Charophytes in Staffordshire, VC39.

John E. Hawksford & Ian J. Hopkins 2013 Revised & Updated 2022

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 in second and subsequent entries.)

Characeae

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.

1926

Chara aspera Dethard. ex Willd.

Rough Stonewort

Native

Cannock Chase, SJ9816, G.C. Druce. Stubbers Green, Walsall, SK0401; and near Chasewater Reservoir, Wyrley & Essington Canal, SK0407: both J.D. Box, det. J.A. Moore, 1986, **BM**. Chara contraria A. Braun ex Kütz. (Chara vulgaris var. contraria (A. Braun ex Kütz.) J.A. Moore.) **Opposite Stonewort** 1999 3 Native Daw End Canal, SK0300, P.M. Wade, det. N.F. Stewart. Stowe Pool, SK1109, NFS, 2002. Eastern edge of Brittles Reservoir, N of Shatterford, J.J. Day & A.W. Reid, SO7982, 2004. *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. Daw End Canal, SK0300, PMW, det. NFS, 1999. Stowe Pool, SK1109, NFS, 2002. Chara globularis Thuill. (Chara globularis Thuill. var. globularis) Fragile Stonewort 1835 Native 5 Needwood Forest, SK12, Babington, C.C., BM. Rudyard Reservoir, SJ95, Searle, H., 1884. BM. Bagnall (1901) gives records (as *Chara fragilis*) for Knypersley Pools, Miss Thompson; near Gnosall; near Oulton. Penkhull, SJ8644, N. Bowles, 1984. New pond to N of Broughton Pool, SJ7930, A. Leak, S.J. Whild, MFG & A.J. Lockton, det. NFS, 2002, BIRM. Near Copmere, SJ7930, MFG, 2003, det. NFS. Belvide Reservoir, SJ8510, B. Goldsmith & J. Salgado, 2011, det. NFS. Belvide Reservoir, SJ8609, E. Shilland & J. Shilland, 2007 & 2014; also BG & JS, 2011. All det. NFS. Belvide Reservoir, SJ8610, NFS, 2007; also ES & JS, 2007 & 2014, det. NFS; also BG & JS, 2011 & 2014, det. NFS.

Chara hispida L. (Chara hispida L. var. hispida) Bristly Stonewort

Native

Abundant, ditches in Forton Moor, near Aqualate Mere, SJ7720, S. Dickenson.

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

1798

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

1

1860-1929 Native

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

Irish Pool, Needwood Forest, SK12, BM.

Field pool, Leafield Farm, S of Shutt Green, Brewood, SJ8709, B.R. Fowler, det. JAM, 1982. **BM**. Chillington Pool, SJ8505, T. Holland, 2013.

Chara vulgaris L.

Common Stonewort 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". Stanton, SK14, C.J. Haynes, det. JAM, 1983, BM. Birley Spoil Mounds, Apedale Community Country Park, SJ8249, C.J. Hayes & R.N. Hill, 1983. Recently made pool, Great Bridge, SO9791, BRF, det. JAM, 1987. Cop Mere, SJ8029, L. Carvalho, S. McGowan, S. Kilinc & B. Moss, 1992. Penn Common, SO89, J. Hooley, det. NFS, 2001. Belvide Reservoir, SJ8610, ENSIS, 2007; also BG & JS, 2011: both det. NFS. Pool Dole, E of Fenton, SJ9044, M. Woods, 2010. Byrkley Park, SK1623, MW, 2010. Sugnall Park, SJ7930, MFG, 2010.

Doxey Marshes Nature Reserve, SJ9024, MFG & RNH, 2010.

Belvide Reservoir, SJ8510, BG & JS, det. NFS, 2011.

Some other specimens were determined to varietal level:

Chara vulgaris var. vulgaris

1 1920 Native

Great Hayward, SJ92, STO.

Baswich, SE of Stafford, SJ9422, P.P. Thornton, 1923, STO.

Quarry seepage, Saltwells, Dudley, SO9387, JAM, 1981, BM.

Pool in ironworks spoil, Burley, Apedale, SJ8249, RNH, det. JAM, 1982, BM.

Stanton, SK1146, CJH, det. JAM, 1983, BM.

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

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

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

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, **BM**. Broughton Pool, SJ7930, AL, SJW, MFG & AJL, det. NFS, 2002, **BIRM**. Pond S of Branston, SK2220, M.E. Smith, det. NFS, 2011.

Chara vulgaris var. papillata Wallr. ex A. Braun

Native

Sinai Park, Burton, SK22. Also Outwood Hills, Burton. Both J.E. Nowers, **BM**. Frequent in a small pool, Fauld, SK1828, BRF, det. JAM, 1987, **BM**.

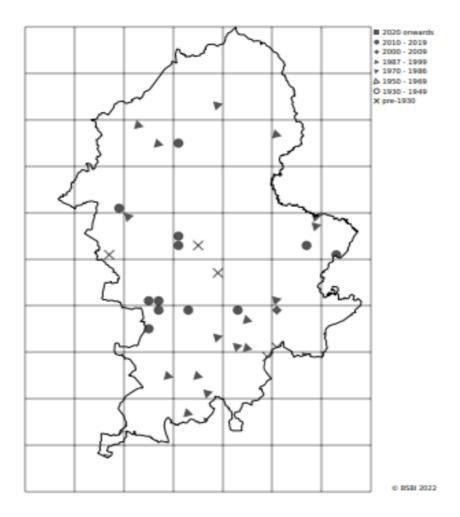
1891

Occasional, Wyrley & Essington Canal, SJ9803, E.F. McKay & T. Teearu, 1996.

River Churner, Cheddleton, SJ9852, N. Mott, 1997.]

[[]The following records were only made at the genus level, *Chara* L.: Cop Mere, SJ8029, A. Hillman & C.Walker, 1992.

All Chara Taxa



Tribe: NITELLEAE Leonh.

Nitella C. Ahgardh

Nitella flexilis (L.) C. Agardh

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

1850

Smooth Stonewort

Native

Cotes Heath, SJ8335, CCB, BM.

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

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

There is a record in the BSBI database for Cannock Chase, SJ91, 1926.

Locally abundant, No Man's Bank, SK0209, M. July, 1986.

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

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

Wetley Rocks, SJ9549, D. Haslam, ES, VB & ICT, det. MFG, 2012.

Nitella opaca (C.Agardh ex Bruzelius) C.Agardh Dark Stonewort

1884 Native

Rudyard Lake, SJ95, C.J. Wilson, **BM**.

Serpentine, Biddulph, SJ85, F.P. Thompson & R.F. Thompson, 1890, **BM**. 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.

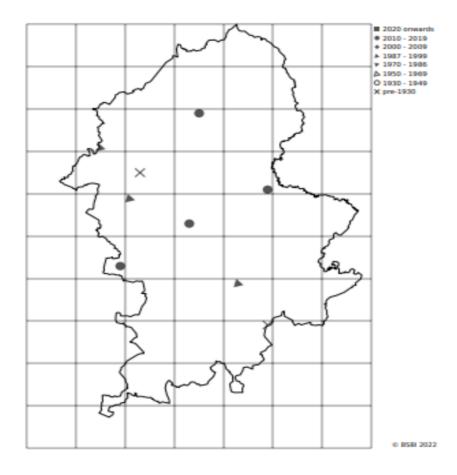
Nitella translucens (Pers.) C. Agardh

Translucent Stonewort

1844 Native

Rudyard Lake, SJ95, HS, det. H. or J. Groves, **BM.** Garner offers "Deep pools at Hatherton".

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



All Nitella Taxa

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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	Milwich	SJ9732
Needwood Forest	SK1623	Oulton	SJ7822
Rushton	SJ9362	Sherbrook Valley	SJ9818
Spittle Brook Mill	SO8487	Stoke-on-Trent	SJ8745
Tipton	SO9692		