

Charophytes in Staffordshire, VC39.

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Charophytes can be found growing (usually on silt, mud or peat) completely submerged in most still water habitats, such as ponds, lakes and reservoirs. They are often the first plant species to colonise newly dug (or cleaned-out) ditches and pools, including those in quarries or mineral workings: suffering a decline during the subsequent plant succession process. A few species can also be found in slow-moving streams or canals.

In general, charophytes are found where the pH lies between 6-9 (very slightly acidic, through neutral to slightly alkaline), although the range of tolerance varies between species (with a general trend for *Nitella* spp. to be found in more acidic situations than *Chara* spp.)

They have suffered a reduction in many counties (and in other countries) where water quality has deteriorated, as the result of nutrient pollution from higher levels of phosphates and nitrates.

There have never been any systematic surveys of Stoneworts in Staffordshire and many field botanists are either unfamiliar with, or otherwise ignore them. They are clearly grossly under-recorded, but their actual frequency is unknown.

In the treatment, that follows, all records known for Staffordshire are given. The presentation of each record is of the form:

Scientific name

(*Synonym used in 1986 Handbook, if different*)

English Name

Number of post-1994 records (if any).....Date of first record.....Status

List of all known records. (Names of individuals are abbreviated to initials, and names of vice-counties are omitted, in second and subsequent entries.)

Characeae

[The following record was only made to the family level, "*Characeae*":

Pond, Alrewas Quarry, SK1815, Tim Hextell & Fiona Wallis (Middlemarch Consultants), 2011.]

Tribe: CHAREAE

Chara L.

***Chara aculeolata* Kütz.**

(See comments on pp. 22-23 of the *Handbook* with respect to *C. hispida*.)

Hedgehog Stonewort

1 2010 Native

Chasewater Heaths SSSI, SK0308, M.F. Godfrey.

***Chara aspera* Dethard. ex Willd.**

Rough Stonewort

1930-1969 Native

There is a record in the BSBI database for SJ91.

Stubbers Green, Walsall, SK0401; and Wyrley & Essington Canal, SK0407: both J.D. Box, det. J.A. Moore, 1986.

Chara contraria A. Braun ex Kütz.

(*Chara vulgaris* var. *contraria* (A. Braun ex Kütz.) J.A. Moore.)

Opposite Stonewort

1 2004 Native

Eastern edge of Brittles Reservoir, N of Shatterford, J.J. Day & A.W. Reid, SO7982.

[A record in the BSBI database for SP29 and the period 1987-1999 is probably from Warwickshire, VC38 or Leicestershire, VC55.]

Chara curta Nolte ex Kütz.

(*Chara aspera* Dethard. ex Willd. var. *curta* (Nolte ex Kütz.) A. Braun ex Leonh.,)

Lesser Bearded Stonewort

?1987-1999 Native

Stowe Pool, Lichfield, SK1110, records at Natural England.

Chara globularis Thuill.

(*Chara globularis* Thuill. var. *globularis*)

Fragile Stonewort

1 1897 Native

Bagnall (1901) gives records (as *Chara fragilis*) for Knypersley Pools, Miss Thompson; near Gnosall; near Oulton.

There is a record in the BSBI database for SJ95, 1930-1969.

Penkhull, SJ8644, N. Bowles, 1984.

New pond to N of Broughton Pool, SJ7930, A. Leak, S.J. Whild, MFG & A.J. Lockton, det. N.F. Stewart, 2002.

[Records in the BSBI database for SK10, SP09 & SP19 and the period 1930-1969 are probably from Warwickshire, VC38; with one from SK12 likely to be for VC57. An entry for SJ73, 1987-1999 may either have been in Staffordshire or VC40, Shropshire.]

Chara hispida L.

(*Chara hispida* L. var. *hispida*)

Bristly Stonewort

1798 Native

Abundant, ditches in Forton Moor, near Aqualate Mere, S. Dickenson.

Garner (1844) has this species for "Betley and Aqualate. Plentiful".

Bagnall (1901) offers for the species: Betley, *Garner*; at the bottom of a spring in a meadow at Gayton, Stokes (in *Withering*); Forton Moss, *Dickenson* in *Shaw*.

Chara tomentosa L.

Coral Stonewort

1798 Error

Only known from lakes on the limestone of central Ireland: vice-counties H9, H15 & H23.

Listed by *Shaw* for the Needwood Forest. Edees disallowed the record in his "Additions to the Comital Flora".

Chara virgata Kütz.

(*Chara globularis* var. *virgata* (Kütz.) R.D. Wood)

Delicate Stonewort

1930-1969 Native

This species can withstand more acidic situations than most taxa of *Chara*.

There is a record in the BSBI database for SK12.

Field pool, S of Shutt Green, SJ8709, B.R. Fowler, det. J.A. Moore, 1982.

***Chara vulgaris* L.**

Common Stonewort

2

1798

Native

Bagnall (1901) offers for this species: gravel-pit at Blymhill, *Dickenson* (in *Shaw*); and, under his own authority: near Mayfield; pool near Little Hay; Spittle Brook Mill, abundant.

H.P. Reader in the 1925-26 *Transactions* gives the species for “canal, Great Haywood”.

Ridge in *The North Staffordshire Flora* just states “Fairly common in ponds”.

Birley Spoil Mounds, Apedale Community Country Park, SJ8249, C.J. Hayes & R.N. Hill, 1983.

Cop Mere, SJ8029, L. Carvalho, S. McGowan, S. Kilinc & B. Moss, 1992.

Sugnall Park, SJ7930, MFG, 2010.

Doxey Marshes Nature Reserve, SJ9024, MFG, 2010.

[A record in the BSBI database for SJ70 and the period 1930-1969 is probably from VC40; with one from SK22 likely to be for VC57. An entry for SO77 is likely to be from VC37, Worcestershire or VC40.

Some other specimens were determined to varietal level:

Chara vulgaris* var. *vulgaris

1

1981

Native

The first six records were all determined by J.A. Moore:

Quarry seepage, Saltwells, Dudley, SO9387, JAM.

Pool in ironworks spoil, Burley, Apedale, SJ8249, RNH, 1982.

Stanton, CJH, 1983.

Six inch square clump, not fully submerged, on mud, streamside, Penn Common, SO8994, BRF, 1986.

A few, newly made pool, waste land, Sheepwash Lane, Great Bridge, SO9791, BRF, 1987.

A few, tiny pool above Fauld Crater, SK1827, BRF, 1987.

SE of Deepmore Farm, SJ9208, A. Maxwell, V. Brooks & D. Cadman, conf. MFG, 2012.

***Chara vulgaris* var. *longibracteata* (Kütz.) J. Groves & Bull.-Webst.**

2

1982

Native

Pool on disused colliery site, Deepfields, Bilston, SO9495, BRF, det. JAM.

Broughton Pool, SJ7930, AL, SJW, MFG & AJL, det. NFS, 2002.

Pond S of Branston, SK2220, M.E. Smith, det. NFS, 2011.

***Chara vulgaris* var. *papillata* Wallr. ex A. Braun**

1987

Native

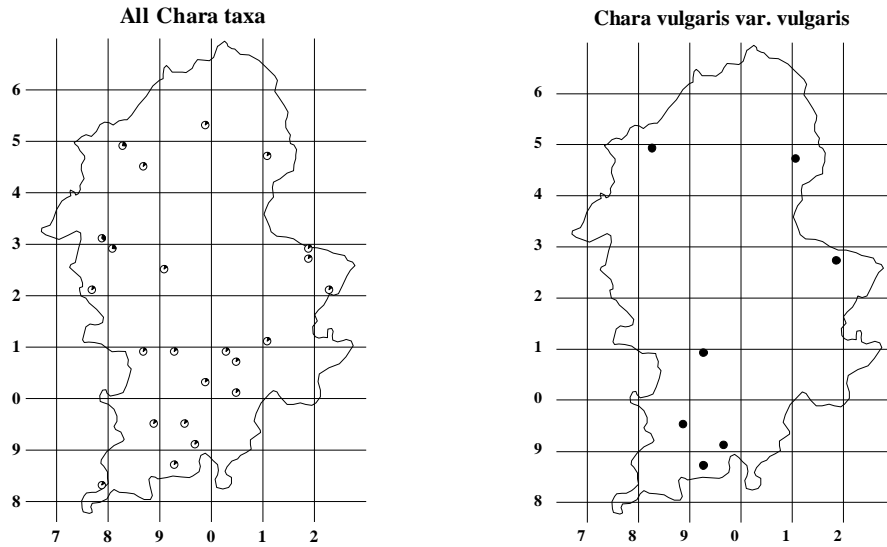
Frequent in a small pool, Fauld, SK1828, BRF, det. JAM.

[The following records were only made to the genus level, “*Chara*”:

Cop Mere, SJ8029, Adrian Hillman & Chris Walker (Natural England), 1992.

Occasional, Wyrley & Essington Canal, SJ9803, E.F. McKay & T. Teearu (SBI Resurvey: South Staffs), 1996.

River Churnet, Cheddleton, SJ9852, Nick Mott (OARP Survey), 1997.]



The above maps only include data for which four figure grid references are given above (with a date range 1981-2012).

Tribe: NITELLEAE Leonh.

Nitella C. Aghardh

Nitella flexilis (L.) C. Agardh

(*Nitella flexilis* (L.) C. Agardh var. *flexilis* sensu J.A. Moore)

Smooth Stonewort

3

1901

Native

Bagnall offers under this species heading: near Fradley Marl-pits, Power; near Milwich and Fradswell, abundant; Blymhill, *Shaw*.

Under the heading of *N. opaca*, records of which may also belong under *N. flexilis*, Bagnall listed: Fradley, H. & J. Groves; pool in Sherbrook Valley, abundant.

Ridge in *The North Staffordshire Flora* gives “Ditches, Stoke-on-Trent *Garner*”; and “near Rushton”.

Locally abundant, No Man’s Bank, SK0209, M. July, Natural England, 1986.

White Sitch, SJ7912. E. Cohn, E. Skinner, VB & I.C. Trueman, 2010.

Pond, Quee Lane Farm fields, SK0830, J. Flanders, AM & DC, conf. MFG, 2011.

Wetley Rocks, SJ9549, D. Haslam, conf. MFG, 2012.

There are records in the BSBI database for SJ83, SJ91 & SJ95, all for the period 1930-1969.

[Records in the BSBI database for the period 1930-1969, in SJ85 & SP09, are probably from VC58, Cheshire and VC38, respectively. Entries for the period 1970-1986 that occur for SJ72 and SJ74 are likely to refer to sites in VC40 and in VC40 or VC58, respectively.]

Nitella translucens (Pers.) C. Agardh

Translucent Stonewort

1844

Native

Garner offers “Deep pools at Hatherton”.

Bagnall (1901) repeats the *Garner* claim, and also gives, on his own authority, “pit at Tipton”.

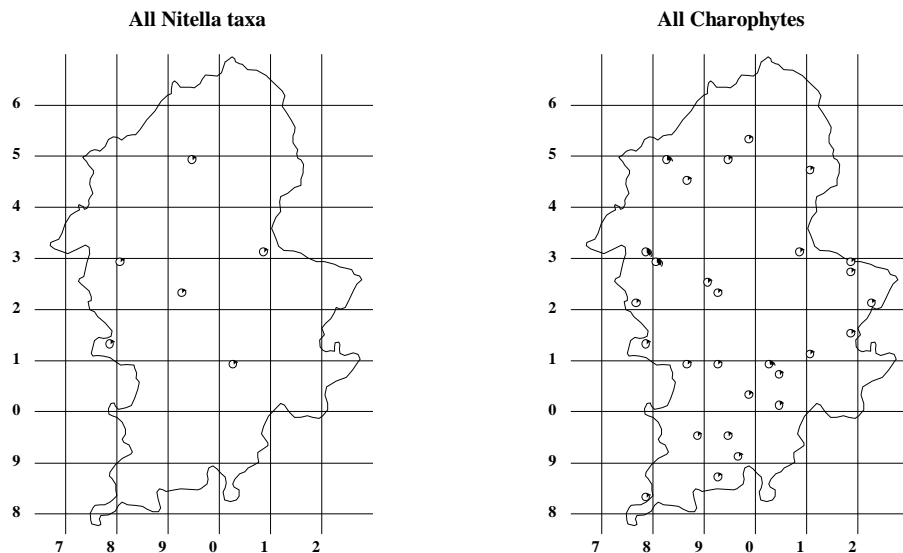
There is a record in the BSBI database for SJ95, for the period 1930-1969.

[A record in the BSBI database for SJ70Z from before 1930 is almost certainly from VC40, whilst one for SJ70 is probably also from that vice-county.]

[The following records were only made to the genus level, “*Nitella*”:

Cop Mere, SJ8029, Natural England (recorder unknown), 1979.

Frequent, land off Tixall Road, SJ9322, AM, VB & DC (SBI Resurvey, Phase 2), 2012.]



The above maps only include data for which four figure grid references are given above (with a date range 1979-2012).

References

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Gazeteer

Aqualate Mere	SJ7720	Betley	SJ7447
Blymhill	SJ8012	Forton Moss	SJ7521
Fradley	SK1513	Fradswell	SJ9732
Gayton	SJ9828	Gnosall	SJ8220
Great Hayward	SJ9922	Hatherton	SJ9510
Knypersley Pools	SJ8955	Little Hay	SK1202
Mayfield	SK1545	Needwood Forest	SK1623
Oulton	SJ7822	Rushton	SJ9362
Sherbrook Valley	SJ9818	Spittle Brook Mill	SO8487
Stoke-on-Trent	SJ8745	Tipton	SO9692