

Sedum villosum (Hairy Stonecrop) in Banffshire v.c. 94

S. villosum is a low growing, pink flowered, fleshy leaved, perennial, sometimes biennial plant, reproducing by offsets and seed (Clapham et al 1987, Braithwaite 1994).

Its typical habitat is described as “stony bryophyte-dominated flushes that are only slightly base-rich, often on rather level ground beside streams amongst species-poor hill grassland or heather moorland” (Braithwaite 1994). In Cumbria, the species’ typical habitat is described as “rather open, stony flushes although it also occurs amongst mosses in small sykes” (rivulets) (Halliday 1997) and in North Aberdeenshire as “flushes and marshes” (Welch 1993). It is not reported from highly calcareous flushes, eg. the moss *Cratoneuron commutatum* (*Palustriella commutata*) is described as infrequent, and *Galium uliginosum* (Fen Bedstraw) described as a typical associate in some areas, is the closest to a rich-fen species amongst those listed by Braithwaite.

Nationally, *S. villosum* is classified as *Near Threatened* (Cheffings and Farrell 2005) and *Nationally Scarce* (JNCC 2009). It was recorded from 95 hectads in GB in the period 1987 – 1999 (Preston et al 2002), with a change index of -0.76 . In Scotland alone, the change index was -0.98 , (Preston et al 2006).

In Banffshire, it is classed as *County Scarce* (Amphlett 2010), having been recorded from 7 tetrads since 1980. Here, it was first recorded in 1860, at Bogbraes (NJ6956) and Blackburn (NJ7154), 8 – 10 km south of Banff. In all, it has been recorded from 20 localised sites in 9 – 11 hectads in the county (Fig. 1, Table 1). Since 1990, it has only been recorded in 3 hectads, at just 2 localised sites. It was last recorded in the county in 1997 at Morinsh (NJ252303).

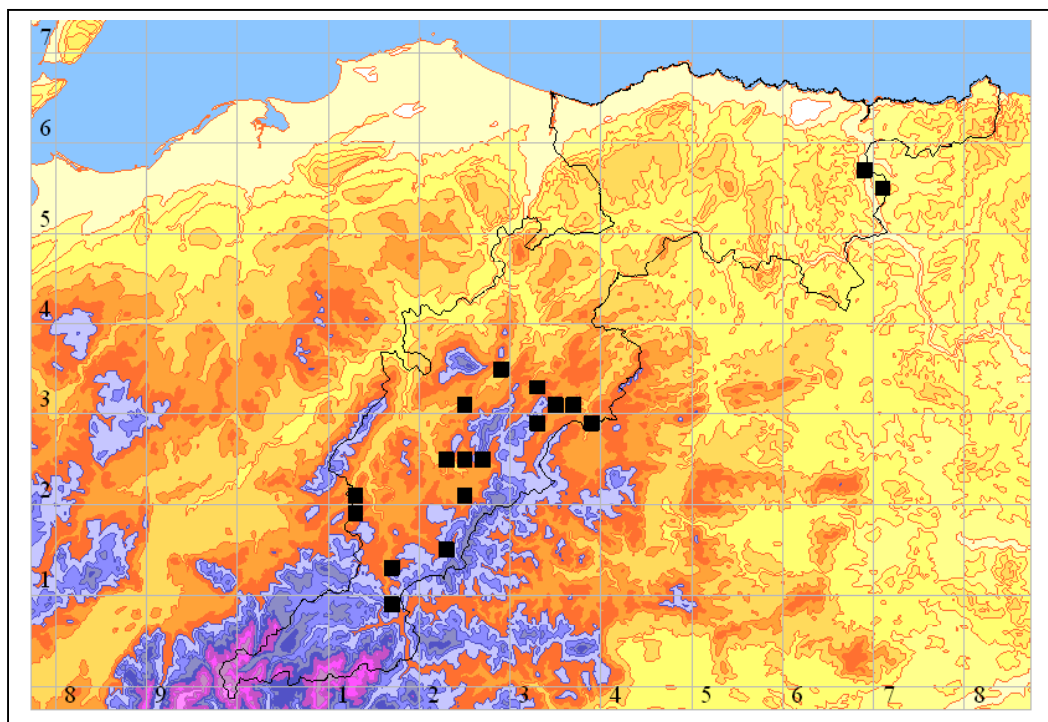


Fig. 1. Tetrad distribution of *Sedum villosum* in Banffshire. All localised records are shown. Relief shading is at 50 m intervals up to 200 m AOD, then at 100m intervals. Areas above 500 m AOD are in blue, and above 900 m in pink (Digital Map Data Copyright © Bartholomew 2007). The vice-county boundary is shown as a black line (© All rights reserved. National Biodiversity Network Trust and Crown Copyright 2003).

At 15 of the 20 sites, *S. villosum* has only been recorded once. While in part this may reflect the generally low level of plant recording in the county, it is also suggestive of populations being transient at some individual sites. Of 7 sites where the record provides information on the habitat, 5 were by rivers or burns (one record refers to damp shingle). It is plausible to speculate that these were transient populations originating from seed or plants washed down from source populations higher upstream.

Assuming that each recorded population persisted between the date of first record and the most recent, it is possible to infer the minimum number of recorded sites present in the county in each decade (Fig. 1, below left). Apart from the 2 records from 1860, all other localised records were made post 1950. There were peaks in the number of recorded sites in the 1960s and 1980s. However, to better interpret this pattern, account has to be taken of variability of recording effort. One measure of this effort is the combined number of individual plant records, of all species, made in each decade in the hectads in which *S. villosum* has been recorded. Dividing the number of sites in Fig. 1 by the number of plant records per decade, gives a measure of frequency of extant sites, calibrated for recording effort (Fig. 2, below right).

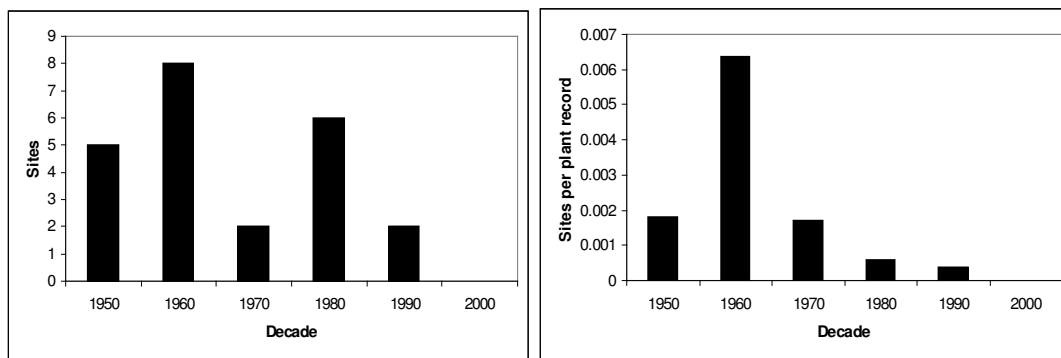


Fig. 1 (above left). Estimated number of extant recorded sites of *S. villosum* per decade, 1950 – 2009. Fig. 2 (above right). Estimated number of extant recorded sites of *S. villosum* per decade, 1950 – 2009, calibrated for recording effort.

The calibrated site data suggest that the high number of recorded sites in the 1980s may have been the product of increased recording effort, and that there has actually been a pronounced downward trend in number of sites since the 1960s. In Banffshire, 10 of the 20 localised sites have been re-visited since 2000, and *S. villosum* has not been re-found at any of them. This result is in line with the GB and Scottish Change Indices, both of which are negative. In the 100 km OS grid square NJ, in NE Scotland, *S. villosum* has been recorded from 26 hectads, but in 17 of these (65%) not since 1986 or earlier, and only in one hectad has it been recorded since 2000 (<http://www.bsbimaps.org.uk/atlas/main.php> - accessed 31/01/2010). In southern Scotland, Corner (2010) states that *S. villosum* “has lost ground throughout the Borders”. In North Aberdeenshire (v.c. 93), Welch (1993) says that *S. villosum* is “now rare and confined to uplands”. Earlier statements that the species is likely to still be present in upland hectads where there are no recent records (Braithwaite 1994, Croft 2002), appear, in the absence of evidence to the contrary, overly optimistic.

In Banffshire, the two 19th-century sites were at less than 100 m AOD. Of the other 18 localised sites (found post 1950), altitude can be estimated for 17; median 350 m (IQ range 330 – 380 m, range 250 – 450 m). The species is reported up to 1100m AOD in the Breadalbanes (Croft 2002), but has not been recorded from montane sites in Banffshire.

Further efforts to re-find this species in Banffshire are a survey priority.

References

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Hectad	Gridref	Year	Site Name	Recorder	Comment
NJ10	NJ1609	1975	River Avon below Foal's Craig	P. Harrold	
NJ11	NJ11	1968	Tombreck Muckle Fergie Burn	A. McG. Stirling BSBI Field Meeting M. McCallum Webster	Damp river shingle Record not localised (Tomintoul area) Flushes Date class 1987 - 1999
	NJ127193	1969			
	NJ11	1983			
	NJ1613	1983			
	NJ11	1987+			
NJ10 or NJ11		1912	Kirkmichael Parish	Burgess, Mr. J.J.	
NJ12	NJ1220	1905	Glen Brown	Rev E.S. Marshall	Site may have been in NJ11
	NJ120210	1986	Bridge of Brown	Tidswell, R.	Grid ref overlaps the v.c. 94 / 95 boundary
NJ21	NJ235153	1966	Well of Lecht	J. Rogerson	
	NJ247193	1969	Scalan	A.J. Souter	
	NJ21	1996	Glenlivet / Ladder Hills	J. Edelsten & E.S. Bruce	
NJ22	NJ274246	1956	Upper Glenlivet	A.J. Souter	Flushes Plentiful. A good place at Chapeltown filled in when distillery built. Over 100 plants
	NJ258204	1966	Corrunich Farm	J. Rogerson	
	NJ2524	1968	Upper Glenlivet	M. McCallum Webster	
	NJ243210	1969	Chapelton	A.J. Souter	
	NJ235249	1982	Allanreid	E.S. Bruce	
	NJ235249	1992	Allanreid	E.S. Bruce	
NJ22	1994	Allanreid	J. Edelsten		
NJ23	NJ23SE	1980	Milltown of Laggan	M. McCallum Webster	Cart track at ford
	NJ285344	1982	Milltown of Laggan	P. Somerset Ward & J. Cameron	
	NJ252303	1997	Morinsh	M. Canham	
NJ24	NJ24	1912	Aberlour Parish	White, Mr. J.	Aberlour town is in NJ24. Record probably refers to NJ23.
NJ32	NJ32	1912	Cabrach Parish	Craib, W.G.	Parish overlaps with v.c. 93
	NJ396294	1956	Corinancy	A.J. Souter	
	NJ32Z	1964	Bank of Corinacy	A.J. Souter	
	NJ3328	1983	Blackwater Lodge	M. McCallum Webster	
	NJ332288	1987	Allt na Bradan.	J. Edelsten & E.S. Bruce	
	NJ32J	1988	Blackwater Lodge area	J. Edelsten & E.S. Bruce	
NJ33	NJ33	1860	Mortlach Parish	Stewart, Dr. L.	Bank of artificial lochan
	NJ33SE	1954		M. McCallum Webster	
	NJ346303	1956	By Black Water	A.J. Souter	
	NJ367316	1956	Bridgend	A.J. Souter	
	NJ33	1974	Glen Fiddich	A.J. Souter	
	NJ3232	1983	Glen Fiddich	M. McCallum Webster	
NJ65	NJ6956	1860	Bogbraes	Todd, Rev. Dr.	
NJ75	NJ7154	1860	Blackburn	Todd, Rev. Dr.	

Table 1. Summary of *Sedum villosum* records, v.c. 94 (Banffshire).