Carmarthenshire (v.-c. 44): SN 6715 3140, Bryn-gwyn, Llansadwrn, festooned over Hawthorn and Oak, Theresa Greenaway 26<sup>th</sup> July 2013.

Carmarthenshire (v.-c. 44): SN 671 355, Pigyn Sion-Nicolas, abundant in one Rowan, Rosie Carmichael 14<sup>th</sup> April 2013.

Carmarthenshire (v.-c. 44): SN 6800 4270, Tre-beddau, Cwrt-y-cadno, 10 tufts on Hawthorn on field boundary, Sam Bosanquet 28<sup>th</sup> January 2013.



Pembrokeshire (v.-c. 45): SM 7 0, BLS database, details unknown.

Pembrokeshire (v.-c. 45): SM 70 24, Ramsey Island, details unknown, record until 2003 at least.

Pembrokeshire (v.-c. 45): SM 87 11, Rosemoor NR, details unknown, recorded in 1995.

Pembrokeshire (v.-c. 45): SM 887 249, Gignog Valley, 5 small tufts on Hawthorn & Blackthorn, Jon Hudson May 2013.

Pembrokeshire (v.-c. 45): SM 8924 1493, Rosehill, abundant in short Willow scrub, Jon Hudson 7<sup>th</sup> May 2011.

Pembrokeshire (v.-c. 45): SM 9 0, BLS database, details unknown.

Pembrokeshire (v.-c. 45): SM 90 31, Llangloffan Fen NNR, details unknown, recorded until 2005 at least.

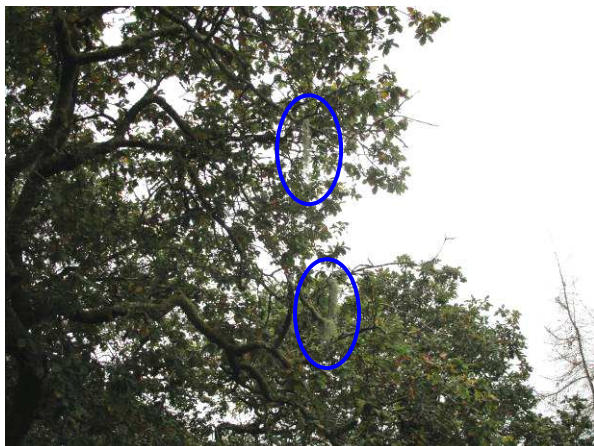
Pembrokeshire (v.-c. 45): SM 90 40, Porthsychan, mentioned in SSSI citation.

Pembrokeshire (v.-c. 45): SM 91 31, Llangloffan Fen NNR, details unknown, recorded until 2002 at least.

Pembrokeshire (v.-c. 45): SM 9602 2445, Treffgarne Gorge, abundant on hybrid Black Poplar, Jon Hudson 20<sup>th</sup> December 2011.

Pembrokeshire (v.-c. 45): SM 97 34 (details below), Esgyrn & Llanwern, large & small tufts on at least 15 trees of 6 species, Sam Bosanquet & Jon Hudson 23<sup>rd</sup> October 2012.

SM 9708 3494	2 large tufts in Oak canopy (photo, viewed from track up to Esgyrn Farm)
SM 9709 3495	5 tufts in Oak canopy, 1 in Rowan & 1 in Hawthorn
SM 9731 3495	1 scrap on Oak branch
SM 9732 3497	1 large tuft on Hawthorn on field edge
SM 9736 3493	2 large patches on Oak
SM 9740 3495	1 tuft on Willow on field edge
SM 9744 3489	1 small tuft on Oak
SM 9753 3486	2 tufts in Oak canopy
SM 9755 3488	1 very large tuft in Sycamore canopy (photo, viewed from Llanwern parking area)
SM 9756 3486	1 tuft in Ash canopy
SM 9758 3492	2 small tufts in Sycamore
SM 9763 3483	1 large tuft on Oak & 1 small tuft on Willow





Pembrokeshire (v.-c. 45): SN 009 342 to SN 010 342, Kilkiffeth Wood, “common in Blackthorn scrub” at top of wood & outside SSSI, Matt Sutton 2000; SN 0095 3422, SN 0124 3413, SN01283412, Kilkiffeth Wood, Pat Wolseley 2007; SN 013 343, Kilkiffeth Wood, “very strong, extending into the willow carr on the valley bottom”, Bernie Stevens 2012 (photo right).



Pembrokeshire (v.-c. 45): SN 0102 1343, Picton Castle, 1 tuft on ornamental *Prunus*, Trevor Theobald, 20<sup>th</sup> February 2013 (photo below left); SN 0130 1354, Picton Castle, 1 tuft fallen from Oak or *Nothofagus* (growing together), Trevor Theobald, 20<sup>th</sup> February 2013 (photo below right); SN 012 135, 1 tuft on Oak in Peep-in Garden, Picton Castle, Janet Atkinson 10<sup>th</sup> April 2013.



Pembrokeshire (v.-c. 45): SN 04 06, Scotland Wood, details unknown, recorded in 1987.

Pembrokeshire (v.-c. 45): SN 05 34, Dyffryn Gwaun SSSI, details unknown.

Pembrokeshire (v.-c. 45): SN 05225 30152, Ty Rhyg, abundant on one Larch, Huw Denman det. Theresa Greenaway, August 2012.

Pembrokeshire (v.-c. 45): SN 0593 1464, Blackpool Mill, in small quantity, Jon Hudson May 2012.

Pembrokeshire (v.-c. 45): SN 0657 1330, Bluestone, *ca.* 20 tufts in Hawthorn by ruined church, Sam Bosanquet 1<sup>st</sup> February 2013 (photos below); SN 0659 1343, Bluestone, 1 tuft on low branch of Oak in village centre, Sam Bosanquet 1<sup>st</sup> February 2013 (photo below).



Pembrokeshire (v.-c. 45): SN 085 338, Tafarn-y-bwlch, in windy Hawthorn bush, Jon Hudson 2010.

Pembrokeshire (v.-c. 45): SN 09 37, Coed Tycanol NNR, details unknown, recorded in 1973.

Pembrokeshire (v.-c. 45): SN 09 39, Coed Llwyngorras, details unknown, recorded in 1977.

Pembrokeshire (v.-c. 45): SN 106 285, Maenclochog north-east, 2 large patches in roadside Hawthorn, Jon Hudson May 2013.

Pembrokeshire (v.-c. 45): SN 1618 3246, Gweunydd Blaencleddau, 15+ tufts in Hawthorn, Jon Hudson 20<sup>th</sup> May 2013 (photos below).



Pembrokeshire (v.-c. 45): SR 9562 9916, Orierton, known for many years (photo below by Clive Hurford).



Pembrokeshire (v.-c. 45): SR 97 93, Mere Pool Valley, recorded until at least 2007.

Pembrokeshire (v.-c. 45): SR 97 96, Lodge Wood carr, recorded until at least 2007.

Pembrokeshire (v.-c. 45): SR 98 94, Stackpole Warren, recorded until at least 2007.

Cardiganshire (v.-c. 46): SN 4574 5158, Rhos Garn Whilgarn, “a small tangle wrapped round a branch ca. 15ft up a Larch and three diminutive strands to c. 4cm at eye-level on the same tree”, Steve Chambers 2012.

Cardiganshire (v.-c. 46): SN 49 51, Rhos Glyn-yr-helyg, on willow in bog, recorded until 1989.

Cardiganshire (v.-c. 46): SN 5467 5981, Maes-y-crugiau/Trychrug south, 10 tufts in windy Hawthorn bushes & 3 tufts in Oak on opposite side of road, Sam Bosanquet 17<sup>th</sup> November 2011; Trychrug SN545600, 1 tuft in Willow, Steve Chambers 2011.



Cardiganshire (v.-c. 46): SN 6 5, BLS database record, details unknown.

Cardiganshire (v.-c. 46): SN 7 5, BLS database record, details unknown.

Cardiganshire (v.-c. 46): SN 7 7, Hafod, large specimens collected in 1780s by Smith.

Cardiganshire (v.-c. 46): SN 705 817, near Nantyrarian, NE of Goginan, five strands, the best c. 18cm long, in two Hawthorns on exposed ffridd-type pasture, Steve Chambers, 23<sup>rd</sup> March 2013.

Cardiganshire (v.-c. 46): SN 7076 7636, track to Pond Rhosrhydd near Trisant, E of Devil's Bridge, 3 tufts on low branch on SE side of windy Hawthorn bush on very windy valley head, Steve Chambers 21<sup>st</sup> December 2012.

Cardiganshire (v.-c. 46): SN 8 7, BLS database record, details unknown.

Merionethshire (v.-c. 48): SH 8067 2385, Allt y Benglog, in good quantity on Oak trunk including on several adjacent trees, Simon Davey 2002; SH 8072 2378, Allt y Benglog, on Oak trunk, Simon Davey 2002.

Merionethshire (v.-c. 48): SH 7 2, Nannau, on dead Hawthorn & nearby Oak high on a ridge, Ray Woods & Jo Clark 2011.