



Nottingham
City Council

Nottinghamshire Vice County 56

Rare Plant Register 2nd Edition

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The Rare and Scarce Vascular Plants of Nottinghamshire Vice County 56

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Front Cover photographs: *Hypochaeris glabra* at Besthorpe (Steve Hammonds)
Dactylorhiza viridis at Teversal (Ken Balkow)

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Introduction

This is the second edition of the register that provides details of the distribution and abundance of rare, scarce and threatened plants found in Vice County 56 Nottinghamshire. The register is intended to contribute to the national initiative of the Botanical Society of the British Isles (BSBI), which aims to produce rare plant registers for all of the Vice Counties (VC) of the British Isles.

The register includes records of plants recorded between 1970 and 2015 and the last known records of plants, which are now extinct in the county, if the records are pre-1970. Although this is a relatively long period of time it is considered to be necessary, because it is now 50 years since the publication of the last County Flora by Howitt & Howitt (1963). The only other publication since 1963 being a flora of the City of Nottingham, written by Dr. P. Shepherd and published in 1998.

Although there has been relatively little by way of published works relating to Nottinghamshire's plants, extensive survey work has been carried out by individuals and organisations, which has contributed to the production of this register. It is anticipated that publication of this register will provide a baseline to continue with and promote further survey work so that the distribution and abundance of the plants in this register will continue to be studied and better understood. In addition, the register will provide for conservation organisations, local authorities and individuals information regarding those species at risk and requiring protection; those species that are vulnerable to declines and may need protection, and those species that have already become extinct. In order to be an effective tool for the conservation of rare and scarce plants this register will be updated at periodic intervals and re-issued electronically on the BSBI website.

In the latter part of the 20th Century, industrial development and agricultural intensification has had a profound impact on the flora of the county. The west of the county and the Trent valley has been particularly affected by industrial development including surface and underground mineral extraction and the construction of power stations. Sherwood Forest has lost much of its heathland, because of afforestation and intensive arable farming on the more productive soils. Agricultural intensification has modified farming systems on the Lias Clays and Keuper Marls leading to a significant reduction in livestock farming and large-scale conversion to rotational arable systems. A noticeable impact of this conversion has been the removal of hedgerows in order to increase field sizes and maximise efficiency. A further outcome of agricultural intensification has been the general eutrophication of soils and aquatic ecosystems.

In recent years there have been successful efforts by conservation organisations, land-owners and land-managers to reverse some of the adverse impacts described above and to conserve rare and scarce plants as part of larger initiatives to promote biodiversity. This has coincided with a greater public awareness of conservation and environmental issues, and a greater desire to see environmental improvements and protection of wildlife. For example, the colliery spoil tips have provided opportunities to create new habitats. The cessation of deep mining has also seen the return of higher water tables, which has aided the restoration of wetlands and rivers in the county. Other initiatives include heathland restoration on previously afforested land and the reinstatement of traditional management of semi-natural habitats such as low-intensity grazing. The sympathetic management of semi-natural habitats is being supported by a general trend towards larger scale conservation schemes that link up the County Wildlife Sites and Statutory Sites of Nature Conservation interest, which are often isolated islands of biodiversity. The Environmental Stewardship Scheme has provided financial assistance for landowners and land-managers to facilitate some of the initiatives that are described above.

The County

In the last county flora, Howitt & Howitt (1963) described Nottinghamshire as being a fairly typical Midlands county and although lacking dramatic landscapes was not without its own charm. The rivers of the county dominate the landscape, particularly the River Trent, which drains most of the county. Low rolling hills adjoin the river valleys in the south, west and central parts of the county. Elsewhere the lands to the east and north are relatively flatter with occasional hills that form prominent landscape features.

Nottinghamshire has a varied geology that was separated into divisions by Professor J. W. Carr in the Victoria County History. Howitt & Howitt subsequently adopted the divisions for their 1963 County Flora. The divisions are still useful to this day and form the basis for understanding the distribution of plants within the county. The divisions include Permian Marls, Coal Measures and Dolomitic Limestones; Bunter Sandstones; Keuper Waterstones and Marls, and Lias Clays.

Howitt & Howitt (1963) provides a detailed but succinct description of the geological formations of the county and the flora that each geological formation supports. As the work is out of print and no longer readily available, it is considered that the inclusion of a brief description of the geology and land use is appropriate in order to provide an insight into the modern distribution and abundance of the rare and scarce plants of the county.

In broad terms the bedrock geology of Nottinghamshire is relatively simple, consisting of a succession of rock formations, from oldest in the west to youngest in the east, which outcrop in a series of belts running the length of the county (Figure 1). In detail there are minor complications to this apparently simple arrangement which result from folding, faulting and overstep. For botanical purposes the bedrock succession can be conveniently grouped into four principal divisions, each yielding a specific range of soil types and plant habitats. A fifth division covers superficial deposits of Glacial and Recent age (Figure 2).

I. Coal Measures and Permian Mudstones and Dolomitic Limestones

The Coal Measures and overlying Permian formations are confined to the western edge of the county, and although variable in composition, are here considered together because of their relatively restricted outcrop within the county. The Coal Measures consist chiefly of mudstones with subordinate siltstones, sandstones and coals, giving rise to a topography characterised by rolling hillsides and small river valleys. The legacy of coal mining has left behind it a heavily industrialised landscape with sprawling settlements intermingled with farmland. One of the most significant features of the landscape are the numerous colliery spoil tips, and there are also extensive areas of post-industrial brownfield land that are of botanical interest and provide a reservoir for wildlife in built-up areas. The Coal Measures dip eastward beneath younger formations, and this concealed part of the coalfield has been exploited from a number of deep mines situated well to the east of the Coal Measures outcrop. The sites of these collieries are marked by large spoil tips.

In the north, the Rivers Meden and Maun flow east towards Sherwood Forest. Both rivers join the River Idle, which is a significant tributary of the River Trent. The rivers are relatively small and of moderate flow-rate. They are now slowly recovering from the legacy of deep coal mining, the surface expression of which has had a significant impact on the quality and quantity of the water they carry. The River Erewash, which forms part of the county boundary, flows south to the River Trent at Attenborough and has similarly suffered from the same adverse impacts of coal mining.

Rocks of Permian age include Mudstones and Siltstones of the Edlington and Roxby formations (formerly named the Middle and Upper Permian Marls respectively), and Dolomitic Limestones of the Cadeby and Brotherton formations (formerly the Lower and Upper Magnesian Limestone). Both the Permian and Coal Measures Mudstones and Siltstones produce acid to circum-neutral, poorly drained clays that are of limited value for growing arable crops. As a consequence, livestock farming is still fairly frequent in the area. Permanent grasslands are a common feature, but very few examples of semi-natural Coal Measures and Permian Mudstone/Siltstone grasslands still exist.

Dolomitic (Magnesian) Limestones support arable farming where the topography is favourable, giving rise to calcareous loams that are suitable for growing a variety of crops, with cereals being the most prevalent. The well-bedded Dolomites of the Cadeby Formation have long been quarried for building stone, roadstone and agricultural lime. There are a few natural rocky Limestone outcrops, such as are found at Creswell Crags and Pleasley Vale, which support semi-natural grassland and woodland habitats, but it is the disused quarries, dismantled railway lines and river valleys that support most of the remaining semi-natural limestone habitats within the county. Unmodified sections of these rivers support a characteristic emergent flora dominated by branched bur-reed *Sparganium erectum*.

Woodland cover in this division is patchy, but there are some areas with significant tracts of woodland. The Annesley and Warsop areas support several ancient woodlands that overlie the Coal Measures and Permian Mudstones. Many have been coniferised, but extensive areas of broadleaved woodland still exist and in places are of significant botanical interest with species such as wood barley *Hordelymus europaeus*, herb paris *Paris quadrifolia* and columbine *Aquilegia columbinum*. Woodlands on the limestone are less common, but are of equal botanical interest and support species such as nettle-leaved bellflower *Campanula trachelium*, large-leaved lime *Tilia platyphyllos* and Solomon's seal *Polygonatum multiflorum*.

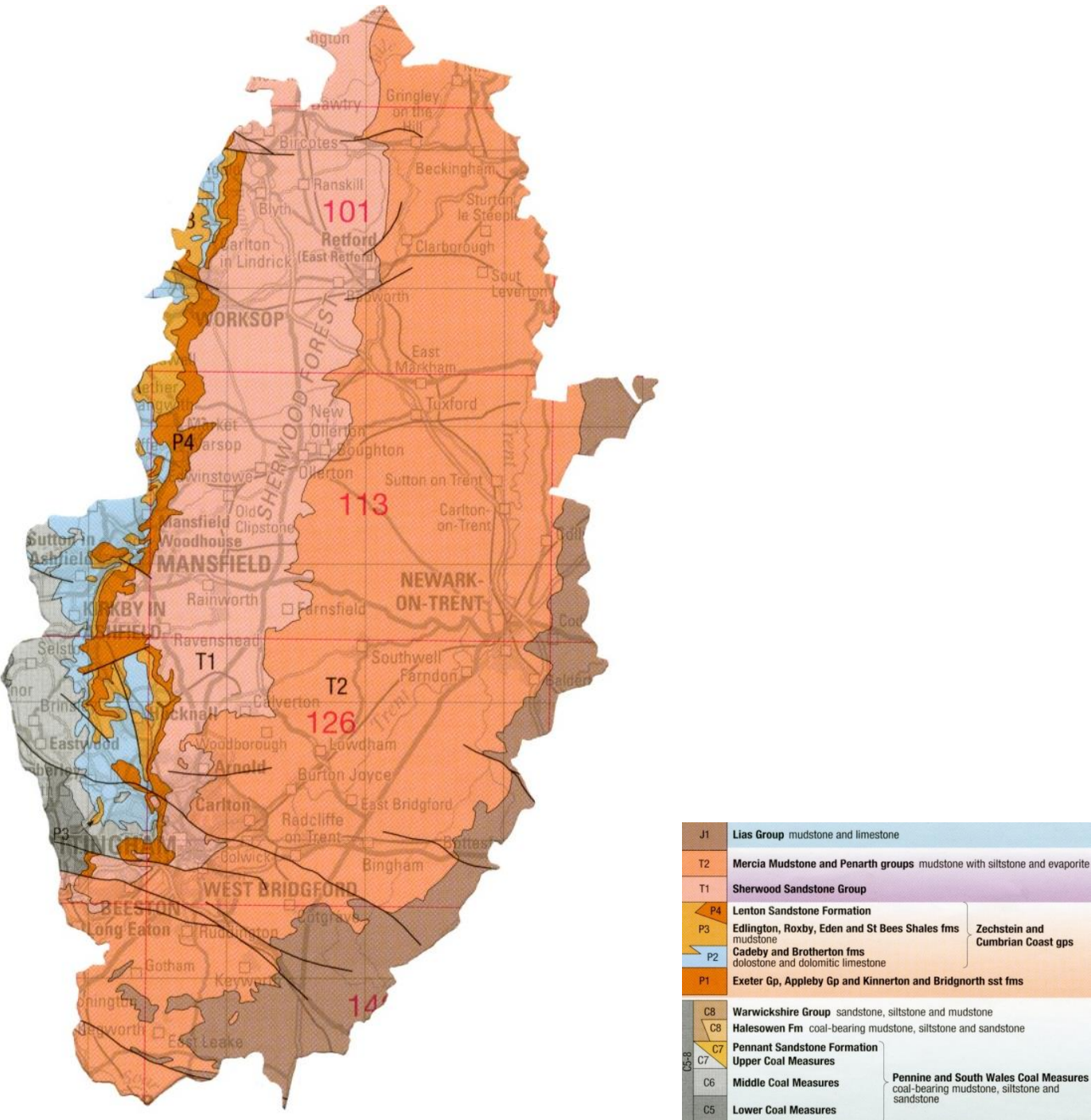


Figure 1. Nottinghamshire bedrock geology

Extracted from British Geological Survey 1:625 000 scale Bedrock Geology map, 5th ed. 2007. (CP13/031 British Geological Survey © NERC. All rights reserved. Topographic base map © HarperCollins Publishers Ltd. 2007).

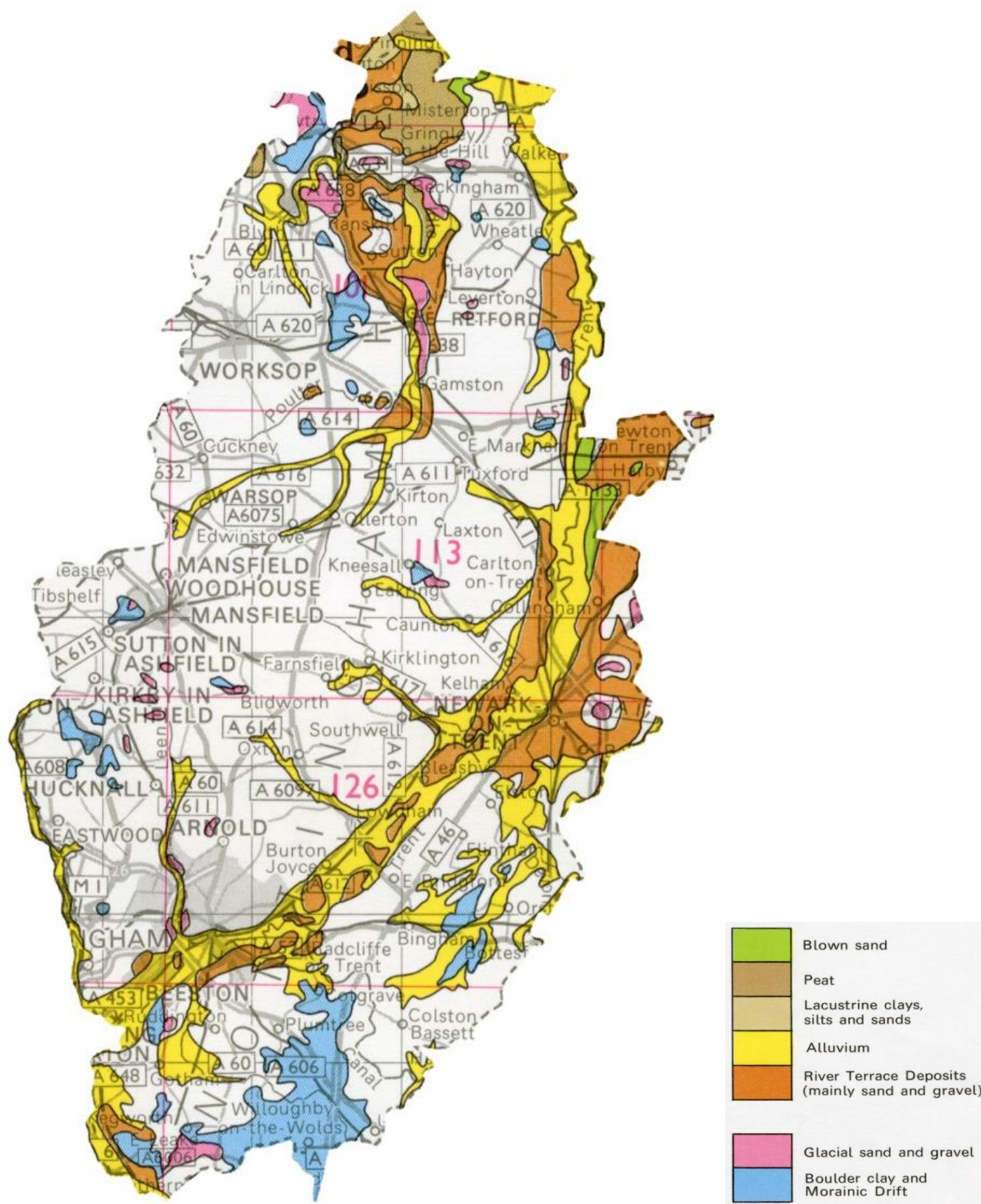


Figure 2. Nottinghamshire superficial geology

Extracted from British Geological Survey 1:625 000 scale Quaternary map, 1977. (CP13/031 British Geological Survey © NERC. All rights reserved. Contains Ordnance Survey data © Crown copyright & database rights 1977).

II. Permo-Triassic Sandstones

The Sherwood Sandstone Group (formerly named the Bunter Sandstone) and Lenton Sandstone Formation (formerly Lower Mottled Sandstone) together, occupy a belt of land stretching northward from Nottingham into Yorkshire, with an outcrop width of up to 14km. A large part of the division underlies Sherwood Forest, an area of approximately 40,000 ha that was Royal Forest until the end of the sixteenth century. Up to the beginning of the twentieth century the sandy soils of this area supported extensive areas of heathland, acid grassland, open birch woodland and bracken. Following the break-up of the Royal Forest, much of the land passed into the ownership of a few families and areas such as Welbeck, Osberton, Thoresby, Rufford and Clumber Park became known as the Dukeries. To this day Osberton, Thoresby and Welbeck are still privately owned estates. The National Trust purchased Clumber Park, whereas the Rufford estate was sold off piecemeal with Nottinghamshire County Council taking over the gardens and ruins of the hall and abbey.

During the twentieth century the Forestry Commission and private landowners afforested vast areas of heathland. More productive soils were agriculturally improved and converted to arable cropping maintained by repeated inputs of artificial fertiliser. The legacy is a landscape of large conifer woodlands and relatively large arable fields with poor, scrubby hedgerows. Despite the widescale changes, rare and scarce plants have managed to persist on the scattered fragments of heathland, woodland rides, sand pits and other marginal lands. In recent years there has been a major change in woodland policy, which has seen a return to heathland at the expense of conifer plantations, along with targeted management of semi-natural habitats. This change of policy appears to be having a beneficial impact on the characteristic plants of the area, with heathland, acid grassland and ruderal habitats all significantly increasing their extent over the last decade.

The rivers Meden, Maun, Ryton, and Rainworth Water flow across the Sherwood Forest area, draining eastward to join the rivers Idle and Trent. There are few rare plants associated with the rivers, but the estates through which some of the rivers flow have created lakes by damming the rivers in close proximity to the Great Houses. The margins of the lakes add to the local botanical interest and in some cases support county rare species such as wood club rush *Scirpus sylvaticus* and wild celery *Apium graveolens*. The River Leen also flows through the Sherwood Forest area, but originates at the south end of the Forest and, unlike the other rivers, flows in a south-westerly direction from Newstead towards Nottingham, where it joins the River Trent at Lenton. The margins of the river support a fairly species-rich botanical assemblage, and where the river traverses the Permian dolomitic limestone, rare plants such as whorl grass *Catabrosa aquatica* can be found.

III. Mercia Mudstone Group

This group of formations, formerly named the Keuper, consists predominantly of red-brown mudstones with a significant sandstone at its stratigraphical base (Sneinton Formation, formerly named Keuper Waterstones) and numerous indurated siltstone and sandstone 'skerries' which form upstanding topographic features. The group is of wide extent and occupies half of the county. It underlies the Trent Valley from Nottingham to Newark, but for the most part gives rise to a rolling rural landscape dotted with small villages. Nowadays the land is mostly arable, being used for cereal and rape crops. The remaining areas of wetter land that still support grassland are fragmented and confined to small fields, many of which are grazed by ponies rather than farm livestock. The Sneinton Formation occupies the western area of the Mercia Mudstone outcrop; its flaggy sandstones and siltstones give rise to an undulating incised topography yielding a light, slightly acid clay soil that supports 'heathy' semi-natural vegetation with species such as hard fern *Blechnum spicant* and heath milkwort *Polygala serpyllifolia*. Woodlands are most prevalent on the slopes of scarps and tend to be oak-birch dominated with fern-rich field layers. The mudstones which form the greater part of this group yield slightly calcareous silt and clay soils, which support a calcicolous semi-natural flora. Gypsum has long been either mined or quarried from various horizons in the Mercia Mudstone, but most operations have been confined to the south-eastern edge of the outcrop, between Gotham and Newark, where former opencast workings provide a substrate for semi-natural calcareous grassland.

The woodlands, which are often located on the wetter clay soils, are some of the most botanically diverse in the county, with a mixed canopy of tree and shrub species subject to local variation. Some of the richest woodlands in the county are located on the Mercia Mudstone and rare and scarce species such as greater butterfly orchid *Platanthera chlorantha*, small teasel *Dipsacus pilosus* and bird's nest orchid *Neottia nidus-avis* are present. Between Nottingham and Southwell there are several fern-rich strips of broadleaved woodland, which occupy narrow gorges known as Dumbles. These are small streams, which run over skerry beds and cut through the softer clays. In places they are impenetrable, but they can support a diverse flora represented by both calcicoles and calcifuges.

IV. Lias Group

This group is located along the southern and eastern margin of the county and consists of grey mudstone with bands of flaggy grey limestone. The mudstone weathers to sticky clay, which is calcareous. The semi-natural grasslands of this group support a typical calcareous grassland flora which has a similar suite of species to the Permian dolomitic limestone assemblages, but there are more species normally associated with the south of England. Arable land supports cereal production and there are species in this division, such as spreading hedge parsley *Torilis arvensis*, night-flowering catchfly *Silene noctiflora* and corn gromwell *Lithospermum arvense*, that are absent or very rare elsewhere in the county. The limestones were formerly worked for the manufacture of hydraulic cement, most notably at Barnstone.

V. Superficial Deposits of Glacial and Recent age (Figure 2)

Nottinghamshire is relatively free of glacial deposits, but in the south of the county a large sheet of glacial till (boulder clay of older usage) caps the Lias Group. This sheet, the Oadby Till, forms the Nottinghamshire Wolds, a rolling landscape of low hills. The flora is not dissimilar to that of the Lias mudstones, from which, in part, this silty-clay stony till is derived. Small, localised patches of till occur in other parts of the county, their composition commonly reflecting that of the underlying bedrock. The tills may be associated with small spreads and pockets of glacially-derived sand and gravel, which support an acid grassland flora.

The floodplain of the River Trent is characterised by neutral river gravels, which produce light sandy soils that support a heathy flora with species such as common cudweed *Filago vulgaris*. There are however extensive areas of calcareous gravels, which support a calcicolous flora similar to the assemblage that is found on calcareous mudstones adjacent to the floodplain. Virtually all of the semi-natural floodplain grasslands have been agriculturally improved in the last 50 years and nowadays support a species-poor sward, but relict areas of grassland can still be found on the margins of the numerous gravel-pits alongside the river.

Within the floodplain there are numerous gravel-pits, ox-bow lakes and borrow pits, which provide habitats for a diverse aquatic and wetland flora. Some of these areas were planted with willows, which supported a thriving basket industry until the start of World War II. Relic patches of willows *Salix* spp. are still found on the banks of the river and in marginal areas of the floodplain, species such as green-leaved osier *Salix x rubra* are indicative of relic willow holts. The tidal section of the River Trent is characterised by finer silts, which give rise to extensive areas of pasture grassland that is productive and relatively species-poor. The margins of the river that are not reinforced support an inundation flora that can be diverse, with a mix of species such as oak-leaved goosefoot *Chenopodium glaucum* and sea aster *Aster tripolium* adapted to both brackish and freshwater habitats.

The River Soar in the south of the county has similar characteristics to the Trent, but has been less modified in the latter part of the twentieth century. As a consequence, the margins of the river support extensive and diverse assemblages of emergent plants that are reduced to isolated fragments on the banks of the River Trent. Rare species associated with the River Soar include the only remaining population of shining pondweed *Potamogeton lucens* left in the county and greater duckweed *Spirodela polyrrhiza*.

To the east of the River Trent is an area of light soils associated with the former course of the Trent. The lightest soils are blown sands, which form inland dune systems and are of very limited agricultural use. The less mobile soils support a heathland type flora, which is stabilised by sand sedge *Carex arenaria*, which is characteristic of this area. The less stable areas and lightest soils support a range of rare and scarce species such as smooth cat's-ear *Hypochaeris glabra*, shepherd's-cress *Teesdalia nudicaulis* and blue fescue *Festuca longifolia*.

At the north end of the county is an area of fenland on the southern fringe of the more extensive fenland of Hatfield Chase and the Isle of Axholme. The area has an extensive cover of superficial deposits including alluvium, peat, blown sand, old river terrace and glacial deposits. The fenland has been much modified following drainage works started by Vermuyden in the seventeenth century. The land is drained by the rivers Idle, Torne, Went and Don, which before modification formed a complex pattern of channels and pools that were flanked by mires and swamp. Numerous drainage schemes since the seventeenth century have resulted in uniform, canalised river channels along with numerous field and flood drains, which rapidly transfer water into the River Idle and neighbouring flood channels. As a consequence the botanical interest is nowadays largely restricted to the drains and a few sites such as Misson Carr and Misson Line Bank, which have managed to escape wholesale modification. These sites support a large number of rare and scarce wetland and aquatic plants such as whorled water milfoil *Myriophyllum verticillatum*, lesser marshwort *Apium inundatum* and lesser water plantain *Baldellia ranunculoides*.

See Appendix IV for further details about the availability of geological information for Nottinghamshire.

Criteria for Inclusion in the Register

The register is separated into two sections. A total of 342 extant taxa are described in the register and details of 92 extinct (as a native) taxa are also included. The first section includes the extant and extinct taxa within the county. Extant taxa are listed under international, national and county criteria as being endemic, rare or scarce; or listed as occurring in IUCN categories; or are listed as Local Biodiversity Action Plan species. The first section also describes all of those species, which have been recorded in the county, but have become extinct. The decision to include extinct species is influenced by the re-appearance of taxa that were not recorded for over a century. Examples include grass-poly *Lythrum hyssopifolia* and small-flowered catchfly *Silene gallica*, which re-appeared in the VC after a gap of 271 years and 119 years respectively. The second section contains taxa that occupy more than ten 1km squares in the VC, but have showed obvious declines since 1970 or have a restricted distribution within the county. In both cases the taxa are vulnerable to losses and without protection are at threat of further decline. More detailed information regarding criteria for inclusion is provided at the beginning of each section. Appendix I summarises the conservation criteria for each species described in the text.

Since the first edition, a Vascular Plant Red List for England has been published, Stroh *et al* (2014) and the authors considered the inclusion of any additional species that were classified under IUCN criteria for England only. However, the various organisations involved with the conservation of plant species in Nottinghamshire have yet to adopt the new criteria and the inclusion of the English criteria in the main text is not perceived, at this stage, to be of any conservation benefit at county level. For example heather *Calluna vulgaris* and bell heather *Erica cinerea*, which are classified in England as 'Near Threatened', are still relatively common species in the Sherwood area and because of active intervention are expanding their range and abundance. In addition, virtually all of the sites containing heathland shrubs are protected through statutory or non-statutory designation. Future editions may take greater account of the English Red List and in recognition of its existence, the Appendix I checklist has been updated to include the species of conservation concern in England as well as those species that are of conservation concern both in England and the UK.

The register includes species, which are native in the British Isles, though not necessarily native in Nottinghamshire. In some cases, taxa have been included such as large leaved lime *Tilia platyphyllos* and whitebeam *Sorbus aria*, which have been recorded as both native and introduced in the county.

The botanical and common names follow the nomenclature of Stace (2010) and the species are arranged in alphabetical order.

Exclusions

There are some hybrids whose distribution is inadequately understood in the county and these have been omitted from the register. However, it is considered that the distribution of the hybrids that are included in this register is sufficiently understood to justify their inclusion.

Stoneworts *Characeae*, microspecies of Dandelions *Taraxacum* spp. and Brambles *Rubus* spp. have been omitted, because of the lack of targeted surveys in modern times. However, the lack of hawkweed *Hieracium* spp. records is because there are relatively few taxa occurring in the county and none of them fulfil any of the criteria for inclusion in this register.

Records and Recorders

The records contained in this register originate from a variety of sources, but the county recorder David Wood is responsible for the majority of the records, with lesser, but still valuable contributions from a large number of recorders. Records have also been collected by systematic recording at various geographic scales such as hectad recording for the BSBI National Atlas scheme, tetrad recording for the BSBI Local Change Project and Atlas 2020 project, and sites visits to County Wildlife Sites organised by the Nottinghamshire Biological and Geological Records Centre (NBGRC). Recording schemes carried out by other conservation organisations such as the Nature Conservancy Council and Nottinghamshire Wildlife Trust under various initiatives and schemes have also made a significant contribution to the work. After 47 years of recording there is now sufficient information to be confident that the distribution and abundance of the county's rare and scarce plants is relatively well known and any changes can be readily detected and updated each time a new edition of the register is prepared.

In some cases, the origin of records has been allocated to an organisation rather than an individual because the names of individuals were not recorded. For example, the Nature Conservancy Council (NCC) carried out systematic surveys of ditches and drains in the north of the county during the early 1980s and the Natural History Museum at Wollaton Hall organised county surveys in the 1980s. In both cases the archives do not always contain

the names of the recorders. The names of all of the recorders who have contributed to this register are listed in Appendix III.

Confidentiality

It is the policy of this register to try and provide the most detailed information available with regards to the distribution and abundance of rare taxa in the county. As a general rule, the location of plants is provided at 100m x 100m resolution, but there are exceptions. There are private landowners who do not wish to provide detailed locations of the whereabouts of plants on their land. In such cases plant records are provided at monad or hectad scale.

Many of the rare and scarce plants included in this register grow on private property and the publication of their locations does not provide a right of access without landowner permission. For the most part landowners are likely to grant access to visit sites with rare or scarce plant species upon receipt of a courteous request, but exceptions may occur because of considerations such as site safety.

Extant and Extinct Taxa

The extant taxa in this part of the register qualify under the following categories:

- Endemic to Britain (see Cheffings & Farrell 2005);
- Restricted distribution internationally (EC Habitats and Species Directive Annex IIb, IVb or Vb; or Appendix I of the Bern Convention or Appendix I or II of CITES);
- Schedule 8 of the Wildlife and Countryside Act 1981;
- IUCN criteria: Critically Endangered, Endangered, Vulnerable and Near Threatened (Cheffings & Farrell 2005);
- Nationally rare (occurring in 15 or fewer 10km squares in Britain);
- Nationally scarce (occurring in between 16 and 100 10km squares in Britain);
- County rare (occurring in 1 to 3 monads in VC56);
- County scarce (occurring in between 4 and 10 monads in VC56), and
- Nottinghamshire Local Biodiversity Action Plan Species (LBAP).

Extinct taxa have been historically recorded in the county, but are no longer extant.

Adiantum capillus-veneris L.

Maidenhair Fern

National Status: Nationally Scarce

Nottinghamshire Status: Rare

Monads: 2

As a native, maidenhair fern *Adiantum capillus-veneris* is mainly found near to the coasts in southern England on damp calcareous cliffs. Inland it is introduced or an escape that is occasionally found growing out of mortar on sheltered walls or in old greenhouses. The two recent records for the VC are both located on sheltered walls. The original record for Hodsock Priory is undated and the recorder is unknown, however, during 2013, the presence of the plant was confirmed.

| Location | GR | Date | Recorder |
|-----------------------------|----------|------|----------|
| Hodsock Priory Wall | SK611854 | 2013 | RAJ |
| Tottle Brook Retaining Wall | SK522387 | 2003 | RAJ |

Adonis annua L.

Pheasant's Eye

National Status: Endangered, Nationally Rare

Nottinghamshire Status: Extinct

Pheasant's eye *Adonis annua* has been recorded twice in the VC at an unspecified location near Bingham and more latterly at Welbeck on chicken grounds. According to Howitt & Howitt (1963) the Bingham record was published in the Botanical Chronicles of 1863, but no further information is given. The later record was discovered by the Howitt's after publication of the 1963 flora.

| Location | GR | Date | Recorder |
|--------------------|-------|------|----------|
| Bingham | SK73 | 1863 | Unknown |
| West Park, Welbeck | SK57M | 1915 | RG |

Agrimonia procera Wallr.

Fragrant Agrimony

National Status: Least Concern

Nottinghamshire Status: Scarce

Monads: 9

Fragrant agrimony *Agrimonia procera* is generally found in 'scrubby' grasslands and 'grassy' woodland rides on lighter soils such as the sandy loams that are associated with the Sherwood Sandstones. Since the 1960s the species has been lost from several sites in the Sherwood area and one site in the east of the county. It is now restricted to only five sites in the VC and none of the populations are large. Since 2012, surveys of Harlow Wood have located two more patches, which are highlighted in bold in the table below.

| Location | GR | Date | Recorder |
|-------------------|----------|------|----------|
| Gamston Airfield | SK6976 | 1972 | RCLH |
| Normanton Larches | SK655745 | 2003 | DCW |
| Cumber Park | SK622763 | 2011 | DCW, RAJ |

| Location | GR | Date | Recorder |
|--------------------|-----------------|-------------|----------------|
| Cumber Park | SK617752 | 2006 | DCW, RAJ |
| Cumber Park | SK615752 | 2006 | DCW, RAJ |
| Cumber Park | SK622721 | 2012 | RAJ |
| Cumber Park | SK617747 | 2006 | DCW, RAJ |
| Cumber Park | SK623741 | 2006 | DCW, RAJ |
| Cumber Park | SK639739 | 2006 | DCW, RAJ |
| Cumber Park | SK635748 | 2006 | DCW, RAJ |
| Harlow Wood | SK554565 | 2011 | DCW |
| Harlow Wood | SK553578 | 2011 | DCW, RAJ |
| Harlow Wood | SK557576 | 2011 | MW |
| Harlow Wood | SK552576 | 2010 | DCW, RAJ |
| Harlow Wood | SK556575 | 2010 | DCW, RAJ |
| Harlow Wood | SK559572 | 2015 | RAJ, JC |
| Harlow Wood | SK557573 | 2015 | RAJ, JC |

Agrostemma githago L.

Corncockle

National Status: Nationally Rare

Nottinghamshire Status: Uncommon (as a neophyte)

Monads: 16 (as a neophyte), 1 (as an archaeophyte)

Corncockle *Agrostemma githago* is an annual weed of arable crops, which is now extinct in the VC as an archaeophyte. R.C.L. Howitt was the last person to record the species as an archaeophyte in the northwest of the VC (in bold). Nowadays the species is often a component of wildflower seed mixes and all but one of the seventeen modern records are either deliberate introductions or garden escapes, often casual and not persisting.

| Location | GR | Date | Recorder |
|---|-------------|-------------|-------------|
| Norwell | SK75 | 1952 | RCLH |
| Brackenhurst Gardens, Southwell | SK695523 | 1999 | MW |
| Brackenhurst Estate, Southwell | SK694523 | 2001 | MW |
| Colwick Hall Bank | SK602391 | 2001 | MW |
| Eaton and Gamston Roadside Verges | SK726773 | 2003 | MW |
| Misson Line Bank | SK715962 | 2008 | MW |
| Blidworth Colliery Tip and Disused Railway Line | SK604579 | 2010 | MW |
| Burntstump Landfill | SK588499 | 2012 | MW |
| A60 - B6011 Junction, Papplewick | SK569509 | 2012 | MW, DCW |
| Collingham Arable Field* | SK85616066 | 2012 | RAJ |
| Southwell Trail, Edingley | SK669566 | 1997 | DCW |
| Southwell Trail, Edingley | SK675566 | 1997 | DCW |
| Hucknall | SK537504 | 1997 | DCW |
| Stoke Bardolph Fly-ash Lagoons | SK638399 | 2004 | DCW |

*Possibly an archaeophyte

Agrostemma githago (Continued)

| Location | GR | Date | Recorder |
|--------------------------|--------|------|----------|
| City Hospital | SK5643 | 2010 | WM |
| Queens Walk, The Meadows | SK5738 | 2010 | WM |
| Victoria Park | SK5740 | 2010 | WM |
| Woodthorpe Grange | SK5743 | 2010 | WM |

*Possibly an archaeophyte

Agrostis x murbeckii Fouill. Ex P. Fourn.

A. capillaris x stolonifera

National Status: Data deficient
Nottinghamshire Status: Scarce
Monads: 6

This hybrid is a vigorous, highly sterile tetraploid that has been recorded from scattered localities in Britain. It is widespread in northern Europe and is probably common in Britain wherever the parents occur together, Sell & Murrell (1996). In the VC this hybrid was not recorded before 1970, but since that time it has been recorded at six locations in a variety of habitats and soil types and it is probably under-recorded.

| Location | GR | Date | Recorder |
|------------------------------|----------|------|----------|
| Holme Pierrepont Gravel Pits | SK6037 | 1988 | DCW |
| Holme Pierrepont Gravel Pits | SK6038 | 1988 | DCW |
| Holme Pierrepont Gravel Pits | SK6137 | 1988 | DCW |
| Holme Pierrepont Gravel Pits | SK6138 | 1988 | DCW |
| Holme Pierrepont Gravel Pits | SK6238 | 1988 | DCW |
| Wellow Park | SK689673 | 2010 | MW |

Allium oleraceum L.

Field Garlic

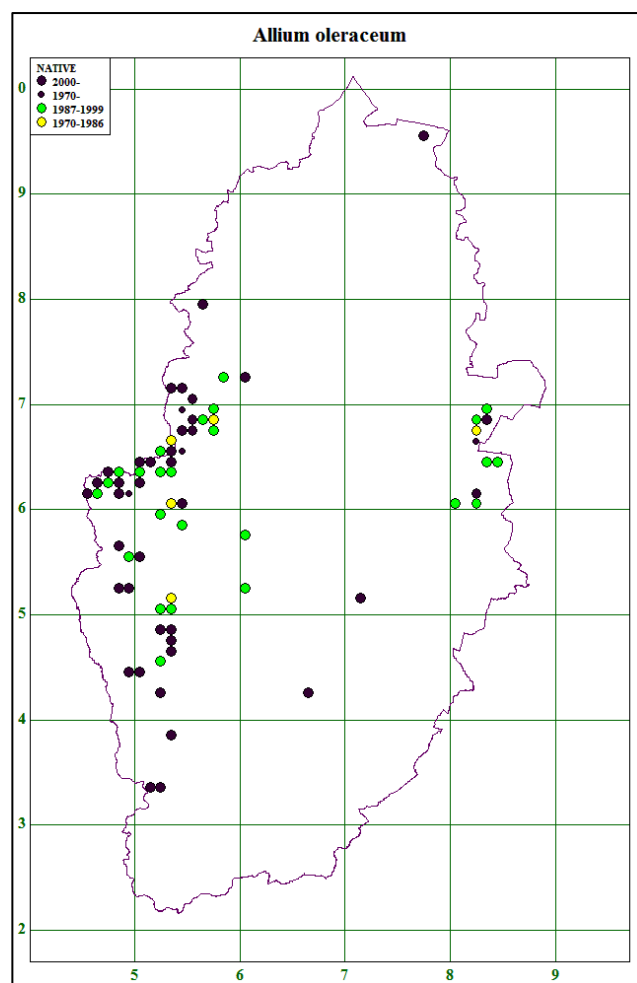
National Status: Vulnerable, Nationally Scarce
Nottinghamshire Status: Local
Monads: 71

Field garlic *Allium oleraceum* is a bulbous perennial herb that grows in dry grassy places, usually on circum-neutral to base-rich soils. Most of the records in Nottinghamshire are associated with the Magnesian Limestone formations. Nationally there is evidence to suggest that the species has undergone declines, Preston, Pearman & Dines (2002), but this does not appear to be the case in Nottinghamshire. Howitt & Howitt (1963) stated that the species was uncommon, but widespread and the number of records since 1970 suggests that declines have not occurred. However, the species may have been under recorded or mis-recorded as wild onion *Allium vineale*.

Wild garlic *Allium oleraceum* at Bulwell Hall Park



Source: S. Hammonds



Allium scorodoprasum L.

Sand Leek

National Status: Nationally Scarce
Nottinghamshire Status: Scarce
Monads: 6

Before 1970 sand leek *Allium scorodoprasum* was recorded only once in the east of the VC, at ballast pits near Barnby Moor, Howitt & Howitt (1963). Since 1970 the species has not been re-found at this site and the extant sites are a considerable distance from Barnby Moor. A population is present on the base-rich clays in the centre of the county on the verge of a ride in Kirton Wood SSSI and the population at Harworth is on a roadside verge on sandy soils; most of the population is located in Southwest Yorkshire (VC63). The two other larger populations are located in the northeast of the county at various locations alongside the River Idle. The population at Misterton extends along a 1km section of sandy riverbank and at West Stockwith the population extends along a 1.2km section of the floodbank. Surveys in 2015 (in bold), confirmed the presence of the populations at Misterton and West Stockwith, but competition with butterbur *Petasites hybridus* appears to be causing population declines.

| Location | GR | Date | Recorder |
|------------------------------|-----------------|-------------|------------|
| River Idle, Misterton | SK783949 | 2015 | RAJ |
| River Idle, Misterton | SK782949 | 2003 | DCW, RAJ |
| River Idle, Misterton | SK778953 | 2003 | DCW, RAJ |
| River Idle, Misterton | SK773956 | 2011 | DCW, RAJ |
| River Idle, Misterton | SK779950 | 2011 | DCW, RAJ |
| River Idle, Misterton | SK779952 | 2011 | RAJ |
| River Idle, Misterton | SK777953 | 2011 | RAJ |
| Kirton Wood | SK708686 | 2012 | DCW, RAJ |

Allium scorodoprasum (Continued)

| Location | GR | Date | Recorder |
|--|-----------------|-------------|--------------|
| River Idle, West Stockwith | SK786950 | 2015 | RAJ |
| River Idle, West Stockwith | SK787949 | 2011 | RAJ |
| River Idle, West Stockwith | SK787950 | 2011 | RAJ |
| River Idle, West Stockwith | SK780950 | 2011 | RAJ |
| River Idle, West Stockwith | SK786950 | 2011 | RAJ |
| River Idle, West Stockwith | SK787950 | 2011 | RAJ |
| River Idle, West Stockwith | SK786951 | 2011 | RAJ |
| A631 Trunk Road (south side), Harworth | SK627925 | 2012 | DCW, MW, RAJ |

Alnus incana (L.) Moench. x *Alnus cordata* (Loisel.) Duby

Hybrid Alder

National Status: Nationally Rare
Nottinghamshire Status: Scarce
Monads: 6

This hybrid has been found at six locations including two new locations (in bold) since 2012. Five locations are associated with landscape reclamation schemes on, or close to, colliery tips where both parents have been planted together. Since 2012, a self-set sapling has been found at Collingham Gravel Pits on disturbed, sandy soils close to planted trees. The 2002 Bentinck Colliery Tip record is likely to be the first record in the wild, because the native distributions of the two species are geographically isolated and as such, the hybrid has been given native status. The distribution of *Alnus cordata* is restricted to small areas of the southern Apennines and mountains in northeastern Corsica at altitudes between 200m and 1600m and *A. incana* is found in the Carpathian Mountains, a distance of over 1000km between the two species.

| Location | GR | Date | Recorder |
|---------------------------------------|---------------------|-------------|----------------|
| Bentinck Colliery Tip | SK490548 | 2002 | DCW |
| Kirkby Bentinck Track | SK48435475 | 2014 | DCW, MW |
| Harworth Colliery Tip | SK615901 | 2004 | DCW |
| Gedling Colliery Tip | SK613437 | 2012 | DCW |
| Freckland Wood, Newstead Colliery Tip | SK527521 | 2012 | MW |
| Collingham Gravel Pits | SK8140662822 | 2013 | MW, DCW |

Alnus x elliptica Req.

Alnus glutinosa (L.) Gaertn. x *A. cordata* (Loisel.) Duby

National Status: Nationally Rare
Nottinghamshire Status: Rare
Monads: 2

This hybrid was first found on the shoreline of a gravel pit at Hoveringham, in the River Trent valley. It was found growing with both parents, which were planted together as part of a landscape restoration scheme following the cessation of gravel extraction. Clive Stace (*pers. com.* 2012) indicated that the hybrid has also been recorded in Cheshire by Graeme Kay in 2010, but the Nottinghamshire record was recorded four years earlier and as such is probably the first time this hybrid has been recorded in the British Isles. Further searches of suitable habitats since 2012 have subsequently located a new site at Bentinck Colliery Tip (in bold), where two saplings were found near to both parents.

| Location | GR | Date | Recorder |
|------------------------------|-----------------|-------------|------------|
| Hoveringham Gravel Pits | SK717478 | 2006 | DCW |
| Bentinck Colliery Tip | SK489549 | 2013 | DCW |

Alopecurus aequalis Sobol.

Orange Foxtail

National Status: Nationally Scarce
Nottinghamshire Status: Scarce
Monads: 4

Preston, Pearman & Dines (2002) state that between 1962 and 1999, orange foxtail *Alopecurus aequalis* appears to have declined

nationally, but losses may have been offset by the species ability to readily colonise new sites. The situation may have also been confused by the species lack of appearance in years when water levels remain high and the ease with which the species can be mistaken for marsh foxtail *Alopecurus geniculatus*. In the VC the species was not recorded until 1973 and since then has only been recorded at three other sites at the edge of lakes or ponds. Essentially, the species is a casual in VC56.

| Location | GR | Date | Recorder |
|---------------------------------------|----------|------|----------|
| Eastwood Hall | SK463476 | 1973 | RCLH |
| Bestwood Country Park, Colliery Tip | SK556469 | 1990 | Woll. |
| River Leen subsidence pond, Hucknall, | SK550493 | 1991 | GL |
| Bleasby Gravel Pits | SK705493 | 2008 | RAJ, DCW |

Alopecurus x brachystylus Peterm.

A. geniculatus x pratensis

National Status: Data Deficient
Nottinghamshire Status: Extinct

A highly sterile hybrid that is intermediate in characters and habitat. It is scattered throughout lowland Britain by ditches and streams and widespread in continental Europe. It was last recorded in Nottinghamshire in 1905 near Kegworth Bridge on the River Soar.

| Location | GR | Date | Recorder |
|----------------------|--------|------|----------|
| River Soar, Kegworth | SK4927 | 1905 | JWC |

Anacamptis morio (L.) R.M. Bateman, Pridgeon & Chase

Green-winged Orchid

National Status: Near Threatened, Nationally Scarce
Nottinghamshire Status: Scarce
Monads: 17

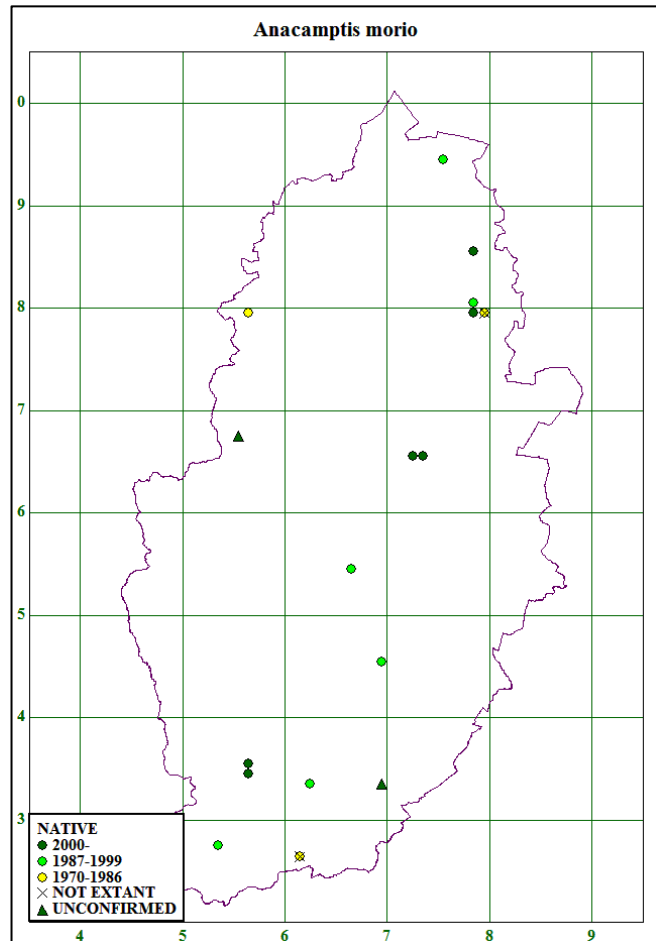
In the VC green-winged orchid *Anacamptis morio* was formerly common and widespread in meadows on basic soils, but the loss of unimproved grasslands since 1945 has caused dramatic declines. Since 1970, the species has been recorded at 14 sites, but is probably extant at only ten sites. The loss of two populations at Treswell (SK791795) and Annabel's Farm (SK6125-6126) has been caused by agricultural improvement and habitat destruction. Only three of the remaining sites including Wilwell Cutting, Ashton's Meadow and West Burton Meadow support large populations. All of these sites are nature reserves and their long-term future is relatively secure. At other sites the populations are smaller and are possibly more vulnerable to decline or loss. Since 2012, surveys of Wilwell Cutting and West Burton Meadow Nature Reserves have confirmed the continued presence of the populations (in bold).

| Location | GR | Date | Recorder |
|----------------------------------|-----------------|-------------|------------|
| Trent Hills | SK6945 | c.1987 | NRL |
| Halam Reservoir | SK662546 | 1999 | DCW, MW |
| Laxton South Field Sykes | SK729655 | 2003 | DCW |
| Laxton South Field Sykes | SK730656 | 2012 | DCW, RAJ |
| Laxton South Field Sykes | SK731656 | 2012 | RAJ |
| Misterton Grassland | SK759944 | 2003 | Woll. |
| Normanton-on-the Wolds Grassland | SK626331 | 1990 | DCW |
| Normanton-on-the Wolds Grassland | SK625332 | 1990 | DCW |
| Warsop Hills and Holes* | SK5567 | Undated | GL |
| Colston Basset Old Hall Drive* | SK694335 | Undated | per CP |
| Lady Lee Quarry | SK5679 | 1986 | Woll. |
| Wilwell Cutting | SK567351 | 2015 | RAJ |

Anacamptis morio (Continued)

| Location | GR | Date | Recorder |
|---------------------------------|-----------------|-------------|------------|
| Wilwell Cutting | SK566348 | 2015 | RAJ |
| Ashton's Meadow, South Leverton | SK787801 | 1997 | DCW |
| Ashton's Meadow, South Leverton | SK787799 | 2011 | DCW, RAJ |
| West Burton Meadow | SK787851 | 2015 | KW |
| West Leake Grassland | SK537273 | 1993 | DCW |

*Unconfirmed



Anagallis arvensis L. forma *azurea*
Hylander

Scarlet Pimpernel
(azure form)

National Status: Data Deficient
Nottinghamshire Status: Rare
Monads: 3

The blue form of scarlet pimpernel *Anagallis arvensis* forma *azurea* is much rarer than the red form and is often confused with blue pimpernel *Anagallis arvensis* subsp. *foemina*, which has not been recorded in the VC since 1962. The three records are widely dispersed across the county and in different habitat types including an arable field, an allotment and disturbed soils on a disused railway siding. The Newstead record has not been re-found since 2008 and is probably no longer extant.

| Location | GR | Date | Recorder |
|-------------------------------------|----------|------|----------|
| Cropwell Bishop Field | SK671354 | 1992 | DCW |
| Southwell Allotments | SK708533 | 2007 | RAJ |
| Newstead Dismantled Railway Sidings | SK523526 | 2008 | MW |

Anagallis arvensis L. subsp. *foemina* (Mill.)
Schinz & Thell

Blue Pimpernel

National Status: Data Deficient
Nottinghamshire Status: Extinct

The archaeophyte blue pimpernel *Anagallis arvensis* subsp. *foemina* was always very rare in the VC. The species had a scattered, but largely southern distribution with Sutton-in-Ashfield being the most northern of its former locations. It was last recorded in 1962 by RCLH 'growing in a field of roots'.

| Location | GR | Date | Recorder |
|-----------------------|------|------|----------|
| Owthorpe Arable Field | SK63 | 1962 | RCLH |

Anagallis tenella L. (L.)

Bog Pimpernel

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 8

By the early 1960s, this perennial species of peaty, wet soils was considered by Howitt and Howitt (1963) to be rare and decreasing in the VC. Since that time bog pimpernel *Anagallis tenella* has continued to decline, reflecting the overall situation in the south and east of England. Bog pimpernel is presently found in only eight monads in the VC and the populations at many sites are very small, being constrained by a limited availability of suitable habitat and continue to be vulnerable to further decline because of eutrophication of surface and ground waters. Recent losses include Sookholme Bath (SK543668), Idle Marshes at Scrooby (SK659898) and Everton Carr (SK690935). Since 2012, surveys have confirmed the presence of bog pimpernel at The Dumbles and Selston Common (in bold).

| Location | GR | Date | Recorder |
|---|-----------------|-------------|----------------|
| The Dumbles, Annesley | SK497508 | 2015 | DCW |
| Coxmoor Golf Course, Kirkby-in-Ashfield | SK524574 | 2009 | DCW |
| Newstead Sports Ground | SK518524 | 1999 | DCW |
| Newstead Park, Newstead | SK543538 | 2004 | DCW |
| Selston Common | SK473528 | 2015 | RAJ, JC |
| Sookholme Moor, Sookholme | SK554678 | 2007 | DCW |
| Taversal Trail | SK490636 | 2008 | DCW |
| Darnsyke, Thorney | SK855738 | 2001 | DCW |

Antennaria dioica (L.) Gaertner

Mountain Everlasting

National Status: Least Concern
Nottinghamshire Status: Extinct

Mountain everlasting *Antennaria dioica* is a native perennial that was always rare in the VC and confined to the Sherwood heathlands south of Mansfield. It was last recorded on a heath at Annesley towards the end of the 19th Century.

| Location | GR | Date | Recorder |
|----------|------|------|----------|
| Annesley | SK55 | 1880 | AG |

Anthemis arvensis L.

Corn Chamomile

National Status: Endangered
Nottinghamshire Status: Extinct

Before the 1960s this archaeophyte annual had a localised distribution, but was widely distributed on the sandy soils of the Sherwood area. It was last recorded in the VC in the early 1960s by RCLH having dramatically declined in a similar manner to the national decline. The decline is considered to have happened because of the development of increasingly effective herbicide compounds.

Anthemis arvensis (Continued)

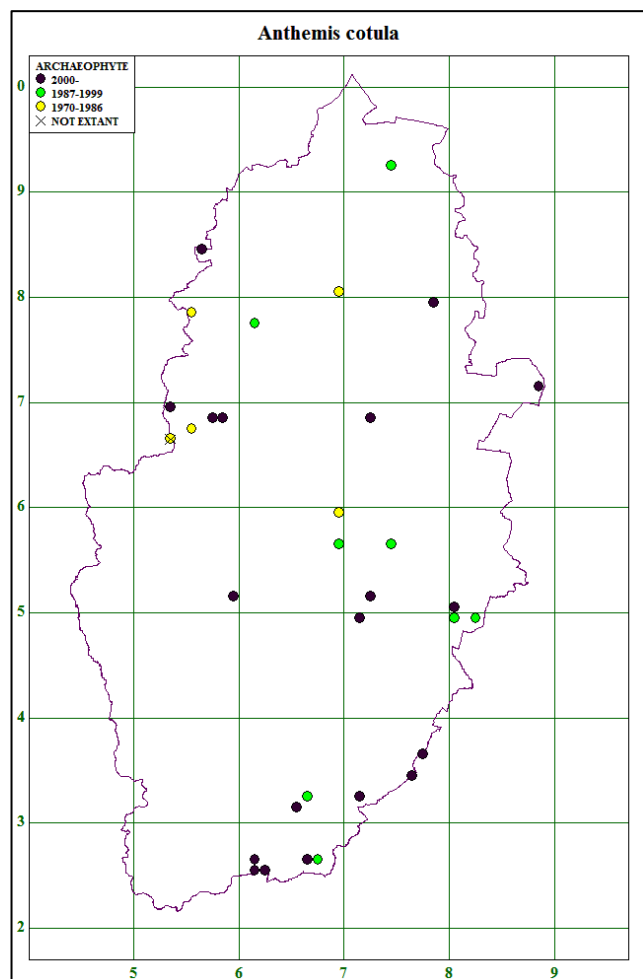
| Location | GR | Date | Recorder |
|----------------------|------|------|----------|
| Hodsock and Osberton | SK68 | 1961 | RCLH |

Anthemis cotula L.

Stinking Chamomile

National Status: Vulnerable**Nottinghamshire Status:** Uncommon**Monads:** 32

Preston *et al.* (2002) stated that stinking chamomile *Anthemis cotula* declined substantially in the 20th Century despite being fairly resistant to the early phenoxy herbicides. According to Howitt & Howitt (1963) this species of arable fields and roadsides, which was widespread on heavy soils, was also declining in the VC before the 1960s. Since 1970 the species has been recorded in 31 rolling monads, somewhat scattered throughout the VC. The number of records suggests a slight increase in abundance, but in modern times the species has often occurred as a casual.

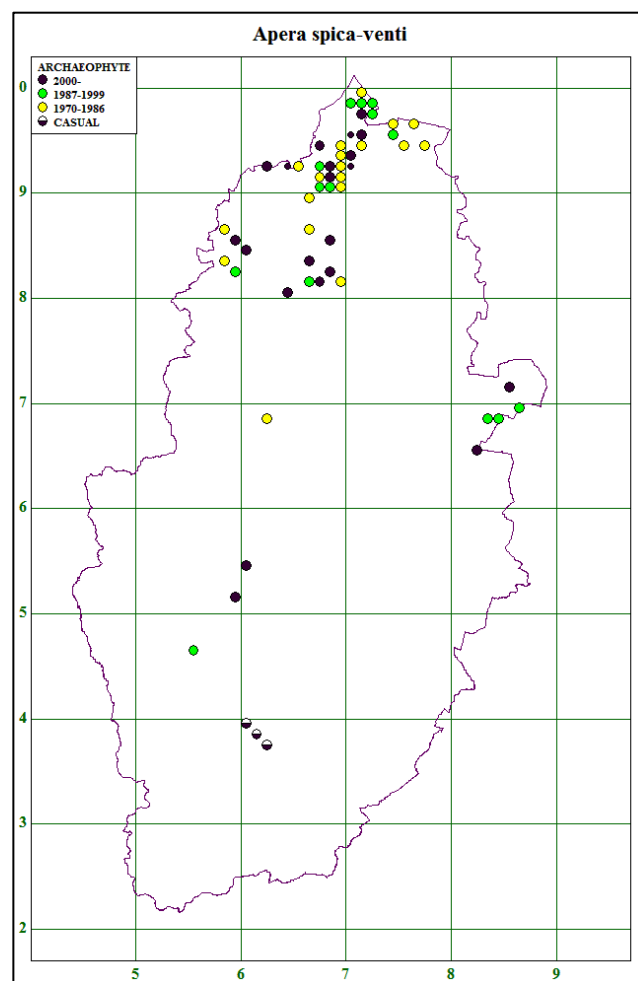
*Apera spica-venti* (L.) Beauv.

Loose Silky-bent

National Status: Near Threatened, Nationally Scarce**Nottinghamshire Status:** Uncommon**Monads:** 57

Since 1970, loose silky-bent *Apera spica-venti* has been recorded throughout the VC on arable and open habitats with sandy soils. Howitt & Howitt (1963) stated that the species was abundant on the edge of the Carrs in the north of the VC, which is confirmed by the distribution map. Howitt & Howitt (1963) considered the species to be native, but the transient nature of many populations suggests otherwise and supports Preston *et al.* (2002), who consider the species to be an archaeophyte. Since 2012, the

species has been recorded at five locations, but only one record is in a new monad.

*Apium graveolens* L.

Wild Celery

National Status: Least Concern**Nottinghamshire Status:** Scarce**Monads:** 8

Many inland sites for wild celery *Apium graveolens* were lost before 1930, Preston *et al.* (2002). In the VC Howitt & Howitt (1963) considered wild celery to be extinct by the 1960s, but since 1998 the species has been recorded at seven locations. It is likely that these records are recent colonists, because the plant has not been found at any of its pre-1960 locations. The species has been found on lakesides at three sites; a typical habitat for the species. Less typically, the species has been found elsewhere as a casual. The cultivated variety *A. graveolens* var. *dulce* has been recorded as a casual at Hawton (SK801502). A further casual record (in bold) has been added since 2012 at Pleasleyhill on land cleared of housing.

| Location | GR | Date | Recorder |
|--|----------|------|----------|
| Clayworth Road, Gringley-on-the-Hill | SK736902 | 1998 | DCW |
| Netherfield Former railway Sidings* | SK631406 | 1999 | DCW |
| Strelley Trackside Verge (dumped materials)* | SK504427 | 2002 | DCW |
| Bramcote Hills Landfill* | SK504386 | 2004 | DCW |

Apium graveolens continued

| Location | GR | Date | Recorder |
|-----------------------------|-----------------|-------------|------------|
| Clumber Park Lake | SK625743 | 2004 | DCW |
| Rufford Country Park Lake | SK645650 | 2006 | MW |
| Colwick Country Park Lagoon | SK609397 | 2011 | DCW |
| Pleasleyhill* | SK509638 | 2013 | DCW |

*Casual records

Apium inundatum (L.) Rchb.f.

Lesser Marshwort

National Status: Least Concern**Nottinghamshire Status:** Rare**Monads:** 4

Lesser marshwort *Apium inundatum* has always had a restricted distribution in the county, being chiefly confined to pools and drains in the Trent Valley and the Carrs in the north of the VC. In recent times the decline of the species in the VC has reflected the national situation with losses caused by destruction, land drainage and eutrophication. Two of the remaining four sites where the species is found are gravel pits, which are a typical habitat for the species, but the site at Stanton-on-the Wolds is untypical because the soils are predominantly clay-based in that area.

| Location | GR | Date | Recorder |
|-------------------------------|----------|------|---------------|
| Sutton-cum-Lound Gravel Pits* | SK690842 | 1972 | JH |
| Collingham Pond | SK836612 | 1978 | NRL, KLJ, CGC |
| Stanton-on-the-Wolds Pond | SK650307 | 2010 | DCW |
| Misson Line Bank | SK711959 | 2012 | DCW, JC |
| Misson Line Bank | SK715960 | 2012 | DCW, JC |
| Misson Line Bank | SK714959 | 2012 | DCW, JC |

*Site destroyed

Aquilegia vulgaris L.

Columbine

National Status: Least Concern**Nottinghamshire Status:** Rare (as a native)**Monads:** 235 (3 as a native)

Howitt & Howitt (1963) described columbine *Aquilegia vulgaris* as very rare and only native in habitats overlying Magnesian Limestone. The species was recorded near all three of its native, extant locations long before the 20th Century, but seems to have disappeared from several other sites on the Magnesian Limestone such as Bulwell, Newstead, Pleasley and Skegby despite the continuing presence of suitable habitat. Away from the Magnesian Limestone, there are approximately 180 records for the species as a neophyte, which are not included in this register. Since 2012, a further 65 records of garden escapes have been submitted, many being repeat records. Surveys at Morning Springs have confirmed the presence of native extant populations.

| Location | GR | Date | Recorder |
|-----------------------------|-----------------|-------------|------------|
| Broxtowe Country Park | SK523431 | 2005 | PA |
| Broxtowe Country Park | SK523429 | 2011 | DCW |
| Morning Springs Wood | SK496492 | 1998 | Woll |
| Morning Springs Wood | SK498494 | 2015 | DCW |
| Morning Springs Wood | SK497494 | 2015 | DCW |
| Teversal Trail | SK491637 | 2004 | DCW, RAJ |
| Teversal Trail | SK49036364 | 2012 | NC |

Arabis glabra L.

Tower Mustard

National Status: Endangered, Nationally Scarce**Nottinghamshire Status:** Extinct

The last record for this native species of sandy fields and roadsides dates back to 1904. J. W. Carr recorded Tower Mustard *Arabis glabra* at Barrow Hills, Everton. It was also recorded in the 18th Century between Radford and Lenton near Nottingham and in

the 19th Century at Blyth, Cuckney, Warsop, Bestwood Park and Wollaton.

| Location | GR | Date | Recorder |
|-----------------------|----------|------|----------|
| Barrow Hills, Everton | SK680920 | 1904 | JWC |

Arabis hirsuta (L.) Scop.

Hairy Rock-cress

National Status: Least Concern**Nottinghamshire Status:** Scarce**Monads:** 7

Historically the species was only ever recorded on sites overlying Magnesian Limestone. Howitt & Howitt (1963) described ten sites including four that they visited during the mid-20th Century. Since 1970 the species has been recorded at four sites on the Magnesian Limestone including the Teversal Trail, Warsop Hills and Holes, Pleasley Vale Dismantled Railway Line and Creswell Craggs at Holbeck. In addition, the species has been recorded on calcareous sands at Barrow Hills, Everton and at Sutton-cum-Lound Gravel Pit as a casual on imported limestone.

| Location | GR | Date | Recorder |
|--|----------|------|--------------|
| Barrow Hills | SK6891 | 1986 | DCW |
| Creswell Craggs, Holbeck | SK534740 | 2012 | DCW |
| Pleasley Vale Dismantled Railway Line | SK520649 | 2007 | RAJ, DCW |
| Northfield House Woodland, Mansfield Woodhouse | SK519649 | 2011 | DCW |
| Sutton-cum-Lound Gravel Pits* | SK6985 | 1987 | DCW |
| Teversal Trail, Norwood | SK4863 | 1970 | NRL |
| Warsop Hills and Holes | SK558681 | 2012 | DCW, RAJ, JC |
| Warsop Hills and Holes | SK558679 | 2012 | DCW, RAJ, JC |

*Casual

Arctium x nothum Ruhmer

A hybrid Burdock

National Status: Data Deficient**Nottinghamshire Status:** Rare**Monads:** 1

This hybrid is intermediate in character and is fertile. It is found in south and central England wherever the parents occur together; but it is infrequent. It was not recorded in the VC before 1970, but in 1998 a single plant was found growing with both parents on a bank of the River Devon, south of Newark-on-Trent.

| Location | GR | Date | Recorder |
|-------------------------------|----------|------|----------|
| Hawton Fox Covert, Devon Bank | SK787478 | 1998 | DCW |

Arnoseris minima L.

Lamb's Succory

National Status: Extinct**Nottinghamshire Status:** Extinct

This archaeophyte was last recorded in the VC before 1963 growing on sandy infertile soils in a field that had not been cultivated in recent years. Earlier in the 20th Century the species was also recorded in sandy fields at Pusto Hill in Everton, Finningley near Doncaster and West Drayton.

| Location | GR | Date | Recorder |
|-----------------------|----------|------|----------|
| Barrow Hills, Everton | SK680920 | 1963 | RCLH |

Aster tripolium L.

Sea Aster

National Status: Least Concern**Nottinghamshire Status:** Rare**Monads:** 2

This coastal species is located at two sites in the VC on the tidal section of the River Trent. Since 1970 it has been confined to two localities, with only a single plant recorded at West Stockwith and a small population found at Walkeringham. Early in the 20th century, away from the tidal River Trent, the species was recorded in a drain at Misson, but since then has not been found at this locality.

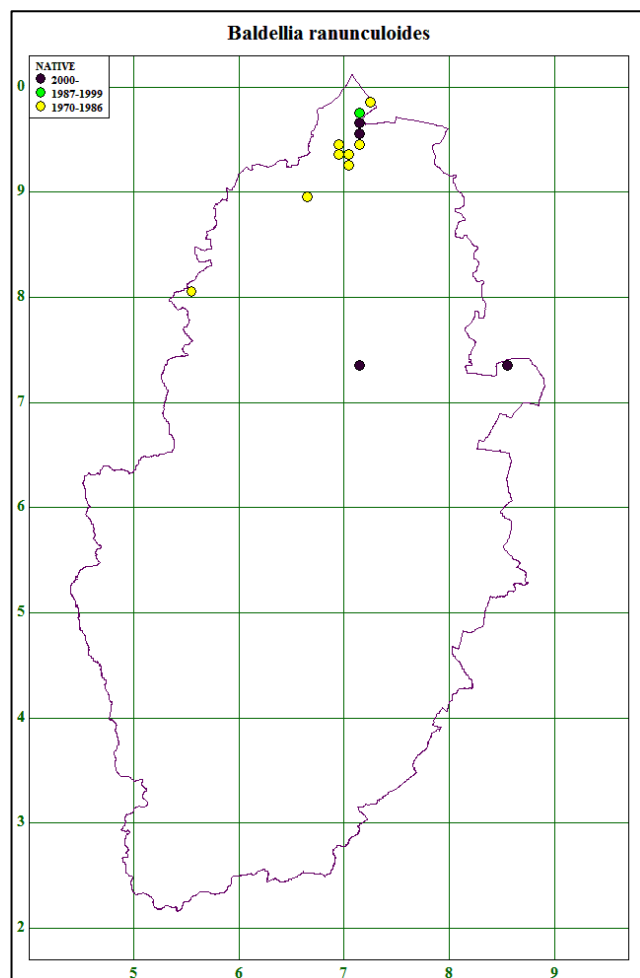
| Location | GR | Date | Recorder |
|-----------------------------|----------|------|----------|
| River Trent, Walkeringham | SK806916 | 1994 | DCW |
| River Trent, West Stockwith | SK793949 | 1998 | DCW |

Baldellia ranunculoides (L.) Parl.

Lesser Water-plantain

National Status: Near Threatened**Nottinghamshire Status:** Uncommon**Monads:** 11

Before the 1970s this perennial herb had a localised distribution in the VC, being associated with peat or limestone substrates in shallow drains and pools with fluctuating water levels. Since 1970, the species has been recorded in approximately twelve rolling monads and the decline in the VC appears to follow a similar pattern to the national decline. The declines are attributed to the loss of small water-bodies, eutrophication and a decline in grazing pressure.



| Location | GR | Date | Recorder |
|--------------------------------------|---------------|------|----------|
| Everton Carr Drain* | SK700933 | 1978 | Woll, JH |
| Everton Carr Drain* | SK695932 | 1980 | NCC |
| Everton Carr Drain* | SK693931 | 1980 | NCC |
| Everton Carr Drain* | SK698932 | 1980 | NCC |
| Everton Carr Drain* | SK705931 | 1980 | NCC |
| Everton Carr Drain* | SK706929 | 1980 | NCC |
| Everton Carr Drain* | SK703924 | 1980 | NCC |
| Delve Drain, Everton Carr* | SK698946 | 1978 | Woll, JH |
| Delve Drain, Everton Carr* | SK690942 | 1978 | Woll, JH |
| Delve Drain, Everton Carr* | SK698947 | 1978 | Woll, JH |
| Carr Road East Drain, Gringley Carr* | SK7194 - 7193 | 1978 | Woll |
| Mother Drain, Gringley Carr | SK717956 | 2011 | DCW, MW |
| Misson Carr | SK712971 | 1999 | PA, RAJ |
| Misson Carr | SK712975 | 1994 | DCW |
| Misson Line Bank | SK716961 | 2004 | DCW, RAJ |
| Misson Line Bank | SK710960 | 1982 | JNCC |
| Levels Lane Drain, Misson * | SK712970 | 1983 | JOM |
| New Idle Drain, Misson* | SK725987 | 1983 | JOM |
| Ranskill Gravel Pits* | SK667891 | 1977 | Woll |
| Shireoaks Park Lake* | SK552807 | 1978 | Woll, JH |
| Darnsyke, Thorney | SK855738 | 2001 | DCW |
| Misson Line Bank* | SK715960 | 1978 | NRL, KLJ |
| Misson Line Bank | SK716960 | 2012 | DCW, JC |

*Possibly no longer extant

Beta vulgaris subsp. *maritima* (L.) Arcang.

Sea Beet

National Status: Least Concern**Nottinghamshire Status:** Extinct

This species is a rare casual inland and it has not been recorded in the VC in modern times. Deering (1751) implied that the species was widespread in the Nottingham area and 'does not only grow in maritime places and salt marshes'.

| Location | GR | Date | Recorder |
|-------------------|------|-----------------|----------|
| Nottingham Common | SK54 | Extinct by 1839 | CD |

Betula x aurata Borkh.*B. pendula x pubescens***National Status:** Uncertain**Nottinghamshire Status:** Scarce**Monads:** 4

The taxonomic difficulty associated with identification of this hybrid means that the national distribution map is very incomplete, Stace *et al* (2015). The same situation is very likely to be the case in Nottinghamshire. There are no known historical records and only four modern records at three sites, with specimens being present with both parents. Targeted surveys are likely to increase the number of records.

| Location | GR | Date | Recorder |
|------------------|----------|------|----------|
| Elkesley | SK6874 | 2012 | JS |
| Old Moor Wood | SK499520 | 2015 | RAJ |
| Clipstone Forest | SK617608 | 2015 | RAJ, JC |
| Clipstone Forest | SK612614 | 2015 | RAJ, JC |

Blysmus compressus (L.) Panz.
Ex Link

Flat Sedge

National Status: Vulnerable, Species of Principal Importance**Nottinghamshire Status:** Extinct

The species was last recorded in the county in the 1970s and despite repeated searches, the species has not been re-found at Lady Lee Quarry or Skegby and is therefore, considered to be extinct in the county.

Blysmus compressus (continued)

| Location | GR | Date | Recorder |
|-----------------|----------|------|----------|
| Lady Lee Quarry | SK563794 | 1972 | JH |
| Skegby Stream | SK495609 | 1972 | JH |

Botrychium lunaria (L.) Sw.

Moonwort

National Status: Least Concern**Nottinghamshire Status:** Extinct

Despite searches of suitable habitats and historic locations in recent times, moonwort *Botrychium lunaria* has not been seen since 1963 and is therefore, considered to be extinct in the VC.

| Location | GR | Date | Recorder |
|-----------------------|----------|-------|-----------|
| Barrow Hills, Everton | SK680920 | <1963 | RCLH, BMH |
| Ranskill | SK68 | <1963 | RCLH, BMH |

Brassica nigra (L.) W.D.J Koch

Black Mustard

National Status: Least Concern**Nottinghamshire Status:** Scarce**Monads:** 5

The species used to be frequent in the county, but since 1970 it has only been recorded at five localities in the VC. All records are considered to be casuals. Nationally the species has declined because it is no longer grown for its seed and it is likely that the decline in the VC can be attributed to the same reason.

| Location | GR | Date | Recorder |
|----------------------------|----------|------|----------|
| Holme Pierrepont Landfill | SK6339 | 1981 | DCW |
| Huthwaite Tipped Spoil | SK462579 | 1994 | DCW |
| Cotgrave Plantation | SK649362 | 1999 | DCW |
| New Clipstone Colliery Tip | SK590628 | 1994 | DCW |
| Toton Sidings | SK489346 | 2001 | DCW |

Brassica oleracea L.

Wild Cabbage

National Status: Least Concern**Nottinghamshire Status:** Rare**Monads:** 1

As a native the species can grow inland on rock faces in quarries, but it also occurs as a garden escape on roadside verges and waste places. In Nottinghamshire a few plants have become established on the bank of the River Erewash at Toton, but the species has also occurred as a casual elsewhere in the VC.

| Location | GR | Date | Recorder |
|----------------------|----------|------|----------|
| River Erewash, Toton | SK501343 | 2011 | DCW |

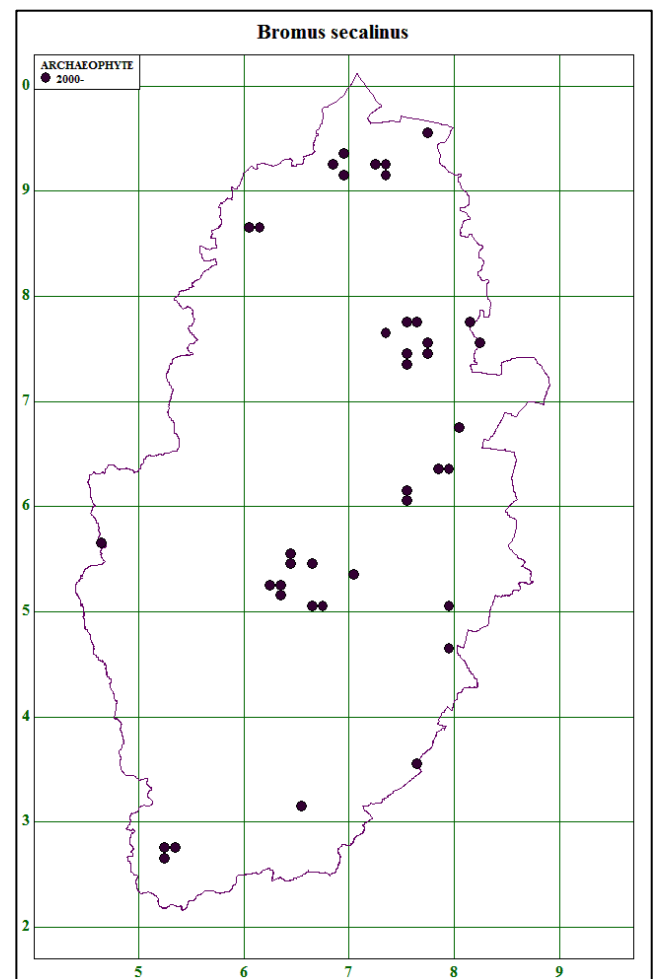
Bromus secalinus L.

Rye Brome

National Status: Vulnerable**Nottinghamshire Status:** Uncommon**Monads:** 40

This archaeophyte is exclusively associated with arable fields and has a very strong affinity with cereal crops. It has a scattered distribution throughout the VC, but occurs on a range of soil types. Howitt & Howitt (1963) did not provide any modern records, which could be a reflection of 19th and early 20th Century declines, Preston *et al* (2002). In the first edition, it was suggested that the species may increase in Nottinghamshire given the comeback in other counties. In the past three years, the number of records has more than quadrupled and records are distributed throughout the county, all associated with arable fields. The only explanation that appears to be feasible is seed contamination, but as to whether this very large increase in distribution is being seen to the same

extent in other counties and whether the increase will be sustained, is to date, unknown.



| Location | GR | Date | Recorder |
|---------------------------------|----------|------|-----------------|
| Darlington Arable Field | SK758732 | 2004 | DCW |
| Askham Arable Field | SK738761 | 2004 | DCW |
| Southwell Arable Field | SK706533 | 2008 | DCW |
| Grassthorne Arable Field | SK805673 | 2008 | DCW |
| Granby Arable Field | SK765352 | 2008 | DCW |
| Misterton Arable Field | SK772951 | 2009 | DCW |
| Stokeham Arable Field | SK763770 | 2010 | DCW |
| Headon Arable Field | SK753773 | 2010 | DCW |
| Headon Arable Field | SK761778 | 2010 | DCW |
| Dunham-on-Trent Arable Field | SK823755 | 2010 | DCW |
| Laneham Arable Field | SK815776 | 2010 | DCW |
| Kirkby-in-Ashfield Arable Field | SK467562 | 2011 | DCW |
| Cotham Arable Field | SK797468 | 2012 | DCW, MW, AB, WM |
| Thurgarton Arable Field | SK669506 | 2012 | DCW |
| Thurgarton Arable Field | SK676503 | 2012 | DCW |

Bupleurum rotundifolium L.

Thorow-wax

National Status: Critically Endangered, Nationally Rare**Nottinghamshire Status:** Extinct

The plants recorded in 1839 in a cornfield at Creswell Craggs were probably the last of any 'native' populations in the county. During 1917 J.W. Carr recorded the species for the last time in the VC at Welbeck, but the population was not considered to be native. A herbarium specimen from the 1917 population was submitted to Nottingham Museum (NOT).

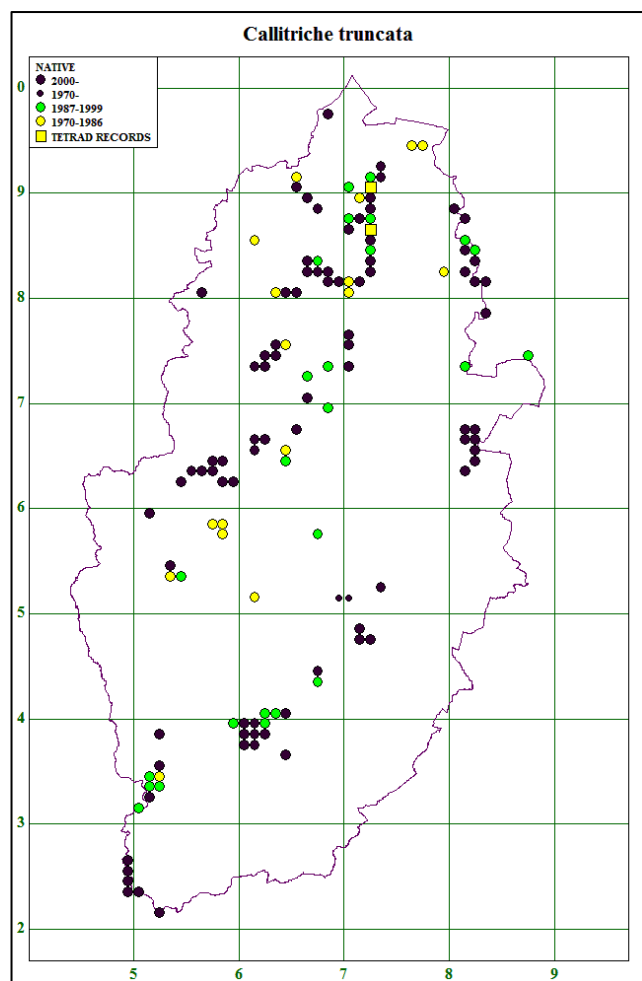
Bupleurum rotundifolium (continued)

| Location | GR | Date | Recorder |
|------------------|------|------|----------|
| Cresswell Craggs | SK57 | 1839 | GH |
| Welbeck | SK57 | 1917 | JWC |

Callitriche truncata W.D.J. Koch Short-leaved Water-starwort

National Status: Nationally Scarce
Nottinghamshire Status: Locally Frequent
Monads: 130

This annual or occasionally perennial herb is nationally scarce, but in the VC the species is locally frequent in base-rich mesotrophic or eutrophic waters, but rarely occurs on wet mud. Historically, Howitt & Howitt (1963) considered that the species was local and chiefly found in the north of the VC in slow streams, canals and large drains. In modern times the species has been found to be locally frequent in the River Trent valley and its tributaries. Since 2012 a further 19 records have been collected from scattered locations across the county.



Calystegia sepium subsp. *roseata* Brummitt. A Hedge Bindweed

National Status: Occasional, possibly introduced
Nottinghamshire Status: Rare
Monads: 2

This taxon is considered by Stace (2010) to be local near the west coast of Britain and occasional, perhaps introduced elsewhere. Targeted searches may confirm that the taxon is actually rare, rather than under-recorded. To date, it has been recorded at two locations in North Nottinghamshire alongside a drain and next to Chesterfield Canal. As to whether the taxon is associated with water-courses elsewhere in the county is yet to be determined.

| Location | GR | Date | Recorder |
|------------------------------------|----------|------|----------|
| Fenton Lane Drain | SK803830 | 2008 | RBa |
| Chesterfield Canal, West Stockwith | SK782947 | 2015 | DCW, MW |
| Chesterfield Canal, West Stockwith | SK780947 | 2015 | DCW, MW |

Campanula glomerata L. Clustered Bellflower

National Status: Least Concern
Nottinghamshire Status: Rare
Monads: 12 (3 as a native)

As a native, this calcicolous, perennial herb is found at four sites in the VC, three of which are located on the Magnesian Limestone. The fourth site at Balderton, near Newark-on-Trent is associated with base-rich drift geology. Before 1970 the species was also located in the south of the VC in the grasslands of the Lias clays and on base-rich clays in the Trent Valley, but the destruction of grasslands or agricultural improvement has reduced the number of localities in modern times. In addition, plants at Warsop have been dug up from time to time. Apart from the native sites, which are listed in the table below, the species has also been recorded as a neophyte at a further nine locations in the VC, which are not listed below.

| Location | GR | Date | Recorder |
|------------------------|----------|------|--------------|
| Balderton Grassland | SK805511 | 1998 | RAJ |
| Holbeck | SK57 | 1998 | PA |
| Tversal Cemetery | SK484619 | 1999 | DCW |
| Warsop Hills and Holes | SK556678 | 2003 | DCW, RAJ, JH |
| Warsop Hills and Holes | SK557686 | 1972 | JH |

Campanula patula L. Spreading Bellflower

National Status: Endangered, Nationally Scarce
Nottinghamshire Status: Extinct (as a native)

Spreading bellflower *Campanula patula* was first recorded in 1826 amongst underwood in Wellow Park by T. Jowett and was last recorded as a native in 1916 in the same locality by Mrs Collinson of Laxton. At that time, specimens were sent to Nottingham Natural History Museum.

| Location | GR | Date | Recorder |
|-------------|----------|------|---------------|
| Wellow Park | SK685670 | 1916 | Mrs Collinson |

Campanula rapunculus L. Rampion

National Status: Endangered, Nationally Rare
Nottinghamshire Status: Extinct

This archaeophyte was "once frequently grown in gardens in our area for ornament and its edible roots. It was recorded from the wild as early as 1597, but fell out of favour as a vegetable around 1700 and consequently has seriously declined. It is now rarely encountered, either in cultivation or in the wild¹." Howitt & Howitt (1963) provided only two records for the VC, the first recorded by C. Deering in 1738 originating from Radford Hollows. The later record is provided below.

| Location | GR | Date | Recorder |
|--------------------------|------|------|----------|
| Plantation at Coddington | SK85 | 1805 | TO |

¹ <http://www.brc.ac.uk/plantatlas/index.php?q=node/3609>

Campanula trachelium L.

Nettle-leaved Bellflower

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 20

As a native, nettle-leaved bellflower *Campanula trachelium* has been recorded at nine locations in the northwest of the VC, all in woodland habitat and on the Magnesian Limestone or limestone ballast. Populations at Pleasley Vale and Warsop have been re-visited since 2012 (in bold) to confirm the continuing presence of the populations. There are ten additional records for the species, which are introductions or garden escapes and marked with an asterisk in the table below. Records located since 2012 are highlighted in bold. The species has always been rare in the VC, but most of the populations recorded in the 1960s are still extant.

| Location | GR | Date | Recorder |
|--|-----------------|-------------|------------|
| Boon Hills Wood | SK538697 | 1997 | DCW |
| Boon Hills Wood | SK533695 | 2012 | DCW |
| Boon Hills Wood | SK531694 | 2012 | DCW |
| Cuckney Hay Wood | SK545698 | 2011 | DCW, MW |
| Cuckney Hay Wood | SK544694 | 1996 | DCW |
| Cuckney Hay Wood | SK546698 | 1996 | DCW |
| Lady's Grove | SK535693 | 1998 | DCW |
| Northfield Plantation | SK530652 | 1993 | DCW |
| Pleasley Vale Dismantled Railway Line | SK521649 | 2009 | DCW |
| Pleasley Vale Dismantled Railway Line | SK521648 | 2014 | DCW |
| Pleasley Vale Dismantled Railway Line | SK522648 | 2014 | DaS |
| Warsop Dismantled Railway Line | SK533690 | 2014 | DCW |
| Warsop Dismantled Railway Line | SK535691 | 2002 | DCW |
| Warsop Dismantled Railway Line | SK537693 | 2002 | DCW |
| Warsop Dismantled Railway Line | SK551694 | 2002 | DCW |
| Warsop Dismantled Railway Line | SK543693 | 2002 | DCW |
| Warsop Dismantled Railway Line | SK542693 | 2014 | RAJ |
| Nether Langwith Woodland | SK540703 | 2012 | KB |
| Lord Stubbin's Wood | SK536688 | 2012 | DCW |
| Hatfield Plantation | SK528651 | 2009 | MW |
| Calverton Landfill* | SK589501 | 2012 | MW |
| Old Canal Basin, Wollaton* | SK527404 | 2011 | PS |
| Bluebell Wood, Bramcote* | SK506373 | 2011 | DCW |
| Harrison's Plantation, Wollaton* | SK530404 | 1999 | PA |
| Broxtowe (East)* | SK5342 | 2010 | WM |
| Bilthorpe* | SK644612 | 2013 | RAJ |
| West Stockwith* | SK788952 | 2011 | RAJ |
| Cropwell Bishop Gypsum Works* | SK674355 | 2015 | DCW |
| Gedling Colliery* | SK613436 | 2015 | DCW |
| Southwell* | SK708532 | 2015 | RAJ |

*Not native

Cardamine impatiens L.

Narrow-leaved Bitter-cress

National Status: Near Threatened, Nationally Scarce
Nottinghamshire Status: Extinct

The species was last recorded in the VC in the 19th Century on the banks of the Cromford Canal near Brinsley on the border with Derbyshire (VC57)

| Location | GR | Date | Recorder |
|----------------|--------|------|----------|
| Cromford Canal | SK4450 | 1839 | GH |

Carduus tenuiflorus Curtis

Slender Thistle

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 9

Slender thistle *Carduus tenuiflorus* is an annual or biennial that is often considered to be an introduced species away from the coast. In the VC it is found on sandy soils and most of the records are located in close proximity to the River Trent. Before 1970, most of the records were associated with sites near Nottingham or on the banks of the River Trent, upstream of Newark-on-Trent. Since 1970 the species has been restricted to sites downstream of Newark-on-Trent (often where the river is tidal) and elsewhere in the north and east of the VC. The loss of the species around the Nottingham area could be due to habitat loss, but the reasons for the colonisation of sites to the north and east of Newark-on-Trent is not clear. The most recent records (in bold) are in the same area as previously recorded, but localised variation is probably caused by the activities of livestock disturbing the grassland and scrub.

| Location | GR | Date | Recorder |
|------------------------------|-----------------|-------------|----------------|
| River Trent, Coates | SK826815 | 2001 | DCW |
| Harby | SK884725 | 2004 | DCW, RAJ |
| Misson | SK689971 | 2002 | DCW |
| Misson | SK689971 | 2010 | DCW |
| River Trent, Rampton | SK825788 | 2003 | DCW |
| Rolleston | SK749527 | 2003 | RAJ |
| South Clifton | SK818697 | 2009 | DCW |
| South Clifton | SK818696 | 2013 | DCW, MW |
| South Clifton | SK818698 | 2014 | DCW |
| South Clifton | SK819683 | 2000 | DCW |
| South Clifton | SK819683 | 2000 | DCW |
| South Clifton | SK818692 | 2000 | DCW |
| River Trent, Sutton-on-Trent | SK811642 | 2001 | DCW |

Carex canescens L.

White Sedge

National Status: Least Concern
Nottinghamshire Status: Rare
Monads: 3

White sedge *Carex curta* is a perennial species that is found in mesotrophic mires in the lowlands. Before 1970 the species was considered to be very rare in the VC and was recorded at only three sites on the Bunter Sandstone including Lindhurst, Scaftworth and Carlton-in-Lindrick. After 1970 the species was not re-found at Carlton-in-Lindrick, but in 1977 was found for the first time at Torworth Sandpit, approximately 3km to the south of Lings Wood, Scaftworth. In recent years however, the species has only been recorded at Lindhurst and because of drainage and increasing shade at Scaftworth (SK668908) and Torworth (SK667862), it is considered to be no longer extant.

| Location | GR | Date | Recorder |
|---------------|----------|------|----------|
| Fouleil Brook | SK578583 | 1991 | DCW |

Carex diandra Schrank

Lesser Tussock Sedge

National Status: Near Threatened
Nottinghamshire Status: Extinct

G. Howitt recorded lesser tussock sedge *Carex diandra* in the 19th Century in bogs near Mansfield. Howitt & Howitt (1963) however, stated that the species was probably extinct, because suitable habitat to the south of Mansfield was no longer present.

| Location | GR | Date | Recorder |
|-----------------------------|------|------|----------|
| Near Bleak Hills, Mansfield | SK55 | 1839 | GH |

Carex digitata L.

Fingered Sedge

National Status: Nationally Scarce
Nottinghamshire Status: Extinct

Fingered sedge *Carex digitata* was recorded in 1826 by T. Jowett in Pleasley Wood, Nottinghamshire. Nowadays only a small part of Pleasley Wood is located in Nottinghamshire and the location referred to by T. Jowett could now be in Derbyshire, because of boundary changes during the last 185 years. In 2006, the species was found in the Wood, approximately 200m from the boundary of the VC and it is perhaps reasonable to assume that this location is in the vicinity of T. Jowett's record. Suitable habitat (shaded, limestone outcrops) is present on the Nottinghamshire side of the woodland and there is optimism that the species will be re-found in the VC.

| Location | GR | Date | Recorder |
|---------------|------|------|----------|
| Pleasley Wood | SK56 | 1826 | TJ |

Carex dioica L.

Dioecious Sedge

National Status: Least Concern
Nottinghamshire Status: Rare
Monads: 1

Nationally dioecious sedge *Carex dioica* has declined because of drainage, Preston *et al* (2002). The species is often found in calcareous springs and flushes and in the VC it was last recorded during 1987 in a peaty flush overlying Magnesian Limestone at Sookholme Moor. Historically the species was more frequently associated with bogs on the Sherwood Bunter Sandstone, but virtually the entire resource was lost or destroyed during the 20th Century, because of drainage and habitat loss caused by coal mining activity. Droughts in the 1990s have also taken their toll and given the lack of recent sightings the species may be no longer extant in the VC.

| Location | GR | Date | Recorder |
|----------------|----------|------|----------|
| Sookholme Moor | SK554678 | 1986 | DCW |

Carex distans L.

Distant Sedge

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 10

Howitt & Howitt (1963) considered the species to be very rare in the VC, being recorded at only three localities and all on the Magnesian Limestone. Nationally the species appears to have declined at inland localities due to drainage, but this does not appear to be the case in the VC. The apparent increase in the number of records could be due to a genuine expansion in the species range or because of increased survey effort. However, it is worth noting that many of the populations are very small and at two sites consists of a single plant. The population at Staunton is probably no longer extant, because of shading. Surveys at three sites since 2012 have confirmed that the populations are still extant (in bold).

| Location | GR | Date | Recorder |
|----------------------------------|-----------------|-------------|------------|
| Annesley Woodhouse Quarry | SK489533 | 2013 | DCW |
| Car Colston Marsh | SK708418 | 2007 | DCW |
| Sheepwash Brook, East Leake | SK559254 | 2000 | DCW |
| Maplebeck Grassland | SK713617 | 1999 | DCW, Woll |
| Ruddington Moor | SK561315 | 2009 | DCW |
| Shireoaks Colliery Tip | SK564806 | 2015 | RAJ |
| Shireoaks Park Cascade | SK548804 | 1997 | DCW |
| Sookholme Moor | SK554678 | 2012 | DCW |
| Warsop Hills and Holes | SK553682 | 2011 | DCW |
| Southwell Grassland | SK704534 | 2015 | RAJ |
| Staunton-in-the-Vale Pond | SK818437 | 1988 | DCW |

Carex divulsa Stokes

Grey Sedge

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 5

Before 1970, the species was recorded at scattered localities in the VC including Welbeck, Colwick Park, Averham and a site near Oxtun. Since 1970 the species has not been re-found at the Averham and Oxtun sites and until 2014 only one population had been recorded at Colwick in sparse vegetation behind a bus stop next to Rough Hill Wood. During the past two years a further four populations have been found at scattered locations in the county on parkland and churchyards. A search of old grasslands in such places may yet reveal further populations.

| Location | GR | Date | Recorder |
|----------------------|------------|------|-------------|
| Rough Hill Wood | SK59313968 | 2012 | PA, DCW |
| Norwell churchyard | SK775617 | 2014 | MC, SP, RAJ |
| Stanford Park | SK566236 | 2015 | DCW |
| Clayworth Churchyard | SK726884 | 2015 | MW |
| Welbeck Grassland | SK57M | 2015 | MW |

Carex echinata Murray

Star Sedge

National Status: Least Concern
Nottinghamshire Status: Rare
Monads: 3

Star sedge *Carex echinata* was once a common species in the VC and was only absent on the Keuper Marl. The decline in the VC is part of a larger national decline throughout the lowlands that has been brought about by land drainage and agricultural improvement. The species is considered to be vulnerable to extinction, because it is now confined to only three sites and each population is small.

| Location | GR | Date | Recorder |
|------------------|----------|------|----------|
| Selston Common | SK474527 | 2002 | DCW |
| Clipstone Forest | SK613603 | 2009 | DCW |
| Rainworth Heath | SK591591 | 2009 | DCW |

Carex elata All.

Tufted Sedge

National Status: Nationally Scarce
Nottinghamshire Status: Scarce
Monads: 7

Howitt (1839) described tufted sedge *Carex elata* as being rather frequent. Since the 19th Century the species has steadily declined in the VC and Howitt & Howitt (1963) described the species as being infrequent occurring on lighter soils next to water. In recent times the species has been recorded in only seven rolling monads and at several sites is reduced to small populations. It is therefore, vulnerable to further declines. Since 2012, a search of the archives has revealed two records (in bold) in the same localities as the other records and a survey of Oxpasture Plantation has confirmed that the population is still extant.

| Location | GR | Date | Recorder |
|--------------------------------|-----------------|-------------|----------------|
| Old Trent, South Clifton | SK823690 | 1975 | RCLH |
| Banks Carr Drain | SK599911 | 1996 | DCW |
| Oxpasture Plantation | SK832634 | 1998 | DCW |
| Oxpasture Plantation | SK832632 | 1998 | DCW |
| Oxpasture Plantation | SK833633 | 2014 | JC |
| Snow Sewer, Misson | SK726983 | 1999 | DCW |
| Snow Sewer, Misson | SK724981 | 2012 | DCW, JC |
| Snow Sewer, Misson | SK727983 | 2006 | LH, RBa |
| Broomston Drain, Misson | SK727982 | 2006 | LH, RBa |
| Darnsyke, Thorney | SK855738 | 2007 | DCW |
| Darnsyke, Thorney | SK856739 | 2011 | DCW, MW |

Carex elata (continued)

| Location | GR | Date | Recorder |
|--|----------|------|----------|
| Wigsley Wood | SK850706 | 2007 | DCW |
| University of Nottingham Jubilee Campus* | SK544399 | 2010 | DCW |

*Probably planted

Carex hostiana DC.

Tawny Sedge

National Status: Least Concern**Nottinghamshire Status:** Rare**Monads:** 2

Tawny sedge *Carex hostiana* species is nowadays confined to two sites in the county, both of which are flushes on the Magnesian Limestone. It was formerly recorded at Sookholme Bath but searches have failed to locate the population in recent years. It has been known at the Sookholme Moor site since 1907, but was not recorded until a recent survey by Natural England in 2013, which confirmed that the species was still present. The population at Annesley Woodhouse Quarry SSSI was a relatively recent find, but historically it may have been overlooked, because it occurs with distant sedge and these two species can be difficult to separate. Both populations are located on designated sites and are being managed to promote biodiversity; as such the populations are not considered to be particularly vulnerable to extinction.

| Location | GR | Date | Recorder |
|---------------------------|----------|------|-------------|
| Sookholme Bath | SK543668 | 1972 | JH |
| Sookholme Moor | SK554678 | 2013 | RT |
| Annesley Woodhouse Quarry | SK489533 | 2008 | JF, MW, DCW |

Carex pulicaris L.

Flea Sedge

National Status: Least Concern**Nottinghamshire Status:** Scarce**Monads:** 4

Flea sedge *Carex pulicaris* had become rare by the early 1960s and Howitt & Howitt (1963) only listed the species at two sites, neither of which were extant by the 1970s. However, in recent times the species has been located at five sites, and with the exception of the Friezeland site, are all associated with the Magnesian Limestone areas of the county. It is not known if the increased number of sites represents an extension in the range of the species or whether in the past, the species was overlooked. Since 2012, a survey of Sookholme Moor (in bold) has confirmed that the population is still extant.

| Location | GR | Date | Recorder |
|---------------------------|-----------------|-------------|-----------|
| Teversal Trail | SK491636 | 2001 | MW |
| Warsop Hills and Holes | SK557678 | 2012 | DCW, RAJ |
| Sookholme Moor | SK554678 | 2013 | RT |
| Friezeland | SK476505 | 2005 | DCW |
| Annesley Woodhouse Quarry | SK489533 | 2008 | DCW, MW |

Carex vesicaria L.

Bladder Sedge

National Status: Least Concern**Nottinghamshire Status:** Scarce**Monads:** 8

Bladder sedge *Carex vesicaria* has never been common in the VC and has generally been associated with base-rich soils where the water table is at or above the ground level for a significant part of the year. In the past, the species was most commonly found close to the Rivers Trent and Erewash, but was also associated with still-water habitats such as Moorgreen Reservoir, Holme Pit and Haughton Duck Decoy. The plant can still be seen in good quantities at many of the extant sites such as Clifton Pond and Moorgreen Reservoir. Since 2012, a survey at Holme Pierrepont

Gravel Pits has confirmed that the population is still extant (in bold).

| Location | GR | Date | Recorder |
|-------------------------------------|-----------------|-------------|------------|
| Broadholme | SK87 | 1973 | MJH |
| High Marnham Power Station Drain | SK812713 | 1977 | IB |
| Holme Pit | SK535346 | 1991 | DCW |
| Holme Pit | SK538347 | 1991 | DCW |
| Holme Pit | SK53743462 | 2010 | DCW |
| Haughton Decoy | SK681719 | 1972 | JH |
| Haughton Decoy | SK6803771885 | 2011 | DCW, MW |
| Holme Pierrepont Gravel Pits | SK620381 | 2015 | DCW |
| Lound Gravel Pit | SK713866 | 2003 | DCW |
| Moorgreen Reservoir | SK481493 | 2005 | DCW |
| Moorgreen Reservoir | SK483496 | 2011 | MW |
| Spalford | SK86 | 1976 | MJH |
| Spalford | SK830688 | 1990 | DCW |
| Spalford | SK828688 | 1990 | DCW |
| Spalford | SK829689 | 1999 | DCW |

Carex vulpina L.

True Fox-sedge

National Status: Vulnerable**Nottinghamshire Status:** Extinct

Aberystwyth University Herbarium holds a specimen of true fox-sedge *Carex vulpina* collected from a site in the Gotham area of South Nottinghamshire by D.A.J. Little. The underlying geology of the monad is Mercia Mudstones, but the wetter areas are generally associated with the floodplain of Fairham Brook on Gotham Moor to the east of Gotham. Targeted searches of ditches and the wetter areas of the remaining unimproved grasslands could be worthwhile.

| Location | GR | Date | Recorder |
|----------|--------|------|----------|
| Gotham | SK5330 | 1948 | DAJL |

Carum carvi L.

Caraway

National Status: Endangered**Nottinghamshire Status:** Rare**Monads:** 1

Caraway *Carum carvi* has always been a rare casual in the VC and before 1970 was recorded at various scattered localities throughout the county, except in the far north. Since 1970, the species has only been recorded once; three plants were found in rough grassland on the bank of Rainworth Water by a sewage treatment works

| Location | GR | Date | Recorder |
|---------------------------|----------|------|----------|
| Rainworth Water Grassland | SK598592 | 1994 | DCW |

Centaurea cyanus L.

Cornflower

National Status: Nationally Rare**Nottinghamshire Status:** Rare (as an archaeophyte)**Monads:** 35 (3 as an archaeophyte)

As an annual weed of arable fields cornflower *Centaurea cyanus* was already rare by the early 1960s. Since 1970 the species has only been recorded at three locations as an arable weed; on sandy soils near to the River Trent, at Costock in the south of the county and more recently in set aside at Bawtry in the north of the Vice County (now in the County of Southeast Yorkshire). Since 1970, as a garden escape or introduction, the species has been recorded in 32 monads, scattered across the county.

Centaurea cyanus (continued)

| Location | GR | Date | Recorder |
|----------------------------|------------|------|----------|
| South Clifton Arable Field | SK826703 | 1999 | PA, RAJ |
| Costock Arable Field | SK574255 | 1987 | Woll. |
| Bawtry Field | SK64379370 | 2006 | GC |
| Bawtry Field | SK64409367 | 2006 | GC |

Centaureum pulchellum (Sw.) Druce

Lesser Centaury

National Status: Least Concern**Nottinghamshire Status:** Scarce**Monads:** 4Lesser centaury *Centaureum pulchellum* at Langold Colliery Yards

Source: S. Hammonds

Lesser centaury *Centaureum pulchellum* is usually found in dry, open grasslands and heaths, but can also be found on open disturbed ground. The species appears to be a recent arrival, because there are no historical records for the VC and at three sites artificial habitats have been colonised following closure of the coalmines. At Langold the plants are located on winter wet barish soils that cover parts of the former colliery yards. At Shireoaks the plants are found in a similar habitat, but thousands of plants also occur on the shale seepages of the colliery spoil tips. At Costhorpe Industrial estate, the substrates are mixed but essentially derive from the former colliery yards and are therefore, of similar composition to the other two sites. Since 2012, targeted surveys have identified existing and new populations (in bold) in the same general area and on railway sidings near Parson's Wood in the Warsop area.

| Location | GR | Date | Recorder |
|-----------------------------|-----------------|-------------|-----------------|
| Langold Colliery Yards | SK582858 | 2012 | DCW, MW, SH, GC |
| Langold Country Park | SK583863 | 2013 | RAJ |

| Location | GR | Date | Recorder |
|--------------------------------------|-----------------|-------------|----------------|
| Costhorpe Industrial Estate | SK5886 | 2015 | RAJ, GC |
| Shireoaks Colliery Tip | SK563805 | 2012 | CS, RS |
| Shireoaks Colliery Tip | SK564806 | 2012 | DCW, CS, RS |
| Shireoaks Colliery Tip | SK559807 | 2015 | RAJ |
| Shireoaks Colliery Tip | SK564806 | 2010 | DCW |
| Shireoaks Colliery Tip | SK561807 | 2012 | CS, RS |
| Shireoaks Colliery Tip | SK561805 | 2015 | CS, RS |
| Shireoaks Colliery Tip | SK560807 | 2013 | DCW |
| Shireoaks Colliery Tip | SK562807 | 2015 | RAJ |
| Shireoaks Colliery Tip | SK559806 | 2010 | DCW |
| Shireoaks Colliery Tip | SK558809 | 2012 | GC |
| Shireoaks Colliery Tip | SK557810 | 2015 | RAJ |
| Shireoaks Colliery Tip | SK557809 | 2011 | DCW, MW |
| Parson's Wood Railway Sidings | SK536683 | 2013 | DCW |

Cephalanthera damasonium (Mill.) Druce

White Helleborine

National Status: Vulnerable**Nottinghamshire Status:** Extinct

G. Howitt last recorded white helleborine *Cephalanthera damasonium* in 1839 in "woods between Newstead and Linby". It has not been recorded since and is considered to be extinct.

| Location | GR | Date | Recorder |
|----------------------------|------|------|----------|
| Between Newstead and Linby | SK55 | 1839 | GH |

Cephalanthera longifolia (L.) Fritsch

Narrow-leaved Helleborine

National Status: Vulnerable, Nationally Scarce**Nottinghamshire Status:** Extinct

J. Thompson last recorded narrow-leaved helleborine *Cephalanthera longifolia* before 1839 in woods near Welbeck. It has not been recorded since and is considered to be extinct.

| Location | GR | Date | Recorder |
|----------|------|------|----------|
| Welbeck | SK56 | 1839 | JT |

Chamaemelum nobile (L.) All.

Chamomile

National Status: Vulnerable, Nationally Scarce**Nottinghamshire Status:** Extinct

Howitt & Howitt (1963) described chamomile *Chamaemelum nobile* "as a rare plant of sandy fields". It is now probably extinct in the VC, because the Bramcote Landfill site, where it was last recorded as an introduction, has recently been landscaped and capped with introduced topsoil.

| Location | GR | Date | Recorder |
|-------------------|----------|------|----------|
| Bramcote Landfill | SK503387 | 2008 | DCW |
| Bilborough | SK54 | 1939 | JWC |

Chenopodium bonus-henricus L.

Good King Henry

National Status: Vulnerable**Nottinghamshire Status:** Declining**Monads:** 14

Though never common, the species was once widespread and well established. Since 1970 the species has undergone serious declines and several of the records are for single plants or small populations. A population on a Brinsley roadside verge (SK458503) is no longer extant and some of the populations listed below are likely to be lost or vulnerable. This is because it is no longer cultivated as a culinary herb and unmanaged areas on farms that could support relict populations have been tidied up.

Chenopodium bonus-henricus (continued)

| Location | GR | Date | Recorder |
|----------------------------------|----------|-------|----------|
| Saundby Railway Crossing | SK7988 | 1970 | RCLH |
| Osberton (near Chequers Bridge) | SK648815 | 1970s | JH |
| Rainworth | SK595578 | 1972 | JH |
| Martins Pond | SK5240 | 1987 | JCo |
| Red Hill | SK4930 | 1987 | DCW |
| River Trent, Hoveringham | SK703463 | 1993 | DCW |
| River Leen, Basford | SK549434 | 1995 | DCW |
| Sneinton Quarry | SK592406 | 1995 | DCW |
| Colston Bassett | SK705335 | 1996 | DCW |
| Pleasley Vale | SK524648 | 1996 | DCW |
| River Trent, East Stoke | SK737508 | 1996 | MW |
| River Idle, Mattersey | SK691894 | 1999 | KB |
| Mansfield | SK546615 | 2001 | DCW |
| Kelham | SK778556 | 2003 | DCW |
| Kirkby-in-Ashfield | SK506576 | 2003 | RAJ |
| Beauvale, Greasley | SK486487 | 2008 | PO, DCW |
| Oldcotes Grassland | SK587884 | 2009 | DCW |
| Mother Drain, Sturton-Le-Steeple | SK815856 | 2010 | DCW |
| Farnsfield Roadside Verge | SK654566 | 2012 | DCW |

Chenopodium glaucum L.

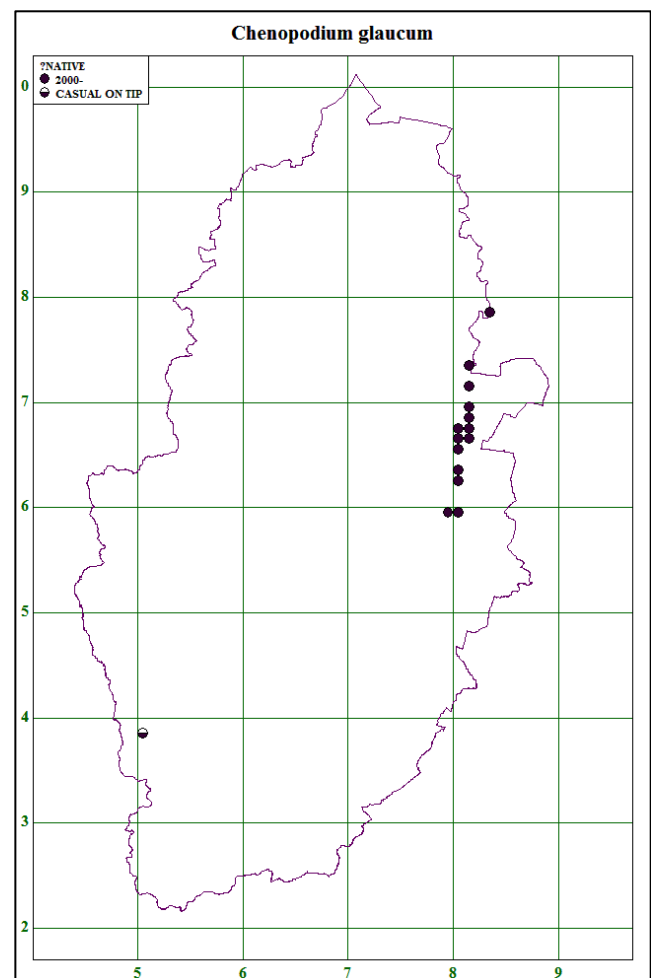
Oak-leaved Goosefoot

National Status: Vulnerable**Nottinghamshire Status:** Uncommon**Monads:** 13

Before 1970, the species had been recorded only once in the VC, in a green lane between Misson and Idle Stop where manure was tipped. Although unlikely, it is possible that the species was overlooked, because modern records are, for the most part, associated with semi-natural habitat on the banks of the tidal River Trent between Holme and Rampton. Targeted surveys were carried out from 2006 to 2010, but during 2011 and 2012, the species was not found, probably because of late-summer flooding in the previous years, which stopped the species from germinating at its normal time. During 2013 targeted surveys (in bold) identified near-continuous populations on the tidal Trent, wherever sandy gravels were present. Further searches in 2015 have added further sites (in bold).

| Location | GR | Date | Recorder |
|-------------------------------------|-----------------|-------------|-----------------|
| Bramcote Landfill | SK505388 | 2009 | DCW |
| River Trent, Collingham | SK807625 | 2006 | DCW, RW |
| River Trent, Collingham | SK803631 | 2006 | DCW, RW |
| River Trent, Collingham | SK803632 | 2006 | DCW, RW |
| River Trent, Collingham | SK803633 | 2006 | DCW, RW |
| River Trent, Gorton | SK818684 | 2013 | DCW, MW |
| River Trent, Gorton | SK816683 | 2009 | DCW |
| Grassthorne Holme | SK809674 | 2013 | DCW, MW |
| River Trent, Grassthorne | SK814670 | 2013 | DCW, MW |
| River Trent, Grassthorne | SK815669 | 2006 | DCW, RAJ |
| River Trent, Grassthorne | SK815669 | 2009 | DCW, SH |
| River Trent, Holme | SK802597 | 2006 | DCW, RAJ |
| River Trent, Holme | SK801595 | 2006 | DCW, RAJ |
| River Trent, Holme | SK801596 | 2006 | DCW, RAJ |
| River Trent, Holme | SK799593 | 2006 | DCW, RAJ |
| River Trent, Normanton Holme | SK817675 | 2008 | DCW |
| River Trent, North Clifton | SK817719 | 2006 | DCW, MW |
| River Trent, Ragnall | SK81677306 | 2007 | RAJ |
| River Trent, Rampton | SK833782 | 2013 | DCW, MW |
| River Trent, Rampton | SK834783 | 2013 | DCW, MW |
| River Trent, South Clifton | SK817695 | 2006 | DCW, MW |
| River Trent, Sutton-on-Trent | SK815668 | 2013 | DCW, MW |
| River Trent, Sutton- | SK816666 | 2006 | DCW, RAJ |

| Location | GR | Date | Recorder |
|------------------------------|----------|------|----------|
| on-Trent | | | |
| River Trent, Sutton-on-Trent | SK814665 | 2013 | DCW, MW |
| River Trent, Sutton-on-Trent | SK810666 | 2006 | DCW, RAJ |
| River Trent, Sutton-on-Trent | SK812666 | 2013 | DCW, MW |
| River Trent, Sutton-on-Trent | SK809666 | 2013 | DCW, MW |
| River Trent, Sutton-on-Trent | SK809664 | 2013 | DCW, MW |
| River Trent, Sutton-on-Trent | SK808662 | 2013 | DCW, MW |
| River Trent, Sutton-on-Trent | SK809661 | 2006 | DCW, RAJ |
| River Trent, Sutton-on-Trent | SK806655 | 2013 | RAJ |
| River Trent, Sutton-on-Trent | SK807661 | 2013 | RAJ |
| River Trent, Sutton-on-Trent | SK808657 | 2013 | DCW, MW |
| River Trent, Sutton-on-Trent | SK809658 | 2013 | DCW, MW |
| River Trent, Sutton-on-Trent | SK809659 | 2013 | RAJ |
| River Trent, Gorton | SK817679 | 2013 | DCW, MW |
| River Trent, Gorton | SK818677 | 2013 | DCW, MW |
| Cromwell Gravel Pits | SK802621 | 2015 | DCW |



Chenopodium hybridum L.

Sowbane

National Status: Least Concern
Nottinghamshire Status: Rare
Monads: 3

The species has always been rare in the VC and before 1970 was only recorded in the Newark-on-Trent area. Since 1970 the species has only been recorded at five locations and in the last three years has disappeared from the two landfill sites at Bramcote (SK503387) and Bunny (SK581286), which have been landscaped and capped.

| Location | GR | Date | Recorder |
|------------------------|----------|------|----------|
| Lady Lee Quarry (near) | SK566797 | 2011 | DCW |
| North Muskham | SK792586 | 2006 | DCW |
| Hawton | SK802502 | 2010 | DCW |
| Hawton | SK800502 | 2012 | DCW, MW |

Chenopodium murale L.

Nettle-leaved Goosefoot

National Status: Vulnerable
Nottinghamshire Status: Rare
Monads: 2

Although the species has always been historically scarce, it was widely distributed throughout the VC, but in recent times the species has declined and has only been recorded at three sites. Although Bramcote Landfill was landscaped and capped with topsoil a few plants were still present in 2010. At the Wilford site only one plant was recorded in 2005 and there have been no recent sightings of the population at Worksop and Martins Pond, so the species is considered to be very vulnerable to extinction in the VC.

| Location | GR | Date | Recorder |
|-------------------|----------|------|----------|
| Worksop | SK592788 | 1972 | JH |
| Martins Pond | SK5240 | 1987 | JCo |
| Wilford | SK564367 | 2005 | DCW |
| Bramcote Landfill | SK503389 | 2010 | DCW |

Chenopodium urbicum L.

Upright Goosefoot

National Status: Critically Endangered
Nottinghamshire Status: Extinct

Before 1970, upright goosefoot *Chenopodium urbicum* was considered to be a rare casual and was recorded near to the Plaster Works at Kingston-on-Soar. Since 1970 the species has been recorded in a garden at Collingham; at Bramcote landfill (now landscaped) and as a casual at Kinoulton, on the margin of a game crop. As the species has not been seen at these sites since, it is very likely that the species is extinct in the VC.

| Location | GR | Date | Recorder |
|-------------------|----------|------|----------|
| Kingston-on-Soar | SK5228 | 1907 | JWC |
| South Collingham | SK827613 | 1989 | EMP |
| Bramcote landfill | SK503387 | 2005 | DCW |
| Kinoulton | SK668312 | 2005 | DCW |

Chenopodium vulvaria L.

Stinking Goosefoot

National Status: Endangered, Nationally Rare
Nottinghamshire Status: Extinct

Stinking goosefoot *Chenopodium vulvaria* has always been rare in the VC and in the 19th Century was restricted to sites at Nottingham and Halam near Southwell. It was last recorded in the early 20th Century by A. R. Horwood in the south of the VC at Kingston-upon-soar.

| Location | GR | Date | Recorder |
|------------------|------|------|----------|
| Kingston-on-Soar | SK52 | 1916 | ARH |

Cicuta virosa L.

Cowbane

National Status: Endangered, Nationally Scarce
Nottinghamshire Status: Extinct

Cowbane *Cicuta virosa* was extinct before the publication of G. Howitt's flora in 1839 and was only ever recorded at two locations in the VC, both in the city of Nottingham.

| Location | GR | Date | Recorder |
|--|--------|------|----------|
| Ditches next to Nottingham Castle Rock | SK5937 | 1809 | JB |

Circaea x intermedia Ehrh.*C. alpina x lutetiana*

National Status: Least Concern
Nottinghamshire Status: Rare
Monads: 2

In 2012 a single large patch and nearby, two smaller patches were recorded growing at Clifton Grove, which is mature broadleaved woodland habitat, rising above the south bank of the River Trent, in the City of Nottingham. This is the first VC record and because the woodland has been frequently surveyed in the last few decades, it is likely to be a recent arrival, possibly following flood events. During 2013 a further colony was located at Norwood in the northwest of the county growing alongside a footpath, which suggests that it was possibly introduced.

| Location | GR | Date | Recorder |
|---------------|------------|------|----------|
| Clifton Grove | SK54613542 | 2013 | DCW |
| Norwood | SK477633 | 2013 | DCW, MW |

Cirsium acaule L.

Dwarf Thistle

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 8

Before 1970, dwarf thistle *Cirsium acaule* was considered to be uncommon in the county, but was widespread and used to occur on the Magnesian Limestone in the northwest of the VC as well as on the base-rich clays of the River Trent Valley and the south of the VC. However, in recent times the species has not been found on the Magnesian Limestone at Skegby (SK4960 / 4961), Teversal (SK481625) and Broxtowe (SK521429) or in the Trent Valley at Thurgarton (SK6848) and in the south has not been seen at the East Leake sites (SK5528 and SK551274). The probable reason for the losses is a lack of grazing and natural succession to tall grassland and scrub. A survey of Orston Plaster Pits confirmed that the population is still extant.

| Location | GR | Date | Recorder |
|--|-----------------|-------------|----------------|
| Barnstone Quarry | SK733346 | 1998 | DCW |
| Normanton-on-Soar Great Central Railway Line | SK538246 | 2011 | DCW, MW |
| Langar Airfield | SK749334 | 2009 | DCW |
| Gotham Hills | SK531307 | 2009 | DCW |
| Gotham Hills | SK529307 | 2009 | DCW |
| Orston Plaster pits | SK762402 | 2015 | RAJ, JC |
| Hickling Standard Grassland | SK683281 | 2010 | DCW |
| Barnstone Dismantled Railway Line | SK739358 | 2010 | DCW |
| Barnstone Dismantled Railway Line | SK744353 | 1997 | MW |

Cirsium dissectum (L.) Hill

Meadow Thistle

National Status: Least Concern**Nottinghamshire Status:** Probably Extinct

Meadow thistle *Cirsium dissectum* has always been rare in the county and by 1970 was only found at one site. Howitt & Howitt (1963) stated that the species was still common in fields near to Misson and Everton until 1950, but declined thereafter because of re-seeding. The reason for the disappearance from Misson Line Bank in 1973 is unknown, but could have been caused by a lack of management and natural succession to scrub and woodland, in addition to a general drying out of the area.

| Location | GR | Date | Recorder |
|------------------|----------|------|----------|
| Everton Meadows | SK69 | 1963 | RCLH |
| Misson Line Bank | SK708958 | 1973 | RCLH |

Cirsium x celakovskianum Knaf.*C. palustre x arvense***National Status:** Data Deficient**Nottinghamshire Status:** Rare**Monads:** 1

The hybrid has been recorded throughout the UK wherever both parents occur together, but it has not knowingly been recorded in Nottinghamshire until 2013 and Stace *et al* (2015) states "that there must be effective barriers to hybridisation as flowering plants of both species without any hybrids are often found in close proximity." Targeted searches of sites containing both parents will probably provide further records, but no hybrids have been found since 2013. At Freckland Wood, a former colliery spoil tip, the parents are growing on a flushed grassland glade that is east-facing.

| Location | GR | Date | Recorder |
|----------------|----------|------|----------|
| Freckland Wood | SK528524 | 2013 | MW |

Cirsium x grandiflorum Kittel*C. eriophorum x vulgare***National Status:** Data Deficient**Nottinghamshire Status:** Rare**Monads:** 1

Stace (1991), states that the hybrid is rare in England to Southeast Yorkshire. It is partially fertile and intermediate in stem wingedness and capitulum characters. It has been recorded at only one location in the south of the VC and has persisted since 1992. Stace *et al* (2015) suggests that the hybrid is confined to similar habitats to woolly thistle *Cirsium eriophorum* rather than spear thistle *C. vulgare*, which would explain why the hybrid is rare in Nottinghamshire.

| Location | GR | Date | Recorder |
|--------------------------------------|----------|------|----------|
| Cropwell Bishop Disused Gypsum Works | SK672355 | 2010 | DCW |

Cladium mariscus (L.) Pohl

Saw Sedge

National Status: Least Concern**Nottinghamshire Status:** Rare**Monads:** 1

Saw sedge *Cladium mariscus* has only ever been recorded at a single site in the county. Howitt & Howitt recorded a small population in a ballast pit at Misterton Soss in June 1952; the population was still present at the same location in 2009.

| Location | GR | Date | Recorder |
|------------------------|----------|------|----------|
| Misterton Ballast Pits | SK775951 | 2009 | DCW |

Clinopodium acinos (L.) Kuntze

Basil Thyme

National Status: Vulnerable, UKBAP**Nottinghamshire Status:** Rare**Monads:** 4

Basil thyme *Clinopodium acinos* is a UKBAP species that has always been rather rare in Nottinghamshire: For the most part it has been found on dry banks on the Magnesian Limestone, but has also been found on sandy soils in the Sherwood area and in the south of the VC on base-rich clay and alluvial soil. In recent times the species has dramatically declined, and the only site on the Magnesian Limestone is Warsop Hills and Holes. Elsewhere the species has persisted at Barrow Hills in the north and a large population has developed in a steep railway cutting at Stanford-on-Soar (SK538224 to SK537229) in the south of the VC. Since 2012 a further population has been located at North Muskham on sandy soils, in short, species-rich, rabbit-grazed grassland alongside a railway line.

| Location | GR | Date | Recorder |
|---|----------|------|-----------------|
| Warsop Hills and Holes | SK558678 | 2012 | DCW, RAJ, JC |
| Warsop Hills and Holes | SK554677 | 2012 | DCW, RAJ, JC |
| Barrow Hills | SK683917 | 2003 | DCW |
| Stanford-on-Soar Great Central Railway Line | SK5322 | 2011 | DCW, MW |
| North Muskham Grassland | SK791587 | 2015 | MW, DCW, MC, SP |

Clinopodium ascendens (Jord.)
Samp.

Common Calamint

National Status: Least Concern**Nottinghamshire Status:** Scarce (as a neophyte)**Monads:** 5

As a presumed native, common calamint *Clinopodium ascendens* was last recorded near Averham Church, but it is no longer extant at that site. It has disappeared from all of the other historic locations, but still occurs as a neophyte at five sites. The population at Bunny Landfill is no longer extant, because the site was recently capped and landscaped. A search at Holme Pierrepont during 2015 confirmed that the population is extant.

| Location | GR | Date | Recorder |
|------------------------------|----------|------|----------|
| Footpath nr Averham Church | SK7654 | 1952 | RCLH |
| Bunny Landfill | SK576284 | 2005 | DCW |
| The Park, Nottingham | SK567394 | 2009 | PS(B) |
| Headon Hedgerow | SK750769 | 2010 | DCW |
| Holme Pierrepont Gravel Pits | SK621387 | 2015 | DCW |
| Plumtree Railway Test Track | SK604336 | 2011 | DCW |
| East of Nether Langwith | SK546703 | 2012 | KB |

Clinopodium calamintha (L.) Stace

Lesser Calamint

National Status: Vulnerable, Nationally Scarce**Nottinghamshire Status:** Extinct

The only record for lesser calamint *Clinopodium calamintha* in the VC originates from 1807 in fields about Coddington, near Newark.

| Location | GR | Date | Recorder |
|-------------------------|------|------|----------|
| Fields about Coddington | SK85 | 1807 | TO |

Colchicum autumnale L.

Meadow Saffron

National Status: Near Threatened**Nottinghamshire Status:** Rare (as a neophyte)**Monads:** 1

As a native, meadow saffron *Colchicum autumnale* is no longer extant in the VC. It was already uncommon and decreasing before 1970 and was last recorded as a native at Walesby Common. In the last decade the species has been recorded at Wilford (SK5637) and Colwick Country Park (SK6039), but it is considered to be a garden escape at both sites.

Meadow saffron *Colchicum autumnale* at Walesby

Source K. Balkow

| Location | GR | Date | Recorder |
|----------------|--------|------|----------|
| Walesby Common | SK6670 | 1997 | KB |

Comarum palustre L.

Marsh Cinquefoil

National Status: Least Concern**Nottinghamshire Status:** Scarce**Monads:** 5

Before 1970 marsh cinquefoil *Potentilla palustris* was considered to be uncommon and decreasing because of the loss and/or degradation of acid bogs. Since 1970 the species has only persisted at Rainworth and Misson and has only been recorded at nine sites. Of those nine sites, populations at Idle Stop, Misson (SK718964), Bestwood Duckponds (SK5549) and Weecar Lane, Gorton (SK836678) have been lost, because of factors such as habitat destruction, drainage and eutrophication. A population in fen habitat at Martins Pond (SK526402) was described in the first management plan for the site. The plan was written soon after the site was designated as a Local Nature Reserve in the late 1970s, but searches in more recent years have not located the species.

| Location | GR | Date | Recorder |
|-------------------------|-----------------|------|-----------|
| Misson Line Bank | SK708958 | 1973 | RCLH |
| Clifton Drain, Spalford | SK8269 / SK8268 | 1975 | RCLH |
| Fouleil Brook | SK578583 | 1978 | JH, Woll. |
| Gringley Carr Drain | SK707939 | 1980 | NCC |
| Fouleil Brook | SK576584 | 2007 | DCW |

Convallaria majalis L.

Lily-of-the-Valley

National Status: Least Concern**Nottinghamshire Status:** Scarce (as a native?)**Monads:** 7 (as a native?)

Native lily-of-the valley *Convallaria majalis* is located on sandy soils in seven woodlands in the VC. Three of the woodlands including Jack O'Sherwood, Harlow Wood and Big Wood are located on the Bunter Sandstones of the Sherwood area. Road Wood, Gibbett Wood and Wigsley Wood are located in the east of the VC on blown sands and the Pleasley population is located in

scrub next to a stream on the Magnesian Limestone. A recently located population at Bagthorpe Plantation (in bold) is possibly native and occurs on the Coal Measures in the west of Nottinghamshire. In addition to the native locations there are a further 34 populations scattered across the VC, which are considered to be introductions or garden escapes and are not included in the table below.

| Location | GR | Date | Recorder |
|----------------------|----------|------|----------|
| Big Wood* | SK563473 | 2010 | DCW, JC |
| Harlow Wood* | SK547573 | 1993 | DCW |
| Jack O'Sherwood | SK544524 | 1978 | Woll. |
| Pleasley Vale* | SK524652 | 1988 | DCW |
| Road Wood | SK852737 | 2004 | RAJ |
| Gibbett Wood | SK8773 | 1975 | RCLH |
| Wigsley Wood | SK854706 | 2011 | DCW, MW |
| Wigsley Wood | SK849704 | 2011 | DCW, MW |
| Bagthorpe Plantation | SK475514 | 2015 | JC |

*Possibly introduced

Crassula tillaea L.

Mossy Stonecrop

National Status: Nationally Scarce**Nottinghamshire Status:** Rare**Monads:** 1

Historically the species has only ever been recorded on gravelly rides at Stapleford Wood and Langford Moor. Both sites are located in the east of the VC in very close proximity to the Lincolnshire border. The species has not been seen at Langford in recent times and in 2012 the population that has been recorded as scattered along a single ride at Stapleford Wood (from SK849559 to SK851556) was reduced to a single plant at SK84965590.

| Location | GR | Date | Recorder |
|-----------------|----------|------|----------|
| Stapleford Wood | SK850557 | 2012 | DCW, RAJ |

Crepis paludosa (L.) Moench.

Marsh Hawk's-beard

National Status: Least Concern**Nottinghamshire Status:** Rare**Monads:** 2

Marsh hawk's-beard *Crepis paludosa* has only ever been recorded at two sites; near Newboundmill and near Annesley Woodhouse. In recent times, the spread of Himalayan balsam *Impatiens glandulifera* is likely to be the cause of the decline at Cuttail Brook. However, the remaining population at Newboundmill is considered to be stable and is comprised of two large colonies associated with wet seepages in semi-natural woodland, just on the Nottinghamshire side of the VC56 / VC57 border.

| Location | GR | Date | Recorder |
|-------------------|----------|------|----------|
| Cuttail Brook | SK489530 | 2011 | DCW |
| Newboundmill Wood | SK492635 | 2012 | DCW, JC |

Crocus nudiflorus Sm.

Autumn Crocus

National Status: Least Concern**Nottinghamshire Status:** Scarce, Nottinghamshire LBAP Species**Monads:** 6

Stace (2010) describes this species as the most naturalised of the crocus species in the British Isles. Howitt & Howitt (1963) described the species as being "formerly naturalised over large areas of Nottingham, Dunkirk and Wilford meadows. Howatt (2004) describes the species as naturalised, being introduced into the county well before 1500 AD. The habitats have been lost to development, mining subsidence, pit dumps, Wilford Power Station, flood prevention schemes and Nottingham City dump. Occasional plants still occur." In modern times the species has been recorded at eight sites in and around the City of Nottingham and one site at Hoveringham.

Crocus nudiflorus (continued)

Two populations at Wilford (SK565366 and SK563365) are no longer extant and the remaining populations are relatively small. Another eleven records, which are not included in the table below (including a population at Walesby), are considered to be deliberate introductions or recent garden escapes.

| Location | GR | Date | Recorder |
|------------------------------|----------|------|----------|
| Colwick Racecourse | SK604396 | 2006 | DCW, RAJ |
| Hoveringham | SK709468 | 2012 | RAJ |
| Skylarks Nature Reserve | SK617390 | 2008 | DCW |
| Holme Pierrepont | SK605384 | 2007 | SH |
| Nottingham General Cemetery | SK565403 | 2007 | PA |
| Elm Tree Avenue, Nottingham | SK571410 | 2006 | PA, DCW |
| Elm Tree Avenue, Nottingham | SK572410 | 2006 | PA, DCW |
| The Forest Recreation Ground | SK563412 | 2002 | PA |
| Wilford Churchyard | SK566378 | 2002 | DCW |

Autumn crocus *Crocus nudiflorus* at Walesby

(Source: Ken Balkow)

Crocus vernus (L.) Hill

Spring Crocus

National Status: Least Concern

Nottinghamshire Status: Scarce, Nottinghamshire LBAP

Monads: 30 (10 as an archaeophyte)

Spring crocus *Crocus vernus* is naturalised in Nottinghamshire, having been recorded before 1500 AD, Howatt (2004). This native of the Balkan region of former Yugoslavia was formerly abundant on the Bunter Sandstones and Keuper Marls and was often found in the same places as autumn crocus. As a consequence of habitat destruction, by the early 1960s, the species suffered a similar fate to that of autumn crocus, but has fared slightly better in more modern times. Since 1970 spring crocus has been recorded at slightly more sites than autumn crocus and several of the remaining populations are relatively large. A census of two sites at the Nottingham University Highfields Campus by the 'Friends of the University of Nottingham' group revealed a total of 11,500 flowering spikes. The species has also been recorded as a garden escape or introduction at 22 sites, but details of those records are not included in this register. Since 2012, surveys of several sites (in bold) have been undertaken and on-going monitoring has been carried out at the University of Nottingham campus between 2013 and 2015.

| Location | GR | Date | Recorder |
|------------------------------------|-----------------|-------------|-----------|
| Moorgreen Chapel | SK485476 | 2001 | RC |
| Beeston Fields | SK521376 | 2002 | RC, DCW |
| Beeston Fields | SK522384 | 2002 | DCW |
| Awsworth Churchyard | SK483441 | 2002 | DCW |
| Radford Churchyard | SK555407 | 2002 | RC |
| Nottingham General Cemetery | SK565403 | 2014 | WH |
| Nottingham Arboretum | SK567407 | 2013 | WH |
| Greasley Churchyard | SK489472 | 2002 | DCW |

| Location | GR | Date | Recorder |
|---|-----------------|-------------|----------------|
| Lenton Churchyard | SK555393 | 2002 | RC, DCW |
| University of Nottingham Highfields Campus | SK536377 | 2015 | DO'G |
| University of Nottingham Highfields Campus | SK533383 | 2015 | DO'G |
| Babworth Churchyard | SK686808 | 2013 | DCW, MW |
| Beeston Fields | SK518374 | 2010 | DCW |

Cuscuta epithymum (L.) L.

Common Dodder

National Status: Vulnerable

Nottinghamshire Status: Rare (probably extinct)

Monads: 1

Howitt & Howitt (1963) considered common dodder *Cuscuta epithymum* to be very rare or extinct, because it was not recorded in the VC after 1910. Since 1970, the species has been recorded at a single location to the east of the City of Nottingham, as a parasite on European Gorse *Ulex europaeus*. Unfortunately the site has been destroyed.

| Location | GR | Date | Recorder |
|--|----------|------|----------|
| Netherfield Dismantled Railway Sidings | SK631404 | 1994 | DCW |

Cuscuta europaea L.

Large Dodder

National Status: Nationally Scarce

Nottinghamshire Status: Extinct

In the VC, large dodder *Cuscuta europaea* has only ever been recorded once in 1875, somewhere near to Mansfield. The presence of the species in the VC is somewhat surprising and it may have been an introduction. Nationally there are a few pre-1970 records for this species that are located to the north of the VC, but these records are mapped as alien and all modern records are located to the south of Northamptonshire, Preston *et al.* (2003).

| Location | GR | Date | Recorder |
|----------------|---------|------|----------|
| Near Mansfield | SK56/66 | 1875 | JCr |

Cynoglossum officinale L.

Hound's-tongue

National Status: Near Threatened

Nottinghamshire Status: Declining

Monads: 16

Hound's-tongue *Cynoglossum officinale* has never been common, but before 1970 was widespread in the VC on dry grasslands or disturbed ground. In recent times the species has declined in the VC and throughout the British Isles, probably because of habitat loss and herbicide spraying. Since 2012, a survey at Bilhaugh has revealed a new population and populations at East Bridgford, Scaftworth and Thoresby Park have been found again (in bold).

| Location | GR | Date | Recorder |
|---------------------------------------|-----------------|-------------|------------|
| Bilhaugh | SK639689 | 2009 | DCW |
| Bilhaugh and Buck Gates | SK642683 | 2015 | RAJ |
| Budby South Forest | SK622694 | 1972 | JH |
| Cropwell Bishop Disused Gypsum Works | SK680348 | 2000 | DCW |
| Old Hill, East Bridgford | SK696448 | 2010 | DCW |
| Old Hill, East Bridgford | SK696449 | 2014 | DCW |
| East Leake Great Central Railway Line | SK544259 | 2009 | DCW |
| East Leake Great Central Railway Line | SK549267 | 2009 | DCW |
| East Leake Great Central Railway Line | SK551275 | 2009 | DCW |

Cynoglossum officinale (continued)

| Location | GR | Date | Recorder |
|--|-----------------|-------------|----------------|
| Normanton-on-Soar Great Central Railway Line | SK537229 | 2011 | DCW, MW |
| Normanton-on-Soar Great Central Railway Line | SK536235 | 2011 | DCW, MW |
| Normanton-on-Soar Great Central Railway Line | SK537244 | 2011 | DCW, MW |
| Normanton-on-Soar Great Central Railway Line | SK540251 | 2009 | DCW |
| Orston Plaster Pits | SK763402 | 2010 | DCW |
| Red Hill | SK493306 | 1996 | DCW |
| Red Hill Lock | SK492303 | 1996 | DCW |
| Scaftworth | SK668919 | 2011 | DCW, MW |
| Scaftworth | SK671917 | 2012 | DCW, MW |
| Scaftworth | SK672917 | 2014 | JC |
| Stanford-on-Soar Great Central Railway | SK537231 | 2009 | DCW |
| Stanford-on-Soar Great Central Railway | SK536236 | 2009 | DCW |
| Stanford-on-Soar Great Central Railway | SK539223 | 1996 | DCW |
| Stanford-on-Soar Great Central Railway | SK542218 | 1996 | DCW |
| Stanford-on-Soar Great Central Railway | SK541219 | 1996 | DCW |
| Thoresby Park | SK636705 | 2009 | DCW |
| Thoresby Park | SK637706 | 2009 | DCW |
| Thoresby Park | SK641708 | 2009 | DCW |
| Thoresby Park | SK646714 | 1972 | JH |
| Thoresby Park | SK638707 | 2015 | RAJ, JC |
| Willoughby-on-the-Wolds | SK621265 | 1987 | Woll. |

Cystopteris fragilis L.

Brittle Bladder-fern

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 7

For the most part, brittle bladder-fern *Cystopteris fragilis* has been recorded on walls rather than rocks and on the latter is now confined to a single population on a Magnesian Limestone outcrop at Pleasley. Elsewhere, populations at Newboundmill and Pleasley, which were recorded in 1963 (Howitt & Howitt, 1963), have subsequently declined and other populations at Linby (SK5351), Sneinton (SK592410) and Eastwood (SK461458) are no longer extant. However, new populations have appeared on walls at South Muskham and Egmont, which were not recorded before 1970. During 2015 the Beeston population was confirmed as extant (in bold).

| Location | GR | Date | Recorder |
|---------------------------------------|-----------------|-------------|-----------------|
| Pleasley Vale Dismantled Railway Line | SK518649 | 1997 | DCW |
| Farm Access Bridge, Teversal Trail | SK486615 | 2000 | DCW |
| River Meden Road Bridge, Newboundmill | SK496633 | 2001 | DCW |
| Egmont Garden Wall | SK734687 | 2012 | DCW, MW, RAJ |
| Trent Viaduct Wall, South Muskham | SK798563 | 2010 | DCW |
| Lock Wall, Beeston Canal | SK536354 | 2015 | DCW, RAJ |

Dactylorhiza incarnata subsp. *incarnata* (L.) Soó

Early Marsh-orchid

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 5

Howitt & Howitt (1963) considered that the only reliable VC record for early marsh orchid *Dactylorhiza incarnata* originated from Warsop Hills and Holes and on the advice of V.S. Summerhayes,

the records of J.W. Carr were probably better assigned to southern marsh orchid *Dactylorhiza praetermissa*. Since 1970, early marsh orchid has been recorded at four sites in addition to the Warsop Hills and Holes record (now referred to as Sookholme Moor). Howitt's Greasely record was not originally allocated to a subspecies, but for the sake of convenience is included below, because this is the most common of the subspecies in the VC.

| Location | GR | Date | Recorder |
|-------------------------|----------|------|-------------|
| Fish Stew, Greasley | SK492469 | 1973 | RCLH |
| Sookholme Moor | SK554678 | 2000 | DCW |
| Kirkby-in-Ashfield | SK493549 | 2001 | RAJ, DCW |
| Maplebeck Grassland | SK713617 | 2002 | DCW |
| Hunt's Meadow | SK714618 | 2013 | RAJ, NC |
| Bevercotes Country Park | SK710737 | 2014 | DCW, MW, DP |

Dactylorhiza incarnata subsp. *pulchella* (Druce) Soó

Early Marsh-orchid

National Status: Least Concern
Nottinghamshire Status: Rare
Monads: 1

The record for this subspecies has yet to be confirmed. It occurs in the west of the VC on Permian Marls in a sedge-rich marsh community.

| Location | GR | Date | Recorder |
|------------|----------|------|----------|
| Friezeland | SK476507 | 2004 | DCW |

Dactylorhiza maculata (E.F. Linton) Hut. & Summerhay.

Heath Spotted-orchid

National Status: Least Concern
Nottinghamshire Status: Rare
Monads: 2

Before 1970 the species was only recorded once in the south of the VC in a marshy meadow at Stanton-on-Wolds. V.S. Summerhayes verified the record in 1951. Since 1970, the species has not been recorded at Stanton-on-Wolds, but it has been recorded at two other sites in the VC. Although the two sites are a considerable distance from each other, they are both flushed grasslands on clay soils. The Askham population however, occurs in pasture grassland, whilst the Gotham population occurs on a golf course.

| Location | GR | Date | Recorder |
|------------------------|----------|------|----------|
| Rushcliffe Golf Course | SK546279 | 2007 | DCW, MW |
| Askham Grassland | SK744751 | 2010 | DCW |

Dactylorhiza x insignis T. & T.A. Stephenson, Soó*D. praetermissa x D. purpurella*

National Status: Least Concern
Nottinghamshire Status: Uncommon
Monads: 11

Taxonomic research by Matthew Gibbons (Nottingham Trent University) strongly suggests that the populations of marsh orchids *Dactylorhiza* spp. at Bevercotes Country Park includes several hybrid taxa. In particular, *Dactylorhiza x insignis* (southern marsh orchid *D. praetermissa* x northern marsh orchid *D. purpurella*), *D. x grandis* (common spotted orchid *D. fuchsii* x southern marsh orchid) and possibly *D. x venusta* (common spotted orchid x northern marsh orchid). As described by Sell & Murrell (1996), the taxonomy of *D. x insignis* at Bevercotes is intermediate between the parents and statistical analysis verified that the characters were distinct from populations of both parents at the site and at other sites in Nottinghamshire and Derbyshire. Further taxonomic research is needed to confirm the presence of *D. x venusta*.

| Location | GR | Date | Recorder |
|-------------------------|----------|------|----------|
| Bevercotes Country Park | SK739737 | 2014 | MGi, MW |

Dactylorhiza viridis (L.) R.M. Bateman, Pridgeon & M.W. Chase Frog Orchid

National Status: Vulnerable
Nottinghamshire Status: Scarce
Monads: 4

Frog orchid *Dactylorhiza viridis* is found in unimproved grasslands on Permian Marls and Keuper Marls and was described by Howitt & Howitt (1963) as very rare. In recent times it has been recorded in five monads, with only one site located on the Keuper Marls. Populations vary from year to year, but there has been a general decline in the numbers of spikes at most sites. Monitoring of the Teversal population since 2012 has confirmed a decline to single figures of flowering spikes.

| Location | GR | Date | Recorder |
|------------------------------------|-------------------|-------------|-------------------------|
| Teversal Grassland | SK479620 | 1972 | JH |
| Kirkby-in-Ashfield Hills and Holes | SK498553 | 1973 | NCC |
| Newhall Reservoir | SK662546 | 1992 | DCW |
| Bentinck Banks | SK494554 | 1993 | DCW |
| Annesley Woodhouse Quarry | SK489534 | 1999 | DCW, MW |
| Bogs Farm Quarry | SK482533 | 2009 | DCW |
| Teversal Trail | SK48026248 | 2015 | NC, KB, DCW, RAJ |

Daphne mezereum L. Mezereon

National Status: Vulnerable, Nationally Scarce
Nottinghamshire Status: Rare
Monads: 2

Since 1970 mezereon *Daphne mezereum* has been recorded at three sites where there is no evidence to suggest deliberate introduction. Although the species is native in the south of England it was not recorded in the VC before 1970 and is therefore, considered to be naturalised in the VC. At Skylarks Nature Reserve (SK619391), where it is no longer extant, and at Worksop the species is obviously naturalised, because it occurs on formerly disturbed land. However, the origin of the Broxtowe Wood bush is curious, because the woodland is ancient. However, given the close proximity of a housing estate the plant is considered to be a garden escape rather than native.

| Location | GR | Date | Recorder |
|---------------|----------|------|----------|
| Broxtowe Wood | SK531429 | 2005 | DCW, PA |
| Worksop | SK581800 | 2009 | DCW |

Dianthus armeria L. Deptford Pink

National Status: Endangered, Schedule 8: Wildlife & Countryside Act 1981, Nationally Scarce,
Nottinghamshire Status: Rare, Nottinghamshire LBAP Species
Monads: 1

Howitt & Howitt (1963) stated that Deptford pink *Dianthus armeria* was a denizen or casual that was frequent near gardens and rubbish dumps. Between 1970 and 1992 the species was recorded as a casual at Bramcote Land-fill (SK504387), where it is no longer extant. Since 1992, native populations were recorded on a dismantled railway line and a railway cutting near Widmerpool in the south of the VC. These populations are monitored on a regular basis and the last counts consisted of a smaller population of 68 plants at SK644297 and at SK649289, 420 plants in 2012 and 431 plants in 2013.

| Location | GR | Date | Recorder |
|------------------------------------|----------|------|----------|
| Widmerpool Dismantled Railway Line | SK643299 | 2003 | DCW |
| Widmerpool Dismantled Railway Line | SK644297 | 2010 | DCW |
| Widmerpool Dismantled Railway Line | SK649289 | 2013 | NC, RAJ |

Dianthus deltoides L. Maiden Pink

National Status: Near Threatened, Nationally Scarce
Nottinghamshire Status: Extinct (as a native)
Monads: 5 (as a neophyte)

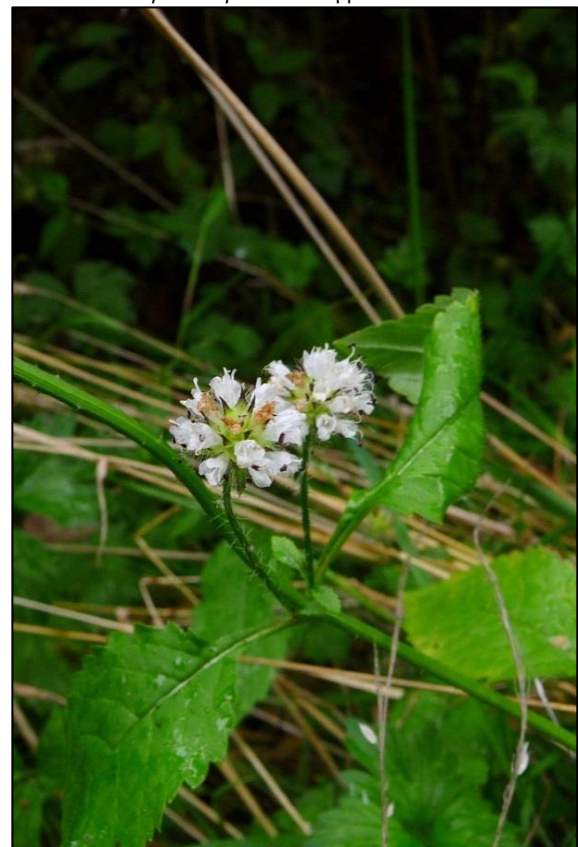
Howitt & Howitt (1963) considered that maiden pink *Dianthus deltoides* was extinct by 1820, but as a native had previously occurred in the VC on Sandstone rocks in the City of Nottingham area. During 2003 the species was recorded at Oak Tree Heath near Mansfield and up until 2007, plants were present at Carburton Plantation on a woodland ride; at both sites, the species could have been native. However, the status was never verified and despite searches at both sites the species has not been re-found in recent years. Since 2012, two further populations have been found (in bold) and they are probably both garden escapes. Another five records are all considered to be introductions or garden escapes, which are marked with an asterisk in the table below.

| Location | GR | Date | Recorder |
|--|-----------------|-------------|------------|
| Oak Tree Heath | SK5660 | 2003 | NRL |
| Carburton Plantation | SK61987216 | 2007 | CS, RS |
| Holme Pierrepont Gravel Pits* | SK621387 | 1992 | DCW |
| Warsop Vale Colliery Yards* | SK552683 | 2002 | DCW |
| Winthorpe Garden Site* | SK815558 | 2004 | DCW |
| Hawton Landfill* | SK803502 | 2010 | DCW |
| University of Nottingham Jubilee Campus* | SK547397 | 2010 | DCW |
| Netherfield Lagoons | SK639402 | 2015 | JC |
| Shirebrook Colliery | SK542669 | 2013 | RAF |

Dipsacus pilosus L. Small Teasel

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 6

Small teasel *Dipsacus pilosus* at Epperstone Park



Source S. Hammonds

Dipsacus pilosus (continued)

Small teasel *Dipsacus pilosus* has always been scarce in the VC and has been lost from Pleasley Forge, Beauvale Abbey, Kneeton Wood, and woods near Thurgarton and Elston. However, it is still extant in old woodlands, associated with Keuper Marl, at Epperstone, Gonalston and Flintham. In recent times the species has also been recorded in plantation woodland at Syerston, in a roadside ditch at Linby that was created less than twenty years ago and on a spoil heap at Bevercotes Colliery. The Linby population is considered to be an introduction from discarded seeds. Primrose Plantation is close to Flintham Wood so the record is not altogether surprising. The record at Bevercote is however, very odd, because it is nowhere near to any old woodland stands and is many miles from the nearest populations. In addition, there are no historical records for the Bevercotes area. Since 2012, the population at Flintham has been confirmed as being extant (in bold).

| Location | GR | Date | Recorder |
|---------------------------------|-----------------|-------------|-----------|
| Spital Wood | SK683484 | 1993 | DCW |
| Flintham Wood | SK721479 | 2007 | DCW |
| Flintham Wood | SK723482 | 2015 | SM |
| Flintham Wood | SK727487 | 2015 | SM |
| Epperstone Park | SK6349 | 1974 | RCLH |
| Epperstone Park | SK634503 | 2010 | DCW, SH |
| Primrose Plantation | SK734488 | 2010 | DCW |
| B6011 Roadside Ditch, Linby | SK533508 | 2011 | MW |
| Bevercotes Colliery Spoil Mound | SK694737 | 2011 | DCW |

Draba muralis L.

Wall Whitlow-grass

National Status: Nationally Scarce
Nottinghamshire Status: Extinct

There is no mention of wall whitlow-grass *Draba muralis* in Howitt & Howitt (1963), but a herbarium sheet originating from Kingston Hall in the south of the VC is held by Aberystwyth University. It is not known why the Howitts were unaware of the record. Aside from its native habitat, wall whitlow-grass is also "a colonist on old walls, forest tracks and railways, and has been recorded as a garden weed where the conditions of its summer-dry, winter-moist, native habitat are mimicked²." It is therefore, possible that wall whitlow-grass could appear again, somewhere in the VC.

| Location | GR | Date | Recorder |
|---------------|----------|------|----------|
| Kingston Hall | SK506279 | 1948 | DAJL |

Drosera rotundifolia L.

Round-leaved Sundew

National Status: Least Concern
Nottinghamshire Status: Extinct

Before the 20th Century round-leaved sundew *Drosera rotundifolia* was found at several sites in the VC, wherever peat deposits were present. By the start of the 20th Century virtually all the suitable habitat was destroyed or drained and subsequently the species became extinct.

| Location | GR | Date | Recorder |
|------------|------|--------|----------|
| Oxton Bogs | SK65 | c.1900 | JWC |

Dryopteris cristata L.

Crested Buckler Fern

National Status: Critically Endangered, Nationally Rare
Nottinghamshire Status: Extinct

Crested buckler fern *Dryopteris cristata* was last recorded in the VC at Oxton Bogs, but had become extinct before the turn of the 20th Century. Nottingham Natural History Museum holds a

herbarium specimen from 1894, which was submitted by J.W. Carr.

| Location | GR | Date | Recorder |
|------------|------|------|----------|
| Oxton Bogs | SK65 | 1894 | JWC |

Dryopteris x complexa Rothm.*D. filix-mas x affinis*

National Status: Data Deficient
Nottinghamshire Status: Rare
Monads: 2

The hybrid was not recorded in the VC before 1970 and has only been recorded twice since that time. Page (1997) discusses the difficulty in separating the hybrid. This is because of the variability of both parents, the possible involvement of any of the scaly male fern *Dryopteris affinis* subspecies and the possibility of backcross hybrids to *Dryopteris filix-mas*. However, Page (1997) states that hybrids are likely to occur wherever the parents meet. As there are numerous sites throughout the VC where both species occur, the hybrid is likely to be more common than the number of records suggest. In the VC the hybrid has been recorded, to date, on damp soils in the Sherwood area.

| Location | GR | Date | Recorder |
|-----------------------|----------|------|----------|
| Carburton Plantations | SK611728 | 1972 | JH |
| Cuckney Hay Wood | SK559696 | 2008 | DCW |

Dryopteris x deweveri Jansen (Jansen & Wachter)*D. carthusiana x dilatata*

National Status: Data Deficient
Nottinghamshire Status: Scarce
Monads: 4

This hybrid is not uncommon in a wide range of slightly damp, fairly acidic plantation and semi-natural woodland habitats throughout the UK, Page (1997). In the VC the hybrid has been located in secondary fen woodland on peat deposits, in willow scrub on damp, sandy soils, secondary oak-birch woodland and in ancient woodland on clay soils. Detailed searches in the VC are likely to reveal more populations of the hybrid, because there are numerous sites where both parents occur together. Since 2012 a further population has been located in damp secondary woodland with both parents.

| Location | GR | Date | Recorder |
|-----------------------|----------|------|----------|
| Misson Carr | SK7197 | 2001 | DCW |
| Daneshill Gravel Pits | SK6686 | 2006 | DCW |
| Treswell Wood | SK765791 | 2006 | DCW |
| Eelhole Wood | SK515478 | 1972 | AJW |
| Oxton Bogs | SK6151 | 2011 | DCW |
| Ash Holt, Babworth | SK687800 | 2013 | DCW, MW |

Dryopteris x uliginosa (Newm.) Kuntze ex Druce*D. carthusiana x cristata*

National Status: Data Deficient
Nottinghamshire Status: Extinct

Page (1997) states that the hybrid is a rare and local hybrid that is probably now confined to Norfolk. In the VC the hybrid has been recorded once only in 1866 at Oxton Bogs.

| Location | GR | Date | Recorder |
|------------|------|------|----------|
| Oxton Bogs | SK65 | 1866 | EJL |

² <http://www.brc.ac.uk/plantatlas/index.php?q=node/2492>

Eleocharis acicularis (L.) Roem. & Schult. Needle Spike-rush

National Status: Nationally Scarce

Nottinghamshire Status: Rare

Monads: 3

Nationally needle spike-rush *Eleocharis acicularis* is scattered, occurring in and next to the margins of still-water bodies and drains. In the VC, Howitt & Howitt (1963) stated that the species was rare, but occurred on the muddy margins of still waters throughout the VC. Since 1970 the species has declined and is now confined to two drains in the far north of the VC and a flooded sand pit at Scrooby, where it was only recently found. The losses at Moorgreen Reservoir and the Grantham Canal are probably caused by changes to the water quality and quantity.

| Location | GR | Date | Recorder |
|---------------------------------------|----------|------|-------------|
| Snow Sewer, Misson | SK724982 | 1972 | JH |
| Gringley Carr Drain | SK721939 | 1978 | Woll. |
| Gringley and Misterton Boundary Drain | SK723940 | 1978 | Woll. |
| Snow Sewer, Misson | SK726983 | 1997 | DCW |
| Snow Sewer, Misson | SK723980 | 1983 | JOM |
| Scrooby Sand Pit | SK654904 | 2012 | DCW, JC, MW |

Eleocharis multicaulis (Sm.) Sm. Multi-stemmed Spike-rush

National Status: Least Concern

Nottinghamshire Status: Extinct

Howitt & Howitt (1963) described multi-stemmed spike-rush *Eleocharis multicaulis* as very rare, but it was probably extinct long before they published their flora, because there are no records after 1927. It was presumably lost because of drainage as many of the pools and wet areas associated with Birklands have dried out or have become seasonally rather than permanently wet.

| Location | GR | Date | Recorder |
|----------------------------|------|------|----------|
| Birklands Pool, Edwinstowe | SK66 | 1927 | JWH |

Eleocharis palustris subsp. *palustris* Sell & Murrell Common Spike-rush

National Status: Data deficient

Nottinghamshire Status: Extinct

Sell & Murrell (1996) describe subspecies *palustris* as much more rare than subspecies *vulgaris*, but includes Nottinghamshire in the list of counties where it has been found. Presumably they are referring to R. C. L. Howitt's single record from Thoresby Park, dated 1958, which was confirmed by S.M. Walters. Unfortunately in more recent times the subspecies has not been refound and it is, therefore, probably extinct in the VC.

| Location | GR | Date | Recorder |
|---------------|------|------|----------|
| Thoresby Park | SK67 | 1966 | RCLH |

Eleocharis quinqueflora (Hartmann) Schwarz Few-flowered Spike-rush

National Status: Least Concern

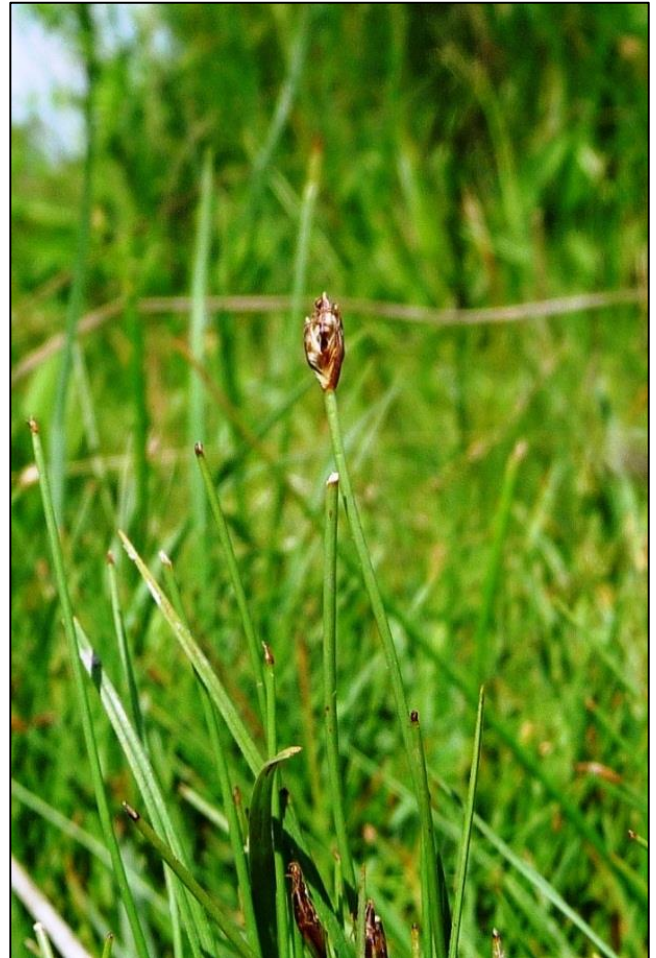
Nottinghamshire Status: Rare

Monads: 1

Few-flowered spike-rush *Eleocharis quinqueflora* was not recorded in the VC until 1953 and has always been rare, being recorded at only two sites. Although the species has not been recorded at Rempstone Old Church Yard in recent years, several patches are still extant at Warsop Hills and Holes (now referred to as Sookholme Moor) in a peaty flush. Since 2012, Natural England have confirmed that the population at Sookholme Moor is still extant.

| Location | GR | Date | Recorder |
|----------------|----------|------|----------|
| Sookholme Moor | SK554678 | 2013 | RT |

Few-flowered spike rush *Eleocharis quinqueflora* at Warsop Hills and Holes



Source S. Hammonds

Eleogiton fluitans (L.) Link.

Floating Club-rush

National Status: Least Concern

Nottinghamshire Status: Scarce

Monads: 9

Floating club-rush *Eleogiton fluitans* has only ever been recorded in drains and pools on the Carrs in the north of the VC. Howitt & Howitt (1963) considered the species to be rare, but more recent survey work has indicated that the species is still localised, but is now scarce, having been recorded in nine rolling monads. Since 2012, the population in the drains at Misson Carr has been confirmed as being extant (in bold).

| Location | GR | Date | Recorder |
|---------------------------------------|----------|------|--------------|
| Everton Carr Drain | SK694944 | 1978 | Woll., JH |
| Delve Drain, Everton Carr | SK690942 | 1978 | Woll., JH |
| Gringley and Misterton Boundary Drain | SK723940 | 1980 | NCC |
| Gringley Carr Drain | SK721939 | 1978 | Woll. |
| Mother Drain, Gringley Carr | SK717954 | 2011 | DCW, MW |
| Mother Drain, Gringley Carr | SK717955 | 2012 | DCW |
| Mother Drain, Gringley Carr | SK715953 | 2011 | DCW, MW |
| Mother Drain, Gringley Carr | SK705943 | 1978 | Woll. |
| Misson Carr Drain | SK717974 | 1994 | DCW, RAJ, PA |
| Misson Carr Drain | SK714975 | 1994 | DCW, RAJ, PA |
| Misson Carr Drain | SK713975 | 2010 | DCW, MW |

Eleogiton fluitans (continued)

| Location | GR | Date | Recorder |
|--------------------------|---------------|-------------|--------------|
| Misson Carr Drain | SK718976 | 1994 | DCW, RAJ, PA |
| Misson Carr Drain | SK713978 | 2010 | DCW, MW |
| Misson Carr Drain | SK7197 | 2014 | MC |
| Misson Drain | SK724982 | 1978 | RCLH, JH |
| Mother Drain, Misterton | SK723964 | 2002 | DCW |

Empetrum nigrum L.

Crowberry

National Status: Least Concern
Nottinghamshire Status: Extinct

In the 19th and early 20th Centuries crowberry *Empetrum nigrum* was found at several sites in the Sherwood area. It was last recorded in 1920 at Oxtan Bogs before it was destroyed by gravel workings. In 1894 J.W. Carr submitted a herbarium specimen from Oxtan Bogs to the Nottingham Natural History Museum.

| Location | GR | Date | Recorder |
|------------|------|------|----------|
| Oxtan Bogs | SK65 | 1920 | JWC |

Epilobium lanceolatum L.

Spear-leaved Willowherb

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 5

Spear-leaved willowherb *Epilobium lanceolatum* must have been unfamiliar to earlier recorders in the VC and therefore overlooked, because there are no pre-1970 records. Although it is predominantly a species of dry habitats in the southwest of Britain it has been frequently found elsewhere as a garden weed, which readily spreads to new habitats. In recent times, the species has been found in a variety of habitats in the south and east of the VC. A search for Collingham Churchyard population in 2012 failed to locate any plants.

| Location | GR | Date | Recorder |
|--|----------|------|----------|
| A1133 Layby, Spalford | SK832692 | 1988 | EMP |
| Collingham Churchyard | SK827613 | 1999 | EMP |
| East Leake Great Central Railway Line | SK556291 | 2009 | DCW |
| Derby Road Church, Nottingham | SK556397 | 2010 | DCW |
| Stanton-on-the-Wolds Dismantled Railway Line | SK643298 | 2000 | DCW |
| Gedling Churchyard | SK6142 | 2012 | JSh |

Epilobium x brevipilum Hausskn.*E. hirsutum x tetragonum*

National Status: Data Deficient
Nottinghamshire Status: Scarce
Monads: 4

This sterile hybrid is scattered in England, mostly in central and southern localities on waste and arable land, quarries and sand works, Sell & Murrell (2009). There are no pre-1970 records for the VC and in recent times, single plants have been recorded at three locations including arable fields and a disused gravel pit. A further single plant has been recently recorded on a new pond bank with both parents.

| Location | GR | Date | Recorder |
|------------------------------|----------|------|---------------------|
| Holme Pierrepont Gravel Pits | SK617387 | 1997 | DCW |
| Holme Pierrepont Gravel Pits | SK622384 | 1997 | DCW |
| Upton Field | SK739535 | 2006 | DCW |
| Clifton Field | SK566345 | 2007 | DCW |
| Langold Colliery Yards | SK584861 | 2012 | DCW, GC, MW, SH, AB |

| Location | GR | Date | Recorder |
|---------------|----------|------|----------|
| Chilwell Pond | SK503360 | 2015 | DCW |

Epilobium x dacicum Borbás*E. parviflorum x obscurum*

National Status: Data Deficient
Nottinghamshire Status: Rare
Monads: 1

This widespread hybrid has been found in a variety of habitats in the UK, Stace *et al* (2015). At Holme Pierrepont Gravel Pits it has been found at two locations where both parents occur together. It has not, however, been recorded in the VC before now.

| Location | GR | Date | Recorder |
|------------------------------|----------|------|----------|
| Holme Pierrepont Gravel Pits | SK616388 | 2015 | DCW |
| Holme Pierrepont Gravel Pits | SK619387 | 2015 | DCW |

Epilobium x erroneum Hausskn.*E. hirsutum x montanum*

National Status: Data Deficient
Nottinghamshire Status: Rare
Monads: 2

This partially sterile hybrid is scattered in England, Wales and southern Scotland, Sell & Murrell (2009). There are no pre-1970 records for the hybrid and since 1970 single plants have been recorded at only four sites. Two sites are the verges of dismantled railway lines and the third site is a colliery tip. The fourth site is Bunny Landfill (SK578287), which has been recently modified by landscaping and capping with imported topsoil and consequently, the hybrid is unlikely to be extant.

| Location | GR | Date | Recorder |
|------------------------------------|----------|------|----------|
| Cotgrave Colliery Yards | SK647365 | 1999 | DCW |
| Ravensdale Dismantled Railway Line | SK560614 | 2001 | DCW |
| Newstead Colliery Tip | SK519535 | 2011 | DCW |

Epilobium x fossicola Smejkal*E. ciliatum x palustre*

National Status: Scattered
Nottinghamshire Status: Rare
Monads: 1

This is the first record of what is widely scattered hybrid in the UK, its distribution reflecting the spread of the neophyte American willowherb *Epilobium ciliatum*, Stace *et al* (2015). It occurs in damp, disturbed habitats and in the Nottinghamshire site it was locally abundant with both parents in damp, tall-herb fen.

| Location | GR | Date | Recorder |
|------------------------------|------------|------|----------|
| The County Estate, Huthwaite | SK46325806 | 2015 | DCW, MW |

Epilobium x haussknechtianum Borbás*E. montanum x tetragonum*

National Status: Data Deficient
Nottinghamshire Status: Rare
Monads: 1

This partially sterile hybrid has been recorded in central and southern England in quarries, gardens and shrubberies, Sell & Murrell (2009). In the VC, a single plant has been recorded on a dismantled railway siding at Cotgrave Colliery.

| Location | GR | Date | Recorder |
|-------------------------|----------|------|----------|
| Cotgrave Colliery Yards | SK647365 | 1999 | DCW |

Epilobium x mentiense Smejkal*E. ciliatum x tetragonum*

National Status: Data Deficient
Nottinghamshire Status: Scarce
Monads: 6

This partially sterile hybrid is scattered throughout England and Wales. There are six post 1970 records for the VC that include a nature reserve, barish soil in a University Campus, a landfill site, abandoned arable land, a gravel pit, a sand pit and a colliery tip. Bramcote landfill (SK504387) has recently been capped and landscaped, so it is probable that the single plant is no longer extant.

| Location | GR | Date | Recorder |
|--|----------|------|----------|
| Bramcote Landfill | SK504387 | 2007 | DCW |
| Nottingham Trent University Clifton Campus | SK551354 | 1996 | DCW |
| Wilwell Cutting | SK567350 | 1994 | DCW |
| Misson Parish | SE713003 | 2012 | DCW, MW |
| Rufford Colliery Tip | SK601608 | 2012 | DCW |
| Holme Pierrepont Gravel Pits | SK617389 | 2012 | DCW |
| Top Road, Misson | SK701955 | 2012 | DCW |

Epilobium x novae-civitatensis Smejkal*E. ciliatum x hirsutum*

National Status: Data Deficient
Nottinghamshire Status: Rare
Monads: 1

This hybrid is scattered in Britain and is generally found on disturbed ground. It has only been recorded once in the VC. A single plant was recorded in a disused gravel pit close to the River Trent.

| Location | GR | Date | Recorder |
|------------------------------|----------|------|----------|
| Holme Pierrepont Gravel Pits | SK616386 | 1997 | DCW |

Epilobium x palatinum F.W. Schultz*E. parviflorum x tetragonum*

National Status: Data Deficient
Nottinghamshire Status: Scarce
Monads: 8

This native hybrid is scattered in southern and central England on disturbed ground. The records for the VC are all post-1970 and habitats include flushed soils on a colliery tip, barish spoil in a quarry, arable set-aside fields with clay soils and damper soils in a disused gravel and sand pits. Since 2012, the species has been recorded at one further location (in bold) with both parents.

| Location | GR | Date | Recorder |
|------------------------|-----------------|-------------|------------|
| Bentnck Void | SK483543 | 2006 | DCW |
| Newstead Colliery Tip | SK524542 | 2011 | DCW |
| Brinsley Field | SK454494 | 2009 | DCW |
| Lound Gravel Pits | SK6986 | 2003 | DCW, MW |
| Lound Gravel Pits | SK6985 | 2003 | MW, DCW |
| Tollerton Field | SK607364 | 2007 | DCW |
| Nether Langwith Quarry | SK542694 | 2012 | DCW |
| Top Road, Misson | SK701955 | 2012 | DCW |
| Shireoaks | SK563806 | 2015 | RAJ |

Epilobium x semiobscurem Borbás*E. tetragonum x obscurem*

National Status: Data Deficient
Nottinghamshire Status: Rare
Monads: 1

This semi-fertile hybrid is found in disturbed sites, damp woods and wood banks across the UK, wherever the parents occur together, Stace *et al* (2015). It has only been recorded once in

Nottinghamshire as a single plant with both parents at Holme Pierrepont Gravel Pits.

| Location | GR | Date | Recorder |
|------------------------------|----------|------|----------|
| Holme Pierrepont Gravel Pits | SK615385 | 2015 | DCW |

Epilobium x subhirsutum Gennari*E. hirsutum x parviflorum*

National Status: Data Deficient
Nottinghamshire Status: Scarce
Monads: 5

This native partially fertile hybrid is scattered throughout Britain on riverbanks, marshes, waste or disturbed ground, gravel pits and quarries. There are no pre-1970 records for the VC and all post 1970 records consist of single plants. The plants are found in arable fields, a car park, a colliery spoil tip and on disturbed soils.

| Location | GR | Date | Recorder |
|----------------------------|----------|------|----------|
| Dukes Wood | SK679602 | 1997 | DCW |
| West Leake Hills | SK533283 | 2001 | DCW |
| High Marnham Field | SK813702 | 2003 | DCW |
| Huthwaite Disused Workings | SK464578 | 2003 | DCW |
| Gedling Colliery Tip | SK611438 | 2010 | DCW |

Epilobium x vicinum Smejkal*E. ciliatum x obscurem*

National Status: Data Deficient
Nottinghamshire Status: Scarce
Monads: 6

This hybrid of an introduced species and a native species is partially fertile and is widespread in Britain. However, it was not recorded before 1970 and before 2012 was only recorded four times in scattered locations in the VC. Since 2012, the hybrid has been recorded at two further locations (in bold) as a single plant at Clipstone, on former railway land, and at Holme Pierrepont where it is occasional with both parents.

| Location | GR | Date | Recorder |
|--|----------|------|----------|
| Nottingham Trent University Clifton Campus | SK549354 | 1996 | DCW |
| Kidney Clump | SK609772 | 1998 | DCW |
| Colwick Country Park | SK613397 | 2006 | DCW |
| Beauvale Brook Marsh | SK473476 | 2011 | DCW |
| Clipstone | SK596625 | 2013 | DCW |
| Holme Pierrepont | SK619387 | 2015 | DCW |

Epipactis phyllanthos G.E. Sm.

Green-flowered Helleborine

National Status: Nationally Scarce
Nottinghamshire Status: Rare
Monads: 1

This species has only ever been recorded at a single location in the VC. In 1995 the population consisted of approximately 50 plants growing in open scrub on fly-ash substrate. It is not known whether the population was being specifically managed for biodiversity and the current status is unknown, because the last known check was carried out in 2004 when only four plants (three flowering) were located.

| Location | GR | Date | Recorder |
|---------------------------|----------|------|----------|
| West Burton Power Station | SK804869 | 2004 | RP |

Epipactis palustris (L.) Crantz

Marsh Helleborine

National Status: Least Concern
Nottinghamshire Status: Extinct

Before 1970, Howitt & Howitt (1963) described marsh helleborine *Epipactis palustris* as being very rare or extinct.

Epipactis palustris (continued)

It was last recorded during 1908 in a marshy area near Newboundmill. Although the species has not been re-found at Newboundmill in recent times, it was last recorded in 1984 some distance to the north in the Idle Valley at a former sandpit area. Unfortunately the sandpit was destroyed soon after 1980 and the species has not been since, so it is assumed to be extinct.

| Location | GR | Date | Recorder |
|--|----------|------|----------|
| Newboundmill Stream | SK46 | 1908 | JWC |
| Wetlands Waterfowl Reserve, Sutton-cum-Lound | SK695855 | 1984 | NRL, PP |

Equisetum hyemale L.

Dutch Rush

National Status: Least Concern
Nottinghamshire Status: Extinct

Dutch rush *Equisetum hyemale* is much more common on heavy damp to wet soils in the north and west of Britain, with a few outliers in East Anglia and the Midlands. In the VC it was last recorded in the 19th Century and was probably lost from the 'moors' between Edingley and Kirklington, because of drainage and agricultural intensification.

| Location | GR | Date | Recorder |
|--|------|------|----------|
| Moors between Edingley and Kirklington | SK65 | 1839 | GH |

Equisetum x litorale Rupr.

Shore Horsetail

National Status: Data Deficient
Nottinghamshire Status: Scarce
Monads: 2

Shore horsetail *Equisetum x litorale* is the most frequent of the horsetail hybrids and it is found in a wide range of habitats, sometimes in the absence of one or more of the parents. The hybrid was not recorded in the VC before 1970 and since then has only been found at two locations. At Dob Park, a very large population is located in a tall-herb fen next to a stream and has been spreading into neighbouring plantation woodland. In the east of the VC, the plant is located in a ditch in mature conifer plantation woodland on peaty soils. D.C. Wood has submitted herbarium specimens to Nottingham Natural History Museum.

| Location | GR | Date | Recorder |
|-----------------|----------|------|----------|
| Stapleford Wood | SK849558 | 2012 | RAJ |
| Dob Park | SK523503 | 2015 | MW |

Equisetum variegatum F. Weber & D. Mohr

Variegated Rush

National Status: Nationally Scarce
Nottinghamshire Status: Extinct

Before 1970 variegated rush *Equisetum variegatum* had not been recorded in the VC, but in 1989 a population covering an area of 3.6m x 2.4m was found by D. C. Wood in the marly soils at the base of a disused gravel pit at Holme Pierrepont. Unfortunately the site was only kept dry whilst active gravel extraction took place and upon completion of the work, the pumps were due to be turned off, to allow the land to flood. In order to try and save the population, plants were translocated to Wilwell Cutting SSSI at Ruddington. The translocated population survived for nine years, but has not been seen at Wilwell Cutting since 1998 and it is now considered to be extinct in the VC.

| Location | GR | Date | Recorder |
|------------------------------|----------|------|----------|
| Holme Pierrepont Gravel Pits | SK611382 | 1989 | DCW |
| Wilwell Cutting | SK567352 | 1998 | DCW |

Erica tetralix L.

Cross-leaved Heath

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 9

Howitt & Howitt (1963) stated that cross-leaved heath *Erica tetralix* was always the least common of the heather species in the VC and by the 1960s it was declining in the Sherwood area, because of a falling water table. Since 1970 the species has completely disappeared from sites on the clays at Bothamsall and Gamston. More recently, the species has not been seen at Stapleford Wood (SK853552, SK853560 and SK853559), Thieves Wood (SK545569) and Manton, A57 Road Cutting at SK603778. It is no longer abundant at any of the six remaining sites in the Sherwood area, even those sites that are managed for biodiversity such as Rainworth Heath and Budby South Forest and further declines are likely to occur. The population at Clipstone Heath was confirmed as extant in 2013, but it is now rare.

| Location | GR | Date | Recorder |
|--------------------|----------|------|--------------|
| Rainworth Marsh | SK583579 | 1972 | JH |
| Walesby Forest | SK666706 | 1992 | DCW |
| Rainworth Heath | SK591592 | 2012 | DCW, MW, RAJ |
| Clipstone Heath | SK595626 | 2013 | DCW |
| Clipstone Forest | SK613603 | 2009 | DCW |
| Budby South Forest | SK607694 | 2012 | DCW, RAJ |

Eriophorum latifolium Hoppe.

Broadleaved Cotton-grass

National Status: Least Concern
Nottinghamshire Status: Extinct

Broadleaved cotton-grass *Eriophorum latifolium* was last recorded in the VC at Newboundmill in peaty meadows, but had become extinct before the middle of the 20th Century. Agricultural improvement and/or habitat conversion are the likely factors that were responsible for the extinction at Newboundmill. Elsewhere, the species was only ever recorded at two other sites in the VC including Stapleford Moor and a site between Newstead and Linby. Both of the records originate from the 19th Century.

| Location | GR | Date | Recorder |
|----------------------|------|------|----------|
| Newboundmill Meadows | SK46 | 1939 | JWC |

Eriophorum vaginatum L.

Hare's-tail Cotton-grass

National Status: Least Concern
Nottinghamshire Status: Rare, possibly extinct
Monads: 4

The species has always been very rare in the VC, being restricted to base-rich peat bogs. Following the demise of the Annesley population (SK495524) due to habitat destruction, the species has steadily declined at the other three sites and is probably now extinct in the county.

| Location | GR | Date | Recorder |
|-----------------|----------|------|----------|
| Fountain Dale | SK573573 | 1986 | DCW, JH |
| Fouleil Brook | SK578583 | 1991 | DCW |
| Davis's Bottom | SK495524 | 1994 | DCW |
| Rainworth Heath | SK591592 | 2001 | DCW |

Erodium maritimum (L.), L'Hér.

Sea Stork's-bill

National Status: Nationally Scarce
Nottinghamshire Status: Rare
Monads: 1

Away from the coast, there are only a handful of inland records, which are mapped by Preston *et al.* (2002) as an introduction. The population at Rainworth is located on a dismantled railway line that in past times was linked to ports and towns on the east coast.

Erodium maritimum (continued)

This may explain its presence approximately 70 miles inland. In recent years the population has declined, but the reasons are unknown, because the overall botanical community in which the species occurs, has undergone little noticeable change.

| Location | GR | Date | Recorder |
|-----------------------------------|----------|------|----------|
| Rainworth Dismantled Railway Line | SK591595 | 2005 | DCW |

Erodium moschatum (L.), L'Hér.

Sea Stork's-bill

National Status: Widespread

Nottinghamshire Status: Rare

Monads: 1

The species is considered to be an archaeophyte in rough ground by the sea and a casual elsewhere. Although it is widespread in central and southern Britain it is very rare in Nottinghamshire and was only recorded once as a casual before publication of the first edition of this register. Since 2012 it has been recorded in an urban setting at a recreation ground where it has persisted for at least two years.

| Location | GR | Date | Recorder |
|--|----------|------|----------|
| Hawton Landfill | SK803502 | 2009 | DCW |
| Greythorne Recreation Ground, West Bridgford | SK576362 | 2015 | SM |

Erophila glabrescens Jordan.

Glabrous Whitlowgrass

National Status: Least Concern

Nottinghamshire Status: Scarce

Monads: 6

This annual species was first described in Clapham Tutin & Warburg (1987). It can be difficult to segregate the species from Common whitlowgrass *Erophila verna* and it could be under-recorded. In the last twenty years the species has been recorded at five locations in the VC in what are considered to be typical habitats for the species. Further survey work and better familiarity with the species is likely to further increase the number of records in the future. However, only one further population has been recorded since 2012 at Bestwood Sand Pits on sparsely vegetated ground (in bold).

| Location | GR | Date | Recorder |
|------------------------------|-----------------|-------------|-----------|
| Clumber Park | SK67 | 1997 | SFW |
| Harlow Wood | SK555578 | 1998 | DCW |
| Attenborough Gravel Pits | SK521343 | 2010 | DCW |
| Clifton Bridge | SK561367 | 2001 | DCW |
| Holme Pierrepont Gravel Pits | SK616389 | 1991 | DCW |
| Holme Pierrepont Gravel Pits | SK614385 | 2001 | DCW |
| Bestwood Sand Pit | SK563476 | 2013 | MW |

Erysimum chieri (L.) Crantz

Wallflower

National Status: Least Concern

Nottinghamshire Status: Scarce (as an archaeophyte)

Monads: 7 (as an archaeophyte)

Wallflower *Erysimum chieri* falls into two categories in the VC. It has been recorded as a naturalised introduction at eight locations (seven monads) in the VC and has persisted at several of those locations such as Castle Rock, the walls of Nottingham Castle, Newark-on-Trent Castle and Newark-on-Trent Friary for hundreds of years. There are also 22 records for the species as a casual, which are not listed in the table below. Since 2012, checks of the Newark-on-Trent Friary and Nottingham Castle Rock (in bold) have confirmed that both populations are extant.

| Location | GR | Date | Recorder |
|---------------------------|----------|------|----------|
| Staunton-in-the-Vale Wall | SK805433 | 1987 | DCW |
| Worksop Priory | SK590789 | 1987 | NRL, DCW |

| Location | GR | Date | Recorder |
|-------------------------------|-----------------|-------------|-----------------|
| Cresswell Crags | SK534741 | 1997 | DCW |
| Hungerhill Grdns, Nottingham | SK583414 | 2001 | DCW |
| Newark-on-Trent Friary | SK802541 | 2012 | RAJ |
| Newark-on-Trent Friary | SK802542 | 2014 | RAJ |
| Nottingham Castle Rock | SK569394 | 2014 | DCW, RAJ |
| The Park, Nottingham | SK567394 | 2009 | PS(b) |
| Newcastle Terrace, Nottingham | SK569400 | 2010 | WM |
| Newark-on-Trent Castle | SK796540 | 2012 | DCW, RAJ |

Euphorbia amygdaloides L. subsp. *amygdaloides*

Wood Spurge

National Status: Least Concern

Nottinghamshire Status: Extinct

Wood spurge *Euphorbia amygdaloides* subsp. *amygdaloides* is now extinct in the VC and has only been recorded once at Colwick Wood (in the City of Nottingham) in the 18th Century. The national distribution map, Preston, *et al.* (2002), indicates that Nottinghamshire is beyond the northern edge of its natural range.

| Location | GR | Date | Recorder |
|--------------|--------|------|----------|
| Colwick Wood | SK5939 | 1738 | CD |

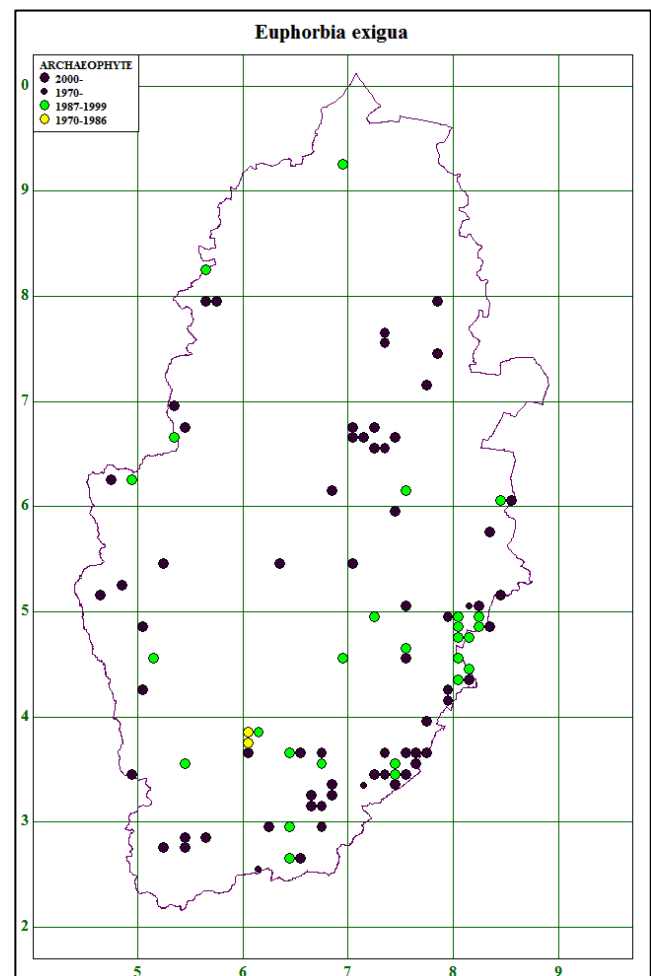
Euphorbia exigua L.

Dwarf Spurge

National Status: Near Threatened

Nottinghamshire Status: Locally Frequent

Monads: 95



Dwarf Spurge *Euphorbia exigua* at Toton Sidings

Source S. Hammonds

In the 1960s this archaeophyte species was locally frequent and recorded throughout the VC on basic and clay soils. Since 1970, the species has declined, because of agricultural intensification and repeated herbicide applications. In the VC, the species does not appear to have declined to the same extent as elsewhere in the south and east of Britain and it is still frequent on the Lias clays in the southeast of the VC. The reasons for this resistance to decline are not clearly understood, but the species is capable of colonising artificial substrates (as shown in the photograph above) and to some extent, this has off-set losses from arable habitats.

Euphorbia platyphyllos L.

Broadleaved Spurge

National Status: Nationally Scarce**Nottinghamshire Status:** Extinct

This archaeophyte species was recorded once during the early 20th Century in cornfields in the south of the VC.

| Location | GR | Date | Recorder |
|-----------------------|------|------|----------|
| West Leake Cornfields | SK52 | 1905 | JWC |

Euphrasia arctica Lange ex Rostrup
ssp. borealis (F. Towns) Yeo

Arctic Eyebright

National Status: Endangered**Nottinghamshire Status:** Extinct

The only record for the VC originates from 1904. J.W. Carr described Arctic Eyebright *Euphrasia arctica* subsp. *borealis* (recorded as *E. brevipila*) as being "common about Annesley", but it is not known whether the population was associated with Permian Marls or Coal Measures or Bunter Sandstones. There are no other records for the species and it is considered to be extinct in the VC.

| Location | GR | Date | Recorder |
|----------|------|------|----------|
| Annesley | SK45 | 1904 | JWC |

Euphrasia officinalis subsp. *anglica*
(Pugsley) Silverside

Glandular Eyebright

National Status: Endangered, UK Biodiversity Action Plan**Nottinghamshire Status:** Scarce**Monads:** 7

This endemic species is largely confined to the south of England on damp acidic substrates. The very few records to the north of Nottinghamshire and Derbyshire are located on the west side of the country. Before 1970, Howitt & Howitt (1963) stated that the species had only been recorded twice in the VC. During 1907 J.W. Carr recorded the species at Rufford Park and Thorseby Park. The modern populations are fairly robust at each site, being locally frequent or locally abundant, but the species is still restricted to a

small number of sites in the VC, mostly on the Bunter Sandstone. Checks of the population at Apleyhead during 2014 have confirmed that it is still present.

| Location | GR | Date | Recorder |
|--------------------------------------|-----------------|-------------|-----------------|
| Carburton Plantations | SK611724 | 2001 | DCW |
| Cumber Park | SK607758 | 1998 | DCW |
| Apleyhead Verges, Cumber Park | SK644773 | 2014 | DCW, RAJ |
| Cumber Park | SK618735 | 2004 | DCW |
| Cumber Park | SK619744 | 2004 | DCW |
| Cumber Lane Verges, Cumber Park | SK609757 | 2011 | RAJ |
| Cumber Park | SK616749 | 2011 | RAJ |
| Cumber Lane Verges, Cumber Park | SK611756 | 2011 | RAJ |
| Swinecotte Dale | SK548544 | 1996 | DCW |
| Worksop | SK577753 | 2001 | DCW |
| Rufford Colliery Tip | SK592601 | 2012 | MW |
| Carburton Plantations | SK613721 | 2012 | DCW, MW |

Euphrasia pseudokernerii Pugsley

Chalk Eyebright

National Status: Endangered, Nationally Scarce**Nottinghamshire Status:** Rare**Monads:** 1

Chalk eyebright *Euphrasia pseudokernerii* is a species associated with the southeast of England on base-rich soils. The species has always been rare in the VC and before 1970 was recorded once during 1905 on the West Leake Hills by J.W. Carr. In modern times, the species was recorded nearly 90 years later, also on the West Leake Hills in a disused Gypsum Mine, where it was found to be frequent. This record could be the most northern extant record in the British Isles.

| Location | GR | Date | Recorder |
|------------------|----------|------|----------|
| West Leake Hills | SK524286 | 1994 | DCW |

Festuca longifolia Thuill.

Blue Fescue

National Status: Nationally Rare, UK Biodiversity Action Plan**Nottinghamshire Status:** Rare**Monads:** 1

This species is associated with very dry acid heaths and in the VC is located on the blown sands along the Nottinghamshire / Lincolnshire border. Pre-1970, Howitt & Howitt (1963) recorded the species as *Festuca ovina* ssp. *eu-ovina* var. *glauca* Hack. and described its occurrence in gravelly meadows at South Collingham and Spalford Warren. In addition, Howitt & Howitt considered that the 16th and 19th Century records from Nottingham of a blue fescue recorded as *F. glauca* var. *caesia* Sm. could have also been *F. ovina* ssp. *eu-ovina* var. *glauca*. However, blue fescue has not been recorded in the Nottingham area since the 19th century. Recent searches suggest that blue fescue is no longer present at Spalford Road (SK8469/8468), Mill Farm (SK8468), A1133 Trunk Road Verge at Spalford (SK831691) and Sand Lane, Spalford (SK832692). However, the relatively small population at Spalford Warren SSSI is still extant. Although the species is located in a nature reserve, the population is heavily grazed by rabbits and is restricted to a small area on the boundary of the site, including the roadside verge. Recent searches during 2014 and 2015 have identified the presence of many plants on the roadside verge at Spalford next to the nature reserve.

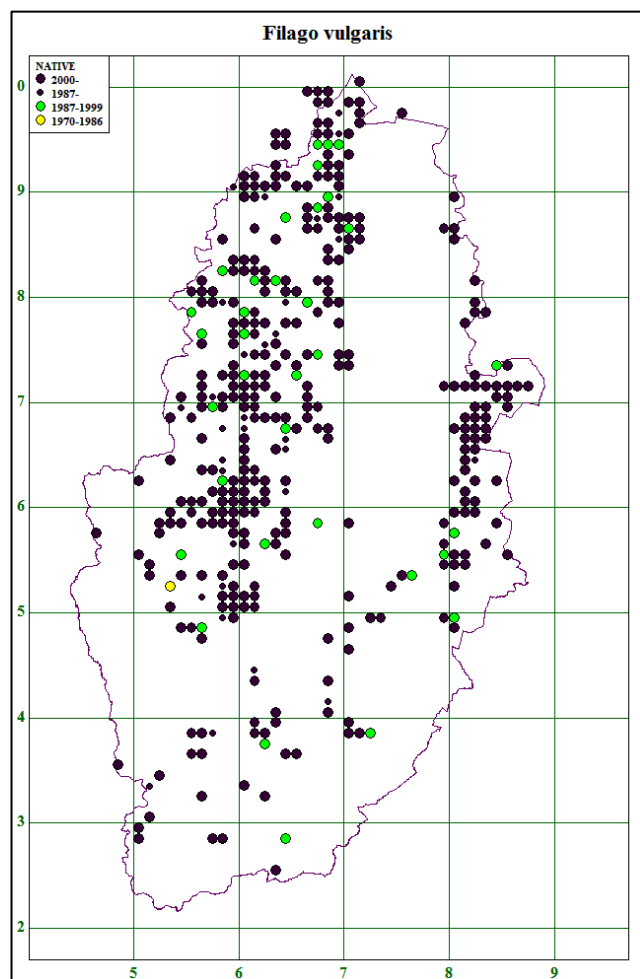
| Location | GR | Date | Recorder |
|--------------------|----------|------|--------------|
| Spalford Warren | SK830678 | 2012 | DCW, MW, RAJ |
| New lane, Spalford | SK829678 | 2015 | RAJ |

Filago vulgaris L.

Common Cudweed

National Status: Near Threatened**Nottinghamshire Status:** Locally Common**Monads:** 395

Despite national declines brought about by agricultural intensification and habitat loss, the distribution of common cudweed *Filago vulgaris* in the VC has remained fairly stable since 1970. Wherever suitable soils are present the species is locally common and it has been recorded in 211 monads in the VC. It is most abundant on the Bunter Sandstone, blown sands and river valley gravels and alluvial soils, but it is also found on artificial substrates such as colliery spoil tips and post-industrial land. Since 2012, there has been a substantial increase in the number of records and monads, nearly doubling the number of monads. However, the distribution has not substantially changed and most new monad records occur in the same vicinity as monads where the plant has already been recorded.

*Fumaria muralis* Sonder ex Koch

Common Ramping-Fumitory

National Status: Near Threatened**Nottinghamshire Status:** Uncommon**Monads:** 17

Before 1970, there was only one single unconfirmed record for common ramping-fumitory *Fumaria muralis*. The single 1906 record was located somewhere on the Coal Measures or Permian Marls in the west of the VC. Since 1970 the species has been recorded in a variety of rural and urban habitats throughout the VC. The distribution and abundance of some of the populations suggests that the species may have been overlooked before 1970. The Gringley plants were determined to be the subspecies 'boraei'.

| Location | GR | Date | Recorder |
|--|----------|------|------------|
| Nottingham | SK571395 | 1982 | PA |
| Nottingham | SK569395 | 1982 | PA |
| Holme Pierrepont Gravel Pits | SK612383 | 1990 | DCW |
| Netherfield Disused Railway Sidings | SK628404 | 1994 | DCW |
| Bestwood Hedgerow | SK555479 | 1996 | DCW |
| Girton Field Hedgerow | SK828667 | 2000 | DCW |
| Nottingham Trent University Clifton Campus | SK547352 | 2002 | DCW |
| Nottingham Trent University Clifton Campus | SK546349 | 2002 | DCW |
| Eaking Field | SK687630 | 2002 | RAJ, DCW |
| Styrrup Field | SK626904 | 2004 | DCW |
| Clumber Park Field | SK642758 | 2004 | DCW |
| Bramcote Landfill | SK503387 | 2011 | PS(b), DCW |
| Mansfield | SK569591 | 2006 | DCW |
| Blidworth Hedgerow | SK612553 | 2007 | DCW |
| Blidworth | SK607563 | 2007 | DCW |
| Cross Lane, Gringley | SK705938 | 2011 | MW, DCW |
| Calverton Field | SK593505 | 2012 | DCW |
| Gilletdale Field | SK554525 | 2012 | MW, DCW |
| Gilletdale Field | SK553526 | 2012 | MW, DCW |
| Newark-on-Trent | SK797543 | 2012 | RAJ |
| Southwell Allotments | SK708533 | 2012 | RAJ |

Common ramping-fumitory *Fumaria muralis* at Clifton Bridge

Source S. Hammond

Gagea lutea (L.) Ker Gawl.

Yellow Star-of-Bethlehem

National Status: Nationally Scarce**Nottinghamshire Status:** Scarce**Monads:** 6

Historically the species was located in a range of habitats including ancient woodland and parkland on the Magnesian Limestone, on the banks of the River Erewash and in ancient woodland at Flintham. Post 1970, the largest population is still located in Flintham Woods and it is still present at Pleasley in Northfield Plantation. In addition, the species has also been recorded on Magnesian Limestone at two other sites; in ancient woodland at Bulwell and also on the verge of an ancient lane, to the north of Mansfield. Since 2012, surveys of Northfield Plantation have confirmed that the population is still extant (in bold).

| Location | GR | Date | Recorder |
|---------------------------------|-----------------|-------------|----------------|
| Flintham Wood | SK730489 | 1986 | DCW |
| Blue Barn Lane, Nether Langwith | SK540714 | 2012 | KB, DCW |
| Flintham Wood | SK726485 | 2007 | DCW |
| Northfield Plantation | SK529652 | 2007 | Woll., DCW, JH |
| Northfield Plantation | SK530652 | 2014 | RAJ |
| Flintham Wood | SK722479 | 2010 | DCW |
| Sellers Wood | SK525456 | 2012 | VH, DCW, MW |

Yellow star-of-bethlehem *Gagea lutea* at Nether Langwith

Source K. Balkow

Galeopsis angustifolia Ehrh.

Red Hemp-nettle

National Status: Critically Endangered, Nationally Scarce
Nottinghamshire Status: Rare (probably extinct)

Monads: 0

Before 1963 the species was recorded at scattered locations in arable fields on clay and peat, but was in decline and becoming rare. The decline in the VC reflected national declines that were brought about by the shift from spring-sown to winter-sown crops and cleaner crop husbandry. Since 1970 the species has declined to a single site at Teversal (on limestone 'scree' on a steep dismantled railway embankment) and it is probably extinct, because the last sighting of a single plant was more than a decade ago.

| Location | GR | Date | Recorder |
|----------------|----------|------|------------|
| Teversal Trail | SK490635 | 1997 | Woll., DCW |

Galeopsis segetum Neck.

Downy Hemp-nettle

National Status: Extinct
Nottinghamshire Status: Extinct

Mrs Sandwith was the last to record the species (as *Galeopsis dubia*) in a sandy cornfield in the north of the VC in 1918. A herbarium specimen was submitted to Nottingham Natural History Museum.

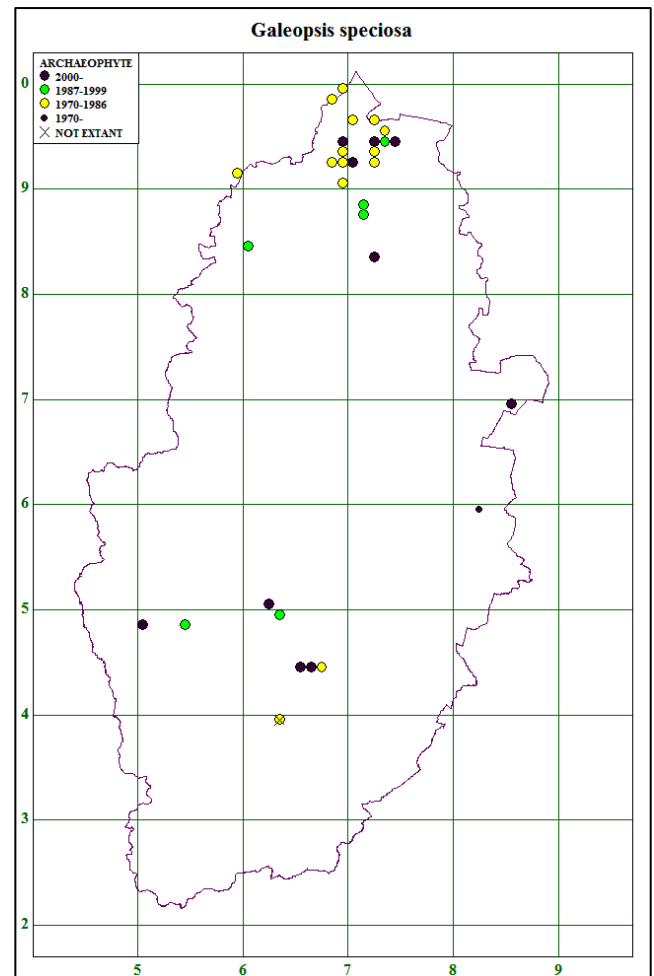
| Location | GR | Date | Recorder |
|---------------------------|------|------|----------|
| Everton Carr Arable field | SK69 | 1918 | Sa |

Galeopsis speciosa Mill.

Large Hemp-nettle

National Status: Vulnerable
Nottinghamshire Status: Locally Frequent
Monads: 28

Large hemp-nettle *Galeopsis speciosa* was formerly widespread, but had started to decline in the VC and nationally before the 1960s, because of modern farming practises and control of weeds. By 1963 the species was restricted to arable fields on the peatlands in the north of VC and most of the post-1970 records are also located in the north of the VC, for the most part, associated with root crops. Since 2012, the species has been recorded only once in a potato field at Everton Carr, SK701923, where it was previously recorded in 1995.

*Galium constrictum* Chaub.

Slender Marsh-bedstraw

National Status: Nationally Rare
Nottinghamshire Status: Extinct

The record of slender marsh-bedstraw *Galium constrictum* from Attenborough Gravel Pits NNR is considered to be an introduction, because it is so far outside of its native range. How it arrived and established on the margin of a pond is an unresolved mystery. However, the species has not been seen since the 1990s and it is no longer extant. This is because the habitat has become overgrown and less suitable for the species. However, the species has not been seen since the 1990s and may no longer be extant. This is because the habitat has become overgrown and less suitable for the species.

| Location | GR | Date | Recorder |
|--------------------------|----------|------|----------|
| Attenborough Gravel Pits | SK520338 | 1995 | SAi |

Galium parisiense L.

Wall Bedstraw

National Status: Vulnerable, Nationally Scarce
Nottinghamshire Status: Rare
Monads: 3

Until 2015, wall bedstraw *Galium parisiense* has only appeared as a casual in the VC. At Nottingham Trent University, two plants were recorded in a shrubbery and at Holme Pierrepont a single plant was recorded growing in newly sown grassland. Surveys at the High Marnham Power Station former railway sidings located a 4m x 2m patch consisting of lots of plants on ballast / clinker growing in a sparse botanical community.

Galium parisiense (continued)

| Location | GR | Date | Recorder |
|--|--------------|------|----------|
| Holme Pierrepont Gravel Pits | SK629397 | 1990 | DCW |
| Nottingham Trent University Clifton Campus | SK549355 | 1996 | DCW |
| High Marnham Power Station | SK8049671325 | 2015 | MW, DCW |

Galium tricornutum.

Corn Cleavers

National Status: Critically Endangered, Nationally Rare
Nottinghamshire Status: Extinct

Nationally the species had already undergone substantial declines by the 1930s and outside of the southeast area was always a rare casual. The species was last recorded in Nottinghamshire at the start of the 20th Century in cornfields in the south of the county. Nottinghamshire Natural History Museum was provided with herbarium specimens from the two locations in the table below.

| Location | GR | Date | Recorder |
|----------------------|--------|------|----------|
| Kinoulton - Owthorpe | SK63 | 1900 | JWC |
| Crow Wood Hill | SK5427 | 1906 | JWC |

Galium uliginosum L.

Fen Bedstraw

National Status: Least Concern
Nottinghamshire Status: Uncommon
Monads: 10

Fen bedstraw *Galium uliginosum* was in decline before the early 1960s, probably because of habitat loss and drainage, particularly in the coal mining areas in the west of the VC. Since the 1960s the species has persisted at Thorney, Rempstone and Sookholme Moor, but has been lost from other sites such as Maplebeck and Coddington Moor. The pre-2012 spread of the species from Annesley Woodhouse Quarry SSSI into the neighbouring Bentinck Void, a post-industrial site, confirms that the species is capable of colonising new sites, if conditions are suitable. Now that coal mining has all but ceased in the VC, in the west of the VC the water table is recovering to pre-mining levels and this may create new opportunities for the species to spread. Since 2012, the species has colonised a new area of Bentinck Void on the banks of a settling pond and the recent colonisation of Bentinck Void is still extant (in bold).

| Location | GR | Date | Recorder |
|-------------------------------|-----------------|-------------|----------------|
| River Meden, Warsop | SK571687 | 1972 | JH |
| Warsop Bottoms | SK577691 | 1972 | JH |
| Rempstone Old Churchyard | SK566251 | 1982 | DCW |
| Rempstone Old Churchyard | SK568250 | 1982 | DCW |
| Greasley Marsh | SK503477 | 1994 | DCW |
| Thoresby Park | SK637706 | 1996 | DCW |
| Carlton-in-Lindrick Grassland | SK583824 | 2006 | DCW |
| Darnsyke, Thorney | SK855738 | 2011 | DCW, MW |
| Sookholme Moor | SK554678 | 2011 | DCW |
| Sookholme Moor | SK554676 | 2008 | DCW |
| Annesley Woodhouse Quarry | SK488533 | 2009 | DCW |
| Bentinck Void | SK488534 | 2013 | DCW, SH |
| Bentinck Void | SK478539 | 2013 | DCW |
| Rempstone Old Churchyard | SK566251 | 2010 | DCW |
| Rempstone Old Churchyard | SK565251 | 2010 | DCW |
| Misson Carr | SK7197 | Undated | DCW |

Genista anglica L.

Petty Whin

National Status: Near Threatened
Nottinghamshire Status: Scarce
Monads: 8

Most of the historic records for petty whin *Genista anglica* originate from boggy places in the west of the VC, but it was also found in a few scattered localities on the clays and the Trent Valley. By 1963 the species was in serious decline and since 1970 the species has remained scarce, with a recent loss of the Harlow Wood (SK552564) population. With the exception of the West Drayton site, the species is nowadays only found in the Sherwood area of the VC and most of the populations are very small. At the present time, only the Ollerton sites support populations that consist of more than a few plants, but the introduced population at Hucknall is increasing, because of protection from grazing. Therefore, with targeted conservation management it could be possible to expand the existing populations to more sustainable levels. Extant populations visited since 2012 are highlighted in bold.

| Location | GR | Date | Recorder |
|-----------------------------------|-----------------|-------------|----------------|
| Clipstone Heath | SK595623 | 1997 | DCW |
| Clipstone Heath | SK593624 | 1997 | DCW |
| Clipstone Colliery | SK595630 | 2001 | DCW |
| Rainworth Dismantled Railway Line | SK596619 | 2001 | DCW |
| Sherwood Heath | SK648675 | 2007 | DCW |
| Leen Pastures | SK551488 | 2015 | DCW |
| West Drayton | SK705741 | 2009 | DCW |
| Ollerton Assarts | SK628688 | 2012 | DCW, RAJ, JC |
| Ollerton Assarts | SK626688 | 2015 | RAJ, JC |
| Clumber Park | SK635741 | 2013 | DCW |

Gentiana pneumonanthe L.

Marsh Gentian

National Status: Nationally Scarce
Nottinghamshire Status: Extinct

Spring gentian *Gentiana pneumonanthe* became extinct in the VC at some stage in the 19th Century. The species also persisted at Langford and Stapleford Moor until much later in the 19th Century, but the populations were located on the Lincolnshire side of the county boundary.

| Location | GR | Date | Recorder |
|---------------|------|-------------|----------|
| Houghton Park | SK77 | c.1820 | TJ |
| Langford Moor | SK85 | Before 1900 | JWC |

Gentianella amarella L.

Autumn Gentian

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 10

Autumn gentian *Gentianella amarella* is associated with dry calcareous grasslands in the VC. The species was already in decline before the 1960s, but was present on the Magnesian Limestone in the west of the VC, the Lias Clays in the south and Keuper Marls in the central area. More recently, further losses have occurred at Rough Hill Bunny (SK569285), Gotham Grassland (SK533292), Rushcliffe Golf Course (SK5427) and Eaton Wood Road Verges (SK7277) and with the exception of one site on the Lias clays, the species is now restricted to nine other monads in old quarries and disused railway lines on the Magnesian Limestone. Since 2012 a search of archives has revealed that the population at Kirkby Bentinck (in bold) was first recorded in 1978.

Gentianella amarella (continued)

| Location | GR | Date | Recorder |
|---------------------------------------|-------------------|-------------|------------|
| Warsop Hills and Holes | SK5567 | 1971 | RCLH |
| Pleasley Vale Dismantled Railway Line | SK5164 | 1972 | RCLH |
| Linby Trail | SK5251/ SK5351 | 1990 | Woll. |
| Kirkby-in-Ashfield Hills and Holes | SK499553 | 1992 | DCW |
| Bentinck Banks | SK498555 | 1992 | DCW |
| Holbeck | SK5373 | 1997 | DCW |
| Teversal Trail | SK491636 | 2000 | DCW |
| Kirkby Bentinck | SK498557 | 2002 | MW |
| Kirkby Bentinck | SK489547 | 2002 | DCW |
| Kirkby Bentinck | SK495551 | 2007 | DCW |
| Teversal Trail | SK485631 | 2007 | DCW |
| Cuckoo Bush | SK534292 | 2012 | DCW |
| Holbeck | SK5374 | 2012 | DCW |

Gentianella campestris (L.) Börner

Field Gentian

National Status: Vulnerable**Nottinghamshire Status:** Extinct

In the VC the species has only been recorded once. J.W. Carr recorded field gentian *Gentianella campestris* (as *G. baltica*) in 1904 at Annesley on a dry limestone bank.

| Location | GR | Date | Recorder |
|----------|---------|------|----------|
| Annesley | SK55/45 | 1904 | JWC |

Gentianella campestris agg. L.

Field Gentian

National Status: Vulnerable**Nottinghamshire Status:** Extinct

The aggregate of field gentian *Gentianella* (as *Gentiana*) *campestris* was considered by Howitt & Howitt (1963) to be very rare in the VC, being recorded at only three sites. In the Sherwood area the species was recorded at a site near Newstead and on the Lime Avenue at Clumber Park. In the early 19th Century it was also recorded on the Keuper Marls between Markham Moor and Great Markham, near Tuxford.

| Location | GR | Date | Recorder |
|---------------------------|------|--------|----------|
| Lime Avenue, Clumber Park | SK67 | c.1900 | JR |

Geranium columbinum L.

Long-stalked Crane's-bill

National Status: Least Concern**Nottinghamshire Status:** Scarce**Monads:** 7

Long-stalked Crane's-bill *Geranium columbinum* at Warsop Hills and Holes



Source S. Hammonds

Long-stalked crane's-bill *Geranium columbinum* is scattered in the VC and is found on a variety of base-rich soils in seven monads. It has always been scarce in the VC and is now largely confined to disused railway lines and abandoned quarries. In recent times, former stations such as green lanes have become overgrown and fields have been ploughed or agriculturally improved. A survey during 2014 (in bold) at Warsop Vale Dismantled Railway has confirmed that the population is still extant.

| Location | GR | Date | Recorder |
|--|-----------------|-------------|------------|
| Widmerpool Dismantled Railway Line | SK645296 | 2000 | DCW, RAJ |
| Steetley Dismantled Railway Line | SK558793 | 2006 | DCW |
| Warsop Vale Dismantled Railway Line | SK540680 | 2011 | DCW, RAJ |
| Warsop Vale Dismantled Railway Line | SK541680 | 2014 | RAJ |
| Widmerpool Dismantled Railway Line | SK648291 | 2007 | |
| Warsop Vale Dismantled Railway Line | SK549677 | 2008 | DCW |
| Bingham Linear Park | SK706390 | 2010 | DCW |
| Bingham Linear Park | SK705391 | 2012 | DCW |
| Cotgrave Forest | SK647329 | 2010 | DCW |
| Warsop Hills and Holes | SK549677 | 2011 | DCW |
| Warsop Hills and Holes | SK547678 | 2011 | DCW |
| Warsop Hills and Holes | SK558681 | 2012 | RAJ, JC |

Geranium purpureum L.

Little Robin

National Status: Nationally Rare**Nottinghamshire Status:** Rare**Monads:** 1

John Hodgson recorded little robin *Geranium purpureum* on the 9th June 2004 at Worksop Station in the north of the VC and reported the find in BSBI News No 99, p22. The record, which was verified by P. F. Yeo, is remarkable, because the site is 150 miles away from other known English localities and 50 miles inland from the nearest piece of coastline. Whilst other maritime species have been introduced into the VC along roads and railway lines that are connected to the east coast, this route of introduction seems less likely because Worksop is located on an east-west branch line and is not linked to southern populations by way of direct railway routes.

| Location | GR | Date | Recorder |
|-------------------------|--------|------|----------|
| Worksop Railway Station | SK8469 | 2004 | JH |

Geranium sanguineum L.

Bloody Crane's-bill

National Status: Least Concern**Nottinghamshire Status:** Extinct (as a native)**Monads:** 57 (as a neophyte)

Bloody crane's-bill *Geranium sanguineum* is a popular garden plant, which can persist as a garden throw-out on base-rich soils and all of the existing records for the VC are considered to be introductions. As a native, the species has only been recorded once in the VC and has not been seen in the 20th Century. In the 19th Century, G. Howitt was informed by B. Eddison of its occurrence on Magnesian Limestone rocks at Creswell Craggs on the Nottinghamshire – Derbyshire border.

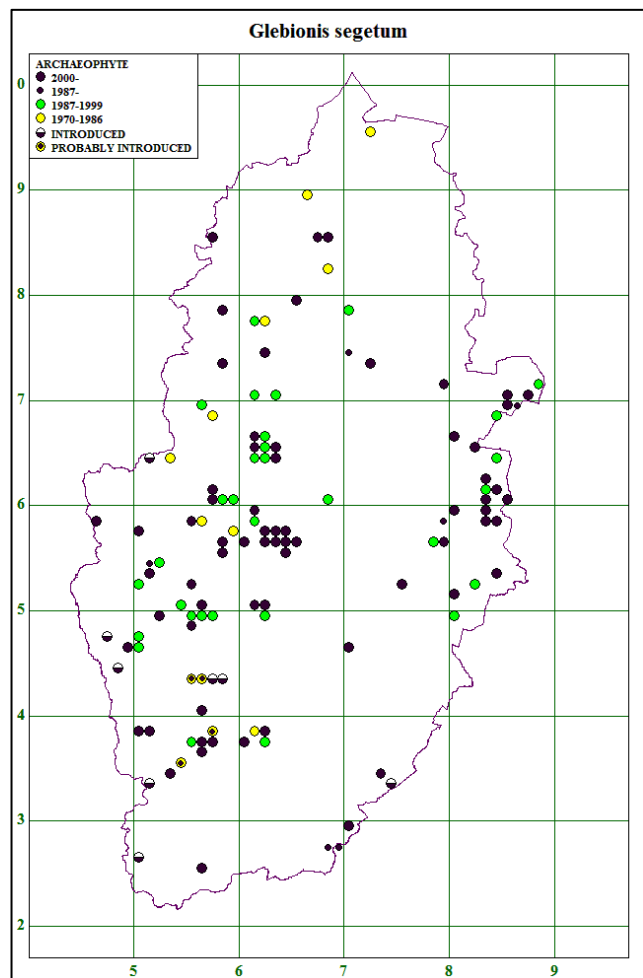
| Location | GR | Date | Recorder |
|-----------------|--------|------|----------|
| Creswell Craggs | SK5374 | 1839 | GH |

Glebionis segetum (L.) Fourr.

Corn Marigold

National Status: Vulnerable**Nottinghamshire Status:** Locally Frequent**Monads:** 126

Although corn marigold *Glebionis segetum* has undergone national declines, because of herbicide applications and seed cleaning, the species is still fairly widespread on lighter soils in the VC. It is frequent in the Sherwood area and on blown sands in the east. It is also present on the sands and gravels of the river valleys. Occasionally, it is planted for conservation purposes.

*Glyceria x pedicillata* F. Towns.

Hybrid Sweet-grass

National Status: Data Deficient**Nottinghamshire Status:** Scarce**Monads:** 9

The hybrid was recorded once before 1970 somewhere in Wollaton, close to Nottingham. The specimen was determined by C. E. Hubbard and was probably recorded in the 1950s or 1960s, but Howitt & Howitt (1963) does not provide any further information. Since 1970 the hybrid has been recorded at nine scattered locations in the VC, but does not seem to be associated with any particular soil type.

| Location | GR | Date | Recorder |
|-----------------------------------|----------|------|----------|
| Welbeck Colliery Village | SK583697 | 1972 | JH |
| The Fleet, South Collingham | SK8261 | 1975 | EMP |
| Greasley Marsh | SK503478 | 1990 | Woll. |
| South Holme Dyke, Sutton-on-Trent | SK806664 | 1994 | DCW |
| Toton Marsh | SK484351 | 1995 | DCW |

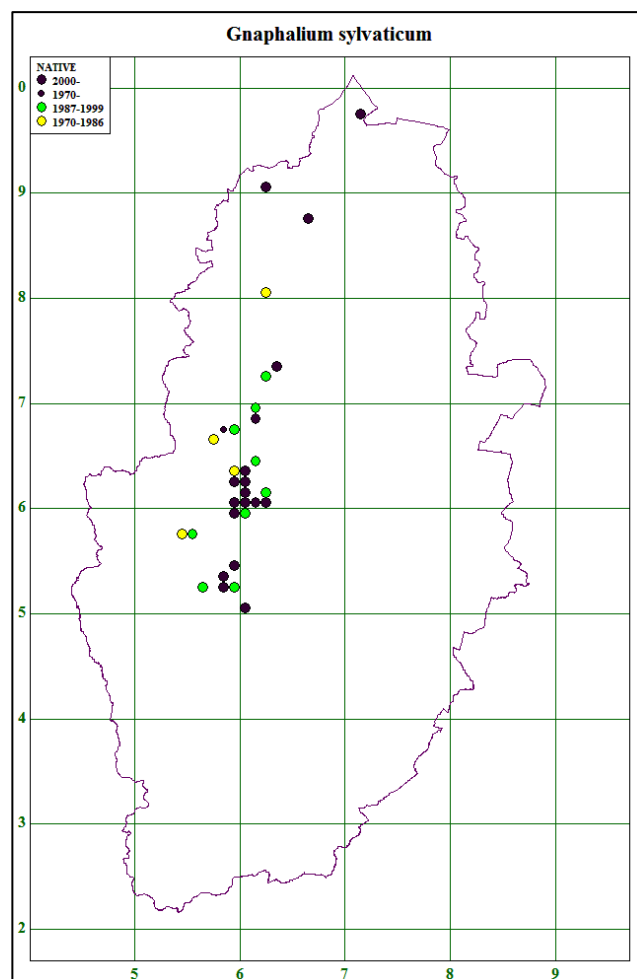
| Location | GR | Date | Recorder |
|-----------------------------------|----------|------|----------|
| Huthwaite Grassland | SK456598 | 1995 | DCW |
| Oldcotes Grassland | SK587885 | 2009 | DCW |
| South Holme Dyke, Sutton-on-Trent | SK805655 | 1994 | DCW |
| Greasley | SK4946 | 2012 | JSh |
| Newstead Colliery Tip | SK5253 | 2004 | MW |

Gnaphalium sylvaticum L.

Heath Cudweed

National Status: Endangered, Nationally Scarce**Nottinghamshire Status:** Local**Monads:** 36

Since the 1960s this nationally endangered perennial species has declined in the VC, because of habitat destruction and afforestation. Before 1970 the species was common on heaths and woods of the Bunter Sandstone. Elsewhere in the VC, it was also found at scattered localities on light sandy and gravelly soils. Since 1970 the species has been recorded in 31 rolling monads and continues to be most common on the heaths and woods of the Bunter Sandstone, but has also been recorded on post-industrial sites such as disused colliery yards and railway sidings.

*Gnaphalium luteoalbum* L.

Jersey Cudweed

National Status: Critically Endangered**Nottinghamshire Status:** Rare (Casual)**Monads:** 4

As a native Jersey cudweed *Gnaphalium luteoalbum* is restricted to the Channel Islands, Norfolk and Kent; elsewhere, it occurs in a few scattered localities as a casual.

Gnaphalium luteoalbum (continued)

In Nottinghamshire there are no known historical records, but in 2012 a single plant was recorded in Worksop at the base of the external face of a garden wall. The species was cut prematurely at the worksop site, but it reappeared in 2013. Since 2012, more casual records have been found following archival research and a single plant was found in 2015. It is still considered to be rare, because the plants at Cotgrave and Nottingham have not been found again.

| Location | GR | Date | Recorder |
|-----------------------------|----------|------|----------|
| Cotgrave Forest | SK645334 | 1990 | CJ |
| Victoria Centre, Nottingham | SK573405 | 2008 | RAJ |
| Hartland Road, Worksop | SK582784 | 2013 | GC |
| Colwick Country Park | SK612398 | 2015 | DCW |

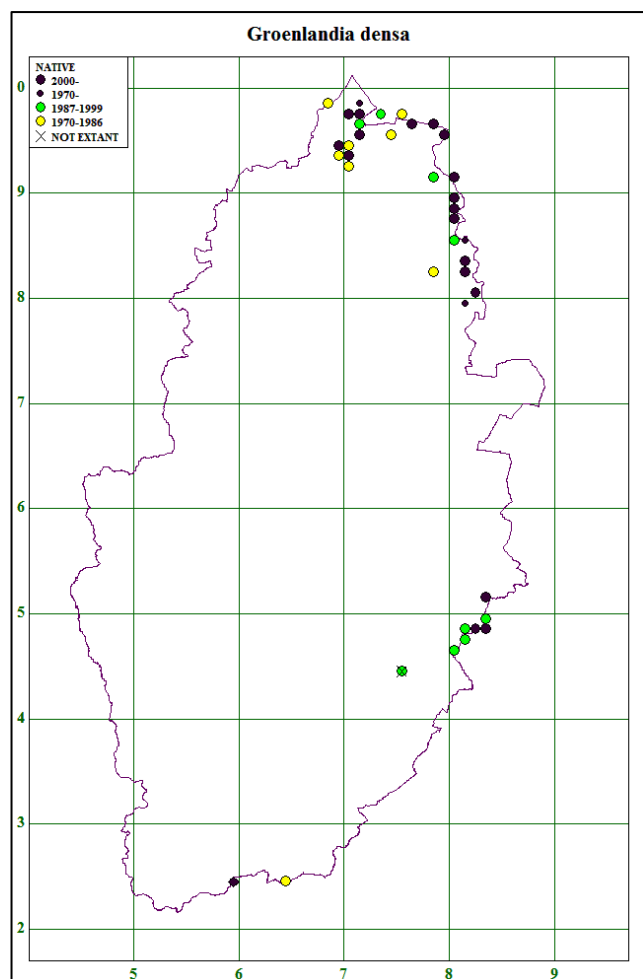
Groenlandia densa (L.) Fourr.

Opposite-leaved Pondweed

National Status: Vulnerable

Nottinghamshire Status: Local

Monads: 40



Before 1970 opposite-leaved pondweed *Groenlandia densa* was recorded throughout the VC in drains, streams and ponds, mostly on peaty substrates. Since 1970, the records for the species originate for the most part from peaty drains in the north of the VC and a few drains on the east side of the VC. Losses are attributed, to drainage and eutrophication.

Gymnadenia conopsea (L.) R. Br.

A Fragrant Orchid

National Status: Least Concern

Nottinghamshire Status: Rare

Monads: 3

Howitt & Howitt (1963) considered that fragrant orchid *Gymnadenia conopsea* was very rare and confined to calcareous meadows on the Magnesian Limestone and Keuper Marls. Howitt & Howitt (1963) did not separate the species to subspecies level and the first edition of the rare plant register did not fully separate the two species. For this edition, populations confirmed as being *G. densiflora* are separated and remaining populations are treated as *G. conopsea* sensu lato until they have been re-examined and identified by use of the most recent keys.

| Location | GR | Date | Recorder |
|-----------------------------|----------|------|----------|
| Teversal (North of) | SK4863 | 2014 | KB |
| Teversal Dismantled Railway | SK494635 | 2009 | DCW |
| Quarry Banks | SK534521 | 1991 | GL |

Gymnadenia densiflora (Wahlenb.) A.

Marsh fragrant Orchid

Diet.

National Status: Least Concern

Nottinghamshire Status: Scarce

Monads: 5

Fragrant marsh orchid *Gymnadenia densiflora* at Wilford Claypit



Source S. Hammonds

It is very likely that all fragrant orchid populations in Nottinghamshire will be *G. densiflora*. With the exception of the Wilford Clay Pit populations all other pre-1970 records for sites on the Keuper Marls are no longer extant.

Gymnadenia densiflora (continued)

Losses that have occurred since 1970 include Holme Pierrepont (SK611383), Sookholme Moor (SK554677 and SK554678) and Rushcliffe Golf Course (SK5427). A new population was recorded in a base-rich flush on colliery spoil at Bentinck Void, Annesley Woodhouse and a population at Portland Park first recorded in 1978 has been recorded again in 2009 and again 2013.

| Location | GR | Date | Recorder |
|------------------------|------------|------|--------------|
| Teversal Trail | SK491636 | 2013 | KB |
| Teversal Trail | SK494635 | 2011 | DCW |
| Warsop Hills and Holes | SK5567 | 2014 | SHo |
| Warsop Hills and Holes | SK557679 | 2012 | DCW, RAJ, JC |
| Portland Park | SK495551 | 2013 | DCW, RAJ |
| Wilford Claypit | SK569356 | 2010 | DCW |
| Wilford Claypit | SK570356 | 2011 | DCW |
| Bentinck Void | SK48725376 | 2013 | SH, DCW |

Gymnocarpium robertianum (Hoffm.) Newman

Limestone Fern

National Status: Nationally Scarce**Nottinghamshire Status:** Rare**Monads:** 2

There are no historic records for this species in the VC, but since 1970 it has been recorded at two very different locations. The City of Nottingham population consists of two small clumps growing out of the mortar on a brick wall surrounding a Methodist Church. The Linby population is much larger and is located in quite tall vegetation at the base of an outcrop of Magnesian Limestone on a disused railway line. Surveys in 2013 confirmed that the population at Linby is flourishing.

| Location | GR | Date | Recorder |
|-------------------------|----------|------|--------------|
| Linby Trail | SK529516 | 2013 | DCW, MW |
| Lenton Methodist Church | SK556397 | 2010 | PA, RAJ, DCW |

Helianthemum nummularium (L.) Mill.

Common Rock-rose

National Status: Least Concern**Nottinghamshire Status:** Scarce**Monads:** 8

Most historic and modern records of common rock-rose *Helianthemum nummularium* are associated with sites on the Magnesian Limestone, but in the 18th Century Deering recorded the species on the Bunter Sandstones of Nottingham Castle Rock and in the 19th Century Ordoyno and Miller recorded the species on the Keuper Marls at Oxtun and Hayton respectively. Eaton (Howitt & Howitt, 1963) and Gamston (Carr, 1939) were the only other sites on the Keuper Marl where the species was recorded and to this day it is still extant on the Eaton Wood Road Verge SSSI. Although the number of stations on the Magnesian Limestone declined before the 1960s, it is still locally abundant at four of the five sites where it still occurs. Updated information since 2012 is highlighted in bold.

| Location | GR | Date | Recorder |
|---|-----------------|-------------|--------------|
| Annesley Woodhouse Scarp Grassland | SK491507 | 2011 | DCW |
| Annesley Woodhouse Quarry | SK489533 | 2011 | DCW |
| Annesley Woodhouse Quarry | SK490533 | 2011 | DCW |
| Bulwell Hall Park | SK536469 | 2010 | PS, DCW |
| Eaton Wood Roadside Verge | SK726772 | 2002 | DCW |
| Eaton Wood Roadside Verge | SK726773 | 2003 | MW |
| Warsop Hills and Holes (Rhein O' Thorns) | SK553682 | 2014 | SHo |
| Warsop Hills and Holes | SK554677 | 2012 | DCW, RAJ, JC |
| Warsop Hills and Holes | SK556678 | 2014 | SHo |
| Warsop Hills and Holes | SK555681 | 2012 | DCW, RAJ, JC |
| Warsop Hills and Holes | SK557681 | 2014 | SHo |

| Location | GR | Date | Recorder |
|---|-----------------|-------------|--------------|
| Warsop Hills and Holes | SK557676 | 2012 | DCW, RAJ, JC |
| Kirkby-in-Ashfield Hills and Holes | SK499554 | 2013 | RAJ |

Helleborus viridis L.

Green Hellebore

National Status: Least Concern**Nottinghamshire Status:** Rare**Monads:** 3

The Rev. H. Friend first recorded green hellebore *Helleborus viridis* in ancient woodland at Wallingwells during 1887. In the 20th Century Howitt & Howitt (1963) recorded the same population and recently (2009 and 2011) D. C. Wood recorded three distinct patches. The species was also recorded in the 19th Century as a native in woodland at Kirkby-in-Ashfield and in the mid-20th Century as a relic of cultivation in the north of the county at Misterton and naturalised on an ancient earthwork (1193AD) at Kingshaugh, Darlton. The species is no longer extant at Misterton, but is still present at Castle Garden and two clumps were found at Darlton during 2012. However, a further population has been found at Langar during 2015 (in bold) at the former cement works, but details regarding population size and habitat have yet to be obtained.

| Location | GR | Date | Recorder |
|---------------------|--------------|------|----------|
| Castle Garden | SK5704584538 | 2011 | DCW, MW |
| Kingshaugh, Darlton | SK765735 | 2012 | JC |
| Langar | SK731345 | 2015 | AC |

Heracleum mantegazzianum Sommier & Levier x *Heracleum sphondylium* L.

Hybrid Hogweed

National Status: Data Deficient**Nottinghamshire Status:** Rare**Monads:** 3

There are no pre-1970 records for giant hogweed *Heracleum mantegazzianum* and consequently there are no records for the hybrid. This is surprising given the length of time that giant hogweed has been known in this country and the number of post-1970 records. To some extent the rarity of the hybrid nowadays is likely to be caused by the efficient control of giant hogweed by organisations such as the Environment Agency. The Dunham Bridge population has been treated and no sign of the hybrid or giant hogweed was observed in 2015.

| Location | GR | Date | Recorder |
|---------------|----------|------|----------|
| Toton | SK494357 | 2001 | DCW |
| Ruddington | SK577341 | 2002 | DCW |
| Dunham Bridge | SK817746 | 2013 | DCW, MW |

Herniaria glabra L.

Smooth Rupturewort

National Status: Nationally Rare**Nottinghamshire Status:** Extinct (as a native)**Monads:** 2 (as an introduction)

As a native, T. Ordoyno last recorded smooth rupturewort *Herniaria glabra* in the VC during the early 19th Century. It was recorded on damp, gravelly ground at sites in or close to Newark-on-Trent. In modern times the species has been recorded as a neophyte at three locations. It is no longer extant at the Bramote Landfill site (SK503387), because of landscaping and capping with topsoil and is unlikely to be extant at the other two locations.

| Location | GR | Date | Recorder |
|-------------------------------|----------|------|----------|
| Quonce Close, Newark-on-Trent | SK75 | 1807 | TO |
| Kilton Road, Worksop | SK590793 | 1996 | LC |
| Woodthorpe Grange | SK583343 | 2011 | WM |

Hippocrepis comosa L.

Horseshoe Vetch

National Status: Least Concern
Nottinghamshire Status: Extinct

C. Deering was the only person to record horseshoe vetch *Hippocrepis comosa* in the VC at Nottingham Park. Howitt & Howitt (1963) stated that 19th Century botanists could not find the plant, but the record was considered to be trustworthy, because other calcicole species such as Nottingham catchfly *Silene nutans* and common rockrose *Helianthemum nummularium* grew in the park, despite the underlying Bunter Sandstone geology.

| Location | GR | Date | Recorder |
|-----------------|------|------|----------|
| Nottingham Park | SK53 | 1738 | CD |

Hordelymus europaeus (Jess.) Jess. Ex Harz

Wood Barley

National Status: Nationally Scarce
Nottinghamshire Status: Scarce
Monads: 9

Wood barley *Hordelymus europaeus* has always been scarce in the VC and before 1970 was recorded at only two locations on Magnesian Limestone at Pleasley Park and in woods near Felley Mill. In modern times the species has been recorded at six ancient woodland sites. The three populations that are located in woods on Magnesian Limestone are small and in the past could easily have been overlooked by botanists. The Epperstone Dumble, Bevercotes Park, Castle Hill Wood and Swindell Wood populations are located on Keuper Marl and the populations in Beauvale Wood and Lord Stubbin's Wood are located on Permian Marls, but Magnesian Limestone formations also occur in both sites. The Epperstone population is relatively large and the Swindell Wood Population is widespread, so it is a puzzle as to why it was not previously recorded at either site. The record from Welbeck Colliery is curious and the type of habitat in which the plants were found is not known. Since 2012, archival research has unearthed records from Pleasley Vale and recent searches have re-found that population and a population at Bevercotes Park.

| Location | GR | Date | Recorder |
|----------------------|------------|------|----------|
| Bevercotes Park | SK701708 | 1977 | CGC |
| Bevercotes Park | SK70067082 | 2013 | DCW |
| Welbeck Colliery | SK584706 | 1977 | JH |
| Swindell Spring Wood | SK734803 | 1980 | CGC |
| Swindell Spring Wood | SK735806 | 1980 | CGC |
| Castle Hill Wood | SK740804 | 1980 | CGC |
| Swindell Spring Wood | SK733805 | 2012 | DCW |
| Beauvale Wood | SK499489 | 1998 | DCW |
| Dovedale Wood | SK467631 | 1999 | DCW |
| Dovedale Wood | SK466629 | 1978 | Woll. |
| Dovedale Wood | SK467629 | 1978 | Woll. |
| Dovedale Wood | SK465633 | 2012 | DCW |
| Dovedale Wood | SK466630 | 2012 | DCW |
| Boon Hills Wood | SK533695 | 2012 | DCW |
| Epperstone Dumble | SK655512 | 2012 | DCW |
| Lord Stubbin's Wood | SK537685 | 2012 | DCW |
| Lord Stubbin's Wood | SK536689 | 2012 | DCW |
| Pleasley Vale | SK508647 | 1978 | CGC |
| Pleasley Vale | SK508647 | 2014 | DCW |

Huperzia selago (L.) Bernh. ex Schrank & Mart.

Fir Clubmoss

National Status: Least Concern
Nottinghamshire Status: Extinct

G. Howitt was the only person to record the species in the VC, c.1839. The plant was recorded on heathland to the south of Mansfield in Mansfield Forest, near to a gate that led to Blidworth.

| Location | GR | Date | Recorder |
|------------------|------|------|----------|
| Mansfield Forest | SK55 | 1839 | GH |

Hydrocharis morsus-ranae L.

Frogbit

National Status: Vulnerable, Nationally Scarce
Nottinghamshire Status: Rare
Monads: 2

Before 1970, frogbit *Hydrocharis morsus-ranae* was uncommon in the VC, but widespread in pools and ditches on the Bunter Sandstone and Keuper Marl. Between 1970 and 2001 the species became extinct as a native and was reduced to a single introduced population. After the major floods of 2001, the species was recorded for the first time at Skylarks Nature Reserve and Holme Pit SSSI. Both of these sites occur on the Trent Valley and were completely inundated during the flood. Whilst the provenance of the new arrivals is not known, the species appears to have arrived and become established without assistance and is therefore, classified as native at both sites. Since 2012 a further population has been located in the Grantham Canal consisting of three patches. The population at Holme Pit is still present and archival research has identified two more locations (South Clifton Drain: SK818704 and Spalford Water Meadow: SK828694), but they remain unconfirmed, undated and the name of the recorders has not been determined.

| Location | GR | Date | Recorder |
|--------------------------|----------|------|----------|
| Skylarks Nature Reserve | SK619391 | 2005 | DCW |
| Holme Pit, Clifton | SK537345 | 2013 | DCW |
| Grantham Canal, Hickling | SK714294 | 2013 | DCW |

Hyoscyamus niger L.

Henbane

National Status: Vulnerable, Nationally Scarce
Nottinghamshire Status: Scarce
Monads: 9

Henbane *Hyoscyamus niger* at Scofton

Source K. Balkow

Henbane *Hyoscyamus niger* was formerly common throughout the VC on waste ground and rough clay slopes, but declined in the 20th century to such an extent that it was considered to be rare by the 1960s, Howitt & Howitt (1963). Since 1970 the species has been recorded in 11 rolling monads, mostly on disturbed soils. Populations at West Bridgford (SK583380), The Meadows (SK576385 and SK575383) and Holme Pierrepont Landfill (SK6339) are, however, no longer extant and elsewhere at Holme Pierrepont (SK611379) and Besthorpe (SK814643), the species is considered to be a casual. Without further disturbance, all other populations, with the exception of the South Clifton population, are small and vulnerable to extinction. The South Clifton population is locally abundant and is the largest in the VC, being first recorded by Howitt & Howitt, 1963. A visit to Gotham Hills during 2014 found that the population had significantly declined.

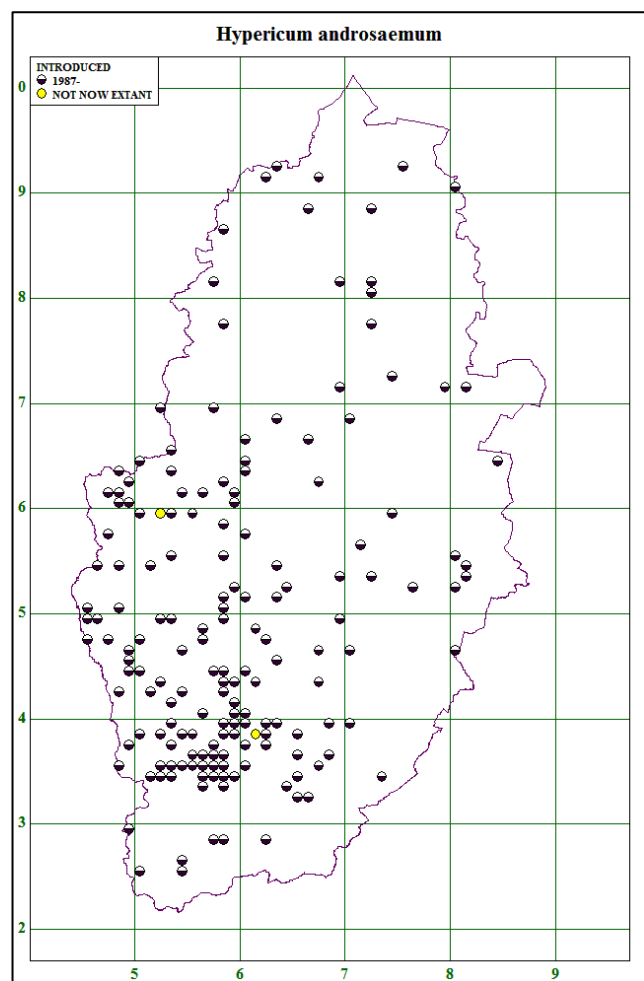
| Location | GR | Date | Recorder |
|----------------|----------|------|----------|
| East Bridgford | SK693438 | 2008 | DCW |
| Fiskerton | SK739515 | 2008 | DCW |
| Gotham Hills | SK532309 | 2014 | DCW |

Hyoscyamus niger (continued)

| Location | GR | Date | Recorder |
|------------------|------------|------|----------|
| Fiskerton | SK73455072 | 2010 | RAJ |
| Osberton Park | SK628806 | 1996 | KB |
| South Clifton | SK821696 | 2012 | DCW |
| King's Clipstone | SK6064 | 2011 | TG, DCW |
| Cotgrave Wolds | SK650334 | 1982 | DCW |

Hypericum androsaemum L.

Tutsan

National Status: Least Concern**Nottinghamshire Status:** Extinct (as a native)**Monads:** 170Tutsan *Hypericum androsaemum* at Wilford Clay Pits

Source S. Hammonds

G Howitt last recorded the species as a native at Nottingham Castle in 1835. Nowadays, tutsan *Hypericum androsaemum* is a popular garden plant and all of the modern records are considered to originate from gardens. The fruits are readily dispersed by birds and this is likely to be one of the reasons for the large number of records and widespread distribution. As a neophyte the species has been recorded in a further 46 monads since 2012.

Hypericum montanum Crantz

Pale St.John's-wort

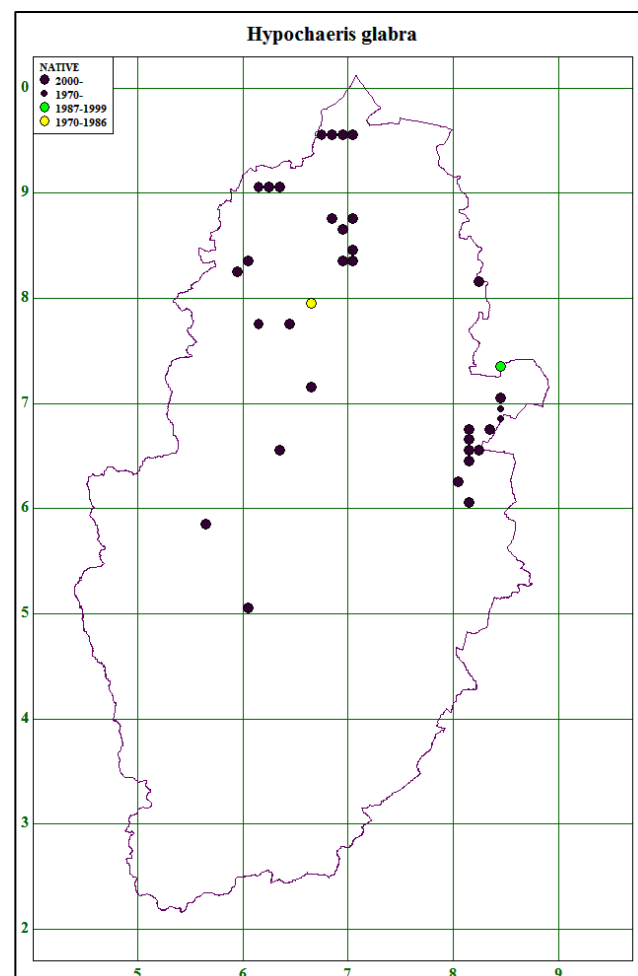
National Status: Near Threatened, Nationally Scarce**Nottinghamshire Status:** Rare**Monads:** 1

The only population of pale St.John's-wort *Hypericum montanum* in the VC is locally frequent, being distributed along a 200m length of a steep east-facing slope on a dismantled railway line, which cuts through Magnesian Limestone. Historically, the species has always been rare in the VC and confined to sites overlying Magnesian Limestone. J. W. Carr recorded the species in 1927 in a wood near Skegby, which is the nearest site to the modern population. In modern times, J. Hodgson recorded the species on the Teversal Trail (SK487631) during 1977. A visit during 2014 confirmed that the population is still extant on the Teversal Trail.

| Location | GR | Date | Recorder |
|----------------|----------|------|----------|
| Teversal Trail | SK487633 | 2014 | KB |

Hypochaeris glabra L.

Smooth Cat's-ear

National Status: Vulnerable, Nationally Scarce**Nottinghamshire Status:** Uncommon**Monads:** 30

Hypochaeris glabra (continued)

Smooth cat's-ear *Hypochaeris glabra* is and always has been uncommon in the VC, but has been recorded across a wide geographic area, wherever light, sandy soils are present. In the east of the VC, the species is located alongside the River Trent and on the blown sands. Elsewhere the species is associated with the Bunter Sandstones in the Sherwood area and in gravel pits alongside the River Idle in the north of the VC. Howitt & Howitt (1963) stated that the species occurred in grassland and arable habitats, but there are no recent records associated with arable sites, probably because of modern farming techniques. To some extent the loss of the species from arable habitat is likely to have been offset by the availability of artificial habitats such as sand and gravel pits, which the species has readily colonised. Since 2012, more populations have been found and a further five monads have been added to the distribution map. All of the monads are located within the parts of the county where the species has been historically recorded.

Hypopitys monotropa Crantz

Yellow Bird's-nest

National Status: Endangered, UK Biodiversity Action Plan**Nottinghamshire Status:** Rare**Monads:** 2

Historically, Howitt & Howitt (1963) listed four woodlands on sandy soils in the north of the VC where the species was found. The historical sites included a wood near Everton, two locations in Thoresby Park, several sites in Clumber Park and a site in Birklands. With regards to the two modern records, a small population has been recorded in mixed plantation woodland in the north of the VC at Osberton, whilst the other similarly small population has been recorded in woodland that surrounds disused gravel pits in the River Trent valley. A search during 2012 failed to locate the population at Osberton, but in 2011 monitoring by a local conservation group reported the presence of 2 plants at the Bleasby site.

| Location | GR | Date | Recorder |
|-----------------------|----------|------|----------|
| Great Whin Covert | SK643780 | 2000 | DCW |
| Bleasby Jubilee Ponds | SK714492 | 2003 | DCW, RAJ |

Iberis amara L.

Wild Candytuft

National Status: Vulnerable**Nottinghamshire Status:** Extinct

In modern times this species has only been recorded once, on a landfill as a casual. Historically, the plant was recorded between 1916 and 1927 at three sites on the Welbeck Estate on sandy, acid soils. Although it was probably a casual at all three sites, at two sites it persisted for five years.

| Location | GR | Date | Recorder |
|---------------------------|----------|------|----------|
| Ganna Bridge, Welbeck | SK57M | 1916 | RG |
| West Park, Welbeck | SK57M | 1922 | RG |
| Old Brick Pit, South Carr | SK5762 | 1920 | RG |
| Bramcote Landfill | SK504387 | 2004 | DCW |

Illecebrum verticillatum L.

Coral Necklace

National Status: Vulnerable, Nationally Scarce**Nottinghamshire Status:** Extinct

In the VC, coral necklace *Illecebrum verticillatum* has only been recorded once on a dismantled railway line at Eastwood. R.C.L. Howitt considered it to be an introduction. There are no further records for the species and the habitat is no longer extant.

| Location | GR | Date | Recorder |
|----------------------------------|----------|------|----------|
| Eastwood Dismantled Railway Line | SK455476 | 1972 | RCLH |

Jasione montana L.

Sheep's-bit

National Status: Least Concern**Nottinghamshire Status:** Scarce**Monads:** 9

Sheep's-bit *Jasione montana* has a distribution that is restricted to sandy, often disturbed soils on the Bunter Sandstones of the Sherwood area and the Blown Sands in the east of the VC. Modern records are mostly associated with woodland rides, railway lines and roadside verges, with only one site being located in sandy grassland. Preston *et al.* (2003) state that the species has declined in Central and South England because of eutrophication and loss of rabbit grazing. In the VC the losses from heathlands and acid grasslands are to some extent offset by the creation of new habitats on sandy soils, which are often disturbed and kept open by human activities such as forestry work and recreation.

| Location | GR | Date | Recorder |
|--------------------------------------|----------|--------|----------|
| Blackcliffe Hill | SK6671 | 1970's | RCLH |
| Babworth Railway Line | SK658792 | 1972 | JH |
| Babworth Railway Line | SK656792 | 1972 | JH |
| Bilthorpe Dismantled Railway Line | SK643612 | 1972 | JH |
| Bilthorpe Dismantled Railway Line | SK646612 | 1972 | JH |
| Babworth Track (by the railway line) | SK653791 | 1999 | DCW |
| Rufford Dismantled Railway Line | SK639612 | 2012 | DCW |
| Haywood Oaks Plantation | SK596548 | 2001 | DCW, MW |
| Manton Wood | SK627785 | 1972 | JH |
| Gibbet Hill | SK647916 | 1985 | Woll. |
| Everton to Mattersey Roadside Verge | SK690899 | 1994 | DCW |
| Girton Roadside Verge | SK827676 | 2001 | DCW |
| Girton Grassland | SK828673 | 2003 | DCW, RAJ |
| A1133 Roadside Verge | SK8266 | 2012 | DCW, MW |

Juncus compressus Jacq.

Round-fruited Rush

National Status: Near Threatened**Nottinghamshire Status:** Occasional and Scattered**Monads:** 53

This native species is scattered throughout the county in a variety of semi-natural and artificial wetland habitats. The distribution map does however confirm that the species is more widespread in the River Trent valley. Howitt & Howitt (1963) recorded the species in a variety of habitats throughout the county and thought that it was probably increasing. In more recent times the species is thought to be decreasing across the country, because of drainage and the loss of permanent pasture, Preston *et al.* (2002), but as in other counties, the species has readily colonised new habitats, which may to some extent, compensate for losses elsewhere. Since 2012 there have been a further eight records, but all at sites where the species has been previously recorded. See next page for distribution map.

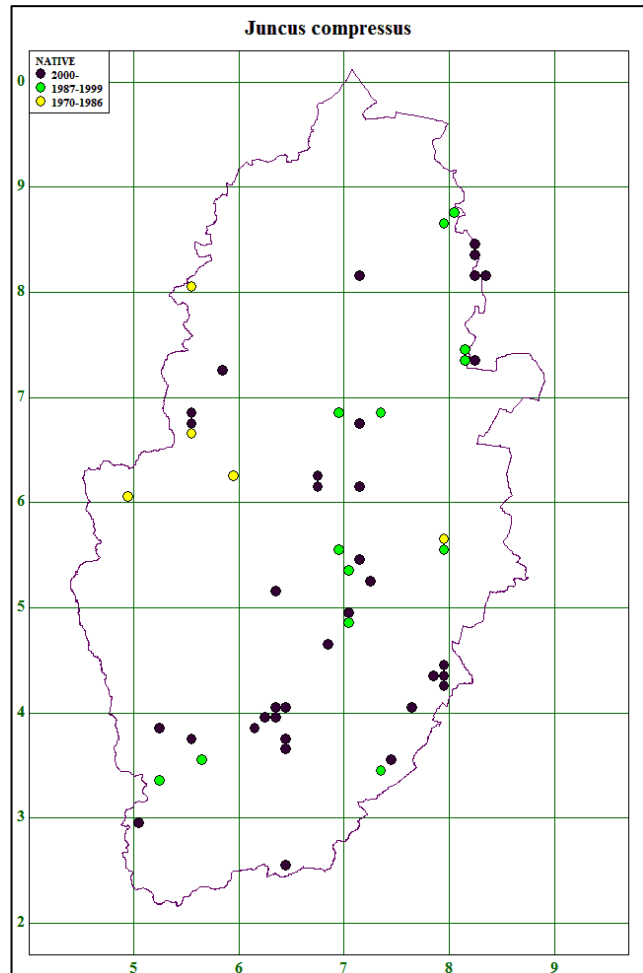
Juncus x diffusus Hoppe*J. effusus x inflexus***National Status:** Data Deficient**Nottinghamshire Status:** Rare**Monads:** 3

Sell & Murrell (1996), describe the hybrid as densely tufted with an inflorescence that resembles hard rush *Juncus inflexus*, but with intermediate floral characters and continuous pith. They describe the distribution of the hybrid as widespread and although nowhere common, it has been recorded from most areas where the parents occur. In the VC there are no historic records and there are only two modern records, which suggest that the hybrid is either rare or overlooked. At Eakring, the population is locally abundant and occurs with both parents. At Lound, a single plant was found in association with both parents.

Juncus x diffusus (continued)

In 2015 a further population of 3 plants was found on land alongside University Boulevard, Nottingham with both parents.

| Location | GR | Date | Recorder |
|----------------------------------|----------|------|----------|
| Eakring Flash | SK675629 | 2002 | DCW |
| Lound Gravel Pits | SK705865 | 2003 | DCW |
| University Boulevard, Nottingham | SK547379 | 2015 | DCW |

*Juniperus communis* L.

Juniper

National Status: Least Concern
Nottinghamshire Status: Extinct

In the early 19th Century T. Ordoyno recorded Juniper *Juniperus communis* on heaths and commons, but noted that it was not frequent. The only attributed record is for "many pretty large trees in Mr Muster's Wilderness by Colwick Hall", Deering (1738). There is also the intriguing occurrence of three bushes in scrub at a former sand quarry at Ranskill (SK662883), these being still extant, but of unknown origin.

| Location | GR | Date | Recorder |
|-------------------|------|------|----------|
| Near Colwick Hall | SK53 | 1807 | TO |

Lathyrus aphaca L.

Yellow Vetchling

National Status: Vulnerable, Nationally Scarce
Nottinghamshire Status: Rare
Monads: 1

The only historic records of yellow vetchling *Lathyrus aphaca* originate from the early 20th Century. J.W.Carr recorded the

species at Newark Malt Kilns and somewhere in the Welbeck area, but no further information is provided. In recent times the species has been recorded only once in a rough grassland on the Magnesian Limestone at Annesley Woodhouse. Given the location of previous records in the VC and the national distribution of native populations it is considered that the Annesley Woodhouse population is probably an introduction.

| Location | GR | Date | Recorder |
|------------------------------|--------------|------|--------------|
| Annesley Woodhouse Grassland | SK5010753456 | 2015 | RAJ, POI, AC |

Lathyrus palustris L.

Marsh Pea

National Status: Near Threatened, Nationally Scarce
Nottinghamshire Status: Extinct

Howitt & Howitt (1963) described marsh pea *Lathyrus palustris* as being very rare "among rough grass, hedges and drain sides on fen peat" in several places in Misson parish both towards Newington and Idle Stop. During the 1960s Howitt & Howitt personally recorded the species near Misson in a 'fenny' field and also on the edge of a drain at Misson. Despite a search of the drain and other suitable sites, the species was not refound during 1973 and has not been recorded since that time. The whole area is now arable land, enabled by a pump drainage scheme, which was initiated in the 1970's.

| Location | GR | Date | Recorder |
|--------------|----------|-------|----------|
| Misson Drain | SK705951 | 1960s | RCLH |

Lathyrus sylvestris L.

Narrow-leaved Everlasting Pea

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 6

Narrow-leaved everlasting pea *Lathyrus sylvestris* has always been very rare in the VC and has been lost from all of the historical locations listed by Howitt & Howitt (1963). Since 1970, the species has been recorded at five sites in different grassland types. The Huthwaite population is extensive and is located in scrubby grassland, extending into VC57; the Kirkby population is less extensive and occurs in rough grassland; the West Bridgford population consists of one plant in grassland on the north verge of a major trunk road; the Bramcote population is also present on a roadside verge, and the Newstead Colliery Tip population is one patch on barish colliery shales that is possibly introduced given the unusual location. None of the extant populations are close to the pre-1970 locations, so the reason(s) for the species scarcity and distribution in the VC is not known. Since 2012 surveys have confirmed extant populations at Huthwaite, West bridgford and Kirkby-in-Ashfield and a new site at Barnstone (in bold).

| Location | GR | Date | Recorder |
|---|-----------------|-------------|----------------|
| A52 Roadside Verge, West Bridgford | SK578347 | 2013 | PA, DCW |
| Huthwaite Dismantled Railway Line | SK464577 | 2012 | DCW |
| Huthwaite Dismantled Railway Line | SK462581 | 2012 | DCW, MW |
| Huthwaite Dismantled Railway Line | SK463579 | 2012 | DCW, MW |
| Huthwaite Dismantled Railway Line | SK464577 | 2013 | DCW |
| Huthwaite Dismantled Railway Line | SK462582 | 2013 | MW |
| Bramcote Roadside Verge | SK51153760 | 2012 | JSh |
| Newstead Colliery Tip | SK522538 | 2012 | MW |
| Kirkby-in-Ashfield Grassland | SK501552 | 2013 | DCW |
| Kirkby-in-Ashfield Grassland | SK500553 | 2009 | DCW |

Lathyrus sylvestris (continued)

| Location | GR | Date | Recorder |
|------------------------------|----------|------|----------|
| Kirkby-in-Ashfield Grassland | SK499553 | 2013 | RAJ |
| Barnstone Cement Works | SK738352 | 2015 | DCW, NP |

Legousia hybrida (L.) Delarbre

Venus's-looking-glass

National Status: Least Concern**Nottinghamshire Status:** Rare**Monads:** 2

The species has always been rare in the VC and there are only five historical records, which are all associated with cornfields on calcareous soils. In recent times however, the species has been located at Holme Pierrepont Gravel Pits in the River Trent valley and also on Sherwood Sandstone at Carlton-in-Lindrick in the north of the VC.

| Location | GR | Date | Recorder |
|------------------------------|----------|------|----------|
| Holme Pierrepont Gravel Pits | SK620387 | 2004 | DCW |
| Holme Pierrepont Gravel Pits | SK621386 | 2004 | DCW |
| Holme Pierrepont Gravel Pits | SK619387 | 2004 | DCW |
| Osberton Estate | SK620819 | 2007 | KB |

Lepidium latifolium L.

Dittander

National Status: Nationally Scarce**Nottinghamshire Status:** Uncommon**Monads:** 17

Although dittander *Lepidium latifolium* is native on the coasts of the British Isles, inland it is introduced and in the VC it is probably a relatively recent introduction. Although it is increasing inland, the species is still relatively scarce in the VC. Many of the extant records are on disused railway lines and the species is likely to have first colonised the county when those railway lines that connected the east coast with the VC were still in use. Observational evidence suggests that once established the species is capable of persisting and slowly spreading. Since 2012, populations at Teversal Trail and Sookholme have been confirmed as extant and two new populations have been found in Nottingham and the south of the VC.

| Location | GR | Date | Recorder |
|--|-----------------|-------------|----------------|
| Teversal Trail | SK493629 | 2010 | MW |
| Teversal Trail | SK492628 | 2013 | KB |
| Teversal Trail | SK493632 | 2000 | DCW |
| Silverhill Colliery Tip | SK476621 | 2011 | DCW, MW |
| Gamston Waste Disposal Site | SK607371 | 2012 | DCW |
| Netherfield Track Verge | SK633402 | 2012 | PS, DCW |
| Newstead Colliery Tip | SK519535 | 2011 | DCW, MW |
| Underneath Dunkirk Flyover | SK551384 | 2012 | RP |
| Tipping Wood | SK594568 | 2012 | MW |
| Blidworth Colliery Tip | SK599566 | 2011 | MW |
| Blidworth Colliery Tip | SK599567 | 2012 | RAJ, MW |
| Blidworth Colliery Tip | SK602573 | 2012 | RAJ, MW |
| Blidworth Colliery Tip | SK598571 | 2012 | RAJ, MW |
| Blidworth Colliery Tip | SK597569 | 2012 | RAJ, MW |
| Blidworth Colliery Tip | SK597568 | 2012 | RAJ, MW |
| Barnstone Landfill | SK740348 | 1999 | DCW |
| Bestwood Landfill | SK566478 | 2009 | DCW |
| A60 Trunk Road Verge, Worksop | SK573785 | 1998 | DCW |
| Plumtree Road Verge | SK611335 | 2012 | DCW |
| Sookholme Colliery Tip | SK543669 | 2013 | MW |
| A52 Trunk Road Verge, Holme Pierrepont | SK618378 | 1996 | DCW |
| Warsop Dismantled Railway | SK530685 | 1994 | DCW |
| A606 Trunk Road, Plumtree | SK611335 | 2013 | RP, DCW |
| Dunkirk | SK553383 | 2015 | RAJ |

| Location | GR | Date | Recorder |
|----------|----------|------|----------|
| Dunkirk | SK555381 | 2015 | RAJ |

Dittander *Lepidium latifolium* at Netherfield Sidings

Source S. Hammonds

Limosella aquatica L.

Mudwort

National Status: Nationally Scarce**Nottinghamshire Status:** Scarce**Monads:** 9

Before 1970, T Ordoyno recorded mudwort *Limosella aquatica* at gravel pits near Kirklington Mill during 1807. Howitt & Howitt (1963) located no other historical records and consequently they considered the species to be extinct in the VC. Since 1970 the species has been recorded at several sites in the River Trent valley and it is likely that the records represent recent colonisations. This is because most of the records are associated with disturbed and open habitats such as gravel pits and seasonal pools, which are of fairly recent origin. Since 2012 (highlighted in bold), many of the populations have been re-visited and are still extant. In the same general area, two new populations have been found on the banks of the River Trent.

| Location | GR | Date | Recorder |
|----------------------------|-----------------|-------------|----------------|
| Besthorpe Gravel Pits | SK8163 | >1970 | NRL |
| Dunham-on-Trent Lagoon | SK818740 | 1992 | DCW |
| Meering | SK820649 | 1994 | DCW |
| Mons Pool | SK813639 | 2013 | DCW |
| Mons Pool | SK815640 | 2013 | JC |
| Mons Pool | SK813640 | 2013 | DCW |
| Girton Gravel Pits | SK819675 | 2003 | DCW |
| Girton Gravel Pits | SK818669 | 2006 | DCW, RAJ |
| River Trent, Girton | SK816682 | 2013 | DCW, MW |

Limosella aquatica (continued)

| Location | GR | Date | Recorder |
|------------------------------------|------------|------|----------|
| River Trent, South Clifton | SK818698 | 2013 | DCW, MW |
| Meering | SK815651 | 2009 | DCW |
| Meering | SK815649 | 2013 | DCW |
| Meering | SK814651 | 2013 | DCW, RAJ |
| Meering | SK816651 | 2013 | DCW, RAJ |
| North Lagoon, Cottam Power Station | SK82807964 | 2009 | NC |
| Shelford Carr | SK66734334 | 2010 | DCW |

Linaria vulgaris Mill. x *L. purpurea* (L.) Mill.

Toadflax hybrid

National Status: Data Deficient
Nottinghamshire Status: Rare
Monads: 1

This hybrid has been reported from one other site in the UK, but has not been confirmed, Stace *et al* (2015). In Nottinghamshire, the hybrid occurs with both parents on rough grassland at a brownfield site near the centre of Nottingham. A herbarium specimen has been collected by D.C. Wood.

| Location | GR | Date | Recorder |
|-------------------|----------|------|----------|
| Nottingham Island | SK579395 | 2014 | DCW |

Linaria x dominii Druce

Linaria purpurea x repens

National Status: Scattered and increasing
Nottinghamshire Status: Rare
Monads: 2

In the VC there are no pre-1970 records of this hybrid, but it was first recorded in the wild in 1950 and records have steadily increased across Britain as the neophyte purple toadflax *Linaria purpurea* has spread into the range of the archaeophyte pale toadflax *L. repens*, Stace *et al* (2015). In Nottinghamshire, the hybrid has been found at two locations, but the first record was mistakenly overlooked in the first edition of the RPR. There are possibly two patches at Forest Recreation Ground as it was recorded twice at two different grid references. There are two patches at Toton Sidings with the parents in close proximity at both sites.

| Location | GR | Date | Recorder |
|--------------------------|----------|------|----------|
| Forest Recreation Ground | SK567414 | 2009 | PA, PS |
| Forest Recreation Ground | SK569417 | 2009 | PA, PS |
| Toton Sidings | SK492347 | 2015 | DCW |
| Toton Sidings | SK490349 | 2015 | DVW |

Linaria x sepium G.J. Sepium

L. vulgaris x repens

National Status: Data Deficient
Nottinghamshire Status: Scarce
Monads: 6

In the VC there are no pre-1970 records of this hybrid and all of the locations where the species has been recorded were active industrial sites before 1970. The location of the hybrid on dismantled railway lines and ex-colliery yards is not surprising as these are the most likely sites in the VC where the parents are likely to be found growing in close proximity to each other. Since 2012 a new population has been found at Toton Sidings (in bold).

| Location | GR | Date | Recorder |
|-----------------------------------|----------|------|----------|
| Warsop Vale Colliery Yards | SK538682 | 1972 | JH |
| Cotgrave Colliery Yards | SK648364 | 1995 | DCW |
| Huthwaite Dismantled Railway Line | SK464577 | 2001 | DCW |
| Warsop Vale Colliery Yards | SK543681 | 2004 | DCW |
| Beeston Sidings | SK547377 | 2005 | DCW |

| Location | GR | Date | Recorder |
|----------------------|-----------------|-------------|------------|
| Toton Sidings | SK491348 | 2010 | DCW |
| Toton Sidings | SK489349 | 2010 | DCW |
| Toton Sidings | SK490350 | 2010 | DCW |
| Toton Sidings | SK492346 | 2011 | DCW |
| Toton Sidings | SK492347 | 2015 | DCW |

Linum bienne Mill.

Pale Flax

National Status: Least Concern
Nottinghamshire Status: Rare
Monads: 3

Nottinghamshire is considered to be at the northern edge of the native range of pale flax *Linum bienne*, Stace (2010). Before 1970 the species had not been recorded in the VC, so it is probably a recent colonist. The species is considered to be a casual at the Nottingham site where it consists of one plant on a wall and also at the Holme Pierrepont site, which consists of two plants on a tip. At Sutton-cum-Lound the population occupies an extensive area of rough sandy grassland and is slowly increasing.

| Location | GR | Date | Recorder |
|------------------------------|----------|------|----------|
| Sutton-cum-Lound | SK692842 | 2012 | DCW |
| Sutton-cum-Lound | SK6884 | 2012 | DCW |
| Sutton-cum-Lound | SK6883 | 2012 | DCW |
| Sutton-cum-Lound | SK6985 | 2012 | DCW |
| Sandfield Road, Nottingham | SK556396 | 2009 | PSm |
| Holme Pierrepont Gravel Pits | SK621388 | 1992 | DCW |

Lithospermum arvense L.

Field Gromwell

National Status: Endangered
Nottinghamshire Status: Scarce
Monads: 5

In Nottinghamshire this archaeophyte used to be locally frequent in "arable fields, especially in beans, on clay or basic soils", Howitt & Howitt (1963). In recent times however, the species has substantially declined because of agricultural intensification. Recent checks at Colston Basset (SK685329), Cotham (SK796467), East Stoke (SK765488) and Flawborough (SK781418) indicate that populations are no longer extant. Further checks are required to fully determine the exact status of the species; two of the Staunton-in-the-vale sites were checked in 2012 and the species was not found. The remaining sites have not been checked for more than 20 years, but survey work for the Atlas since 2012 has not encountered the taxa in the southeast of the VC where it was formerly recorded.

| Location | GR | Date | Recorder |
|---------------------------------|----------|------|----------|
| South Scaffold Lane, Collingham | SK8460 | 1984 | EMP |
| Balderton Field | SK816486 | 1988 | DCW |
| Cotham Field | SK796467 | 1998 | DCW |
| Staunton-in-the-vale Field | SK808437 | 1988 | DCW |
| Staunton-in-the-vale Field | SK819438 | 1988 | DCW |
| Staunton-in-the-vale Field | SK817439 | 1988 | DCW |
| Cropwell Bishop | SK680356 | 1987 | RGS |

Lithospermum officinale L.

Common Gromwell

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 5

The species has always been rare, but widespread in the VC on neutral to base-rich soils and has been recorded on the edge of woodlands and hedgerows. In modern times, of all of the populations described by Howitt & Howitt (1963) only the Scratta Wood population survived, but a 2012 search failed to find the species. All of the extant populations are found on sites where the species was not previously recorded before 1970.

Lithospermum officinale (continued)

The species is however still found on a variety of substrates in the VC including Magnesian Limestone (Linby), Keuper Marl (Kirton), Bunter Sandstone (Clipstone) and the Lias Clays (Cotgrave). Since 2012 the populations at Cotgrave and Clipstone have been confirmed as extant (in bold).

| Location | GR | Date | Recorder |
|--|-----------------|-------------|----------------|
| Clipstone Forest | SK612619 | 2015 | RAJ, JC |
| Clipstone Forest | SK611619 | 2015 | RAJ, JC |
| Clipstone Forest | SK610619 | 2015 | RAJ, JC |
| Clipstone Forest | SK594605 | 2000 | MW |
| Blackberry Hill, Cotgrave Forest | SK639331 | 2010 | DCW |
| Blackberry Hill, Cotgrave Forest | SK641330 | 2015 | DCW, NP |
| Kirton Wood | SK707682 | 2009 | DCW |
| Scratta Wood | SK544802 | 1981 | CS, RS |
| Crossley Hills Lane, Carlton-in-Lindrick | SK6083 | 1984 | CS, RS |
| Joe's Wood | SK523514 | 1996 | Woll. |
| Quarry Banks | SK535521 | 1991 | GL |

Littorella uniflora (L.) Aschers.

Shoreweed

National Status: Least Concern
Nottinghamshire Status: Extinct

Shoreweed *Littorella uniflora* has only ever been recorded at two sites in the VC including Oxtan Bogs and Moorgreen Reservoir. Howitt & Howitt (1963) indicated that the species was no longer extant at Oxtan Bogs, but was still present at Moorgreen Reservoir. Shoreweed disappeared before 1973 following the modification of the reservoir dam, which increased water depth and made conditions less suitable for the species. Since 2012 archival research has revealed an anonymous record from Oxtan Bogs where the species was recorded in the 19th Century, but it has not been recorded during more recent surveys.

| Location | GR | Date | Recorder |
|---------------------|----------|-------|----------|
| Moorgreen Reservoir | SK481491 | <1973 | RCLH |

Luzula sylvatica (Huds.) Gaud.

Great Wood-rush

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 7

Most of the records of this species are associated with ancient woodland or mature woodland stands. The species has disappeared from Felley Mill, Roselle Wood at Oxtan, woods between Annesley and Greaseley and possibly Treswell Wood, but has persisted at High Park Wood. At other sites including Hagley's Plantation, Harlow Wood and Elkesley Woodland the populations consist of small numbers of plants, which could be new colonists or relicts of once larger populations that were not found during earlier site surveys.

| Location | GR | Date | Recorder |
|---------------------|-----------------|------|----------|
| Park Farm Dumble | SK6450 - SK6451 | 1974 | RCLH |
| Bulwell Wood | SK518464 | 1989 | DCW |
| Treswell Wood | SK761793 | 1993 | DCW |
| High Park Wood | SK484494 | 2011 | DCW, MW |
| Elkesley Woodland | SK649744 | 2010 | DCW |
| Hagley's Plantation | SK693691 | 2011 | DCW |
| Harlow Wood | SK549573 | 2011 | MW |
| Middle Arches | SK652714 | 2010 | DCW, MW |

Lycopodiella inundata L.

Marsh Club-moss

National Status: Nationally Scarce
Nottinghamshire Status: Extinct

Marsh club-moss *Lycopodium inundatum* was last recorded during the 19th Century on acid bogs near Rainworth Water. After 1839 the acid bogs surrounding Rainworth Water were lost because of drainage and habitat modification.

| Location | GR | Date | Recorder |
|-----------------|------|------|----------|
| Rainworth Water | SK55 | 1839 | GH |

Lycopodium clavatum L.

Stag's-horn Club-moss

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 5

In the 19th Century Stag's-horn club-moss *Lycopodium clavatum* was frequent on the heaths of the Sherwood Bunter Sandstone. By the 1960s habitat destruction had contributed to the decline of the species and Howitt & Howitt (1963) described the species as being very rare. Since 1970 the species has been recorded at only five sites, all of which are on the Bunter Sandstone. In modern times, the species is found in habitats other than heaths including a sand quarry and conifer plantations established on former heathland.

| Location | GR | Date | Recorder |
|-----------------------------|----------|------|----------|
| Clipstone Heath | SK593624 | 1995 | DCW |
| Clipstone Heath | SK594625 | 1991 | DCW |
| Ellis Plantation | SK685881 | 2004 | DCW, RAJ |
| Sherwood Forest Golf Course | SK587617 | 1987 | NCC |
| Sherwood Heath | SK650675 | 2005 | DCW |
| Sherwood Heath | SK648675 | 2003 | DCW |
| Clipstone Forest | SK607635 | 1989 | DCW |

Lythrum hyssopifolia L.

Grass Poly

National Status: Endangered, Schedule 8: Wildlife & Countryside Act 1981, Nationally Rare
Nottinghamshire Status: Rare
Monads: 1

Grass-poly *Lythrum hyssopifolia* at Colwick Country Park



Source S. Hammonds

Lythrum hyssopifolium (continued)

Before 1970 there was only one record for the county, originating from Deering's Catalogus stirpium, 1738, which states that grass poly *Lythrum hyssopifolium* "grows in places where sometimes water stagnates, a little below Wilford Boat." The species was not seen in the 19th or for most of the 20th Century and was considered by Howitt & Howitt (1963) to be extinct. In 2007 however, D.C. Wood counted approximately 30 plants in two temporary pools, surrounded by short, fairly species-poor, goose-grazed, ruderal grassland at Colwick Park, which were still present in 2015. A recent survey of Sherwood Forest Golf Course, which is designated as an SSSI for its heathland communities has found a population of grass poly in a damp area on an unused part of the golf course.

| Location | GR | Date | Recorder |
|-----------------------------|--------------|------|----------|
| Colwick Country Park | SK6124139812 | 2015 | DCW |
| Colwick Country Park | SK6124839809 | 2015 | DCW |
| Sherwood Forest Golf Course | SK576613 | 2015 | JC |

Marrubium vulgare L.

White Horehound

National Status: Nationally Scarce
Nottinghamshire Status: Extinct

Howitt & Howitt (1963) described white horehound *Marrubium vulgare* as a possible native that was found near houses and on roadsides. They considered it to be very rare and possibly extinct with the last confirmed record originating from a site near Farnsfield in 1839. Following the publication of the flora B. Howitt discovered an historical record (1917 to 1920) from Welbeck. In 1987 British Waterways Board recorded the species on an island (The Nabbs) in the River Trent and sent the details to S. Alton at Nottinghamshire Wildlife Trust, but the record is best considered as unconfirmed. Despite more recent searches the species has not been refound at The Nabbs and it is now considered to be extinct in the VC.

| Location | GR | Date | Recorder |
|--------------------|----------|------|----------|
| Farnsfield | SK65 | 1839 | GH |
| The Nabbs, Bleasby | SK730493 | 1987 | BWB |

Medicago polymorpha L.

Toothed Medick

National Status: Nationally Scarce
Nottinghamshire Status: Scarce
Monads: 4

Preston *et al.* (2002) describe inland populations of toothed medick *Medicago polymorpha* as casual, which have become increasingly scarce in recent times. Howitt & Howitt (1963) considered the species to be very rare in the VC, being recorded at only two sites: Barrow Hills and on land near Blyth. In modern times the species has been recorded at four sites, two of which are located next to the River Trent and the other sites being at the edge of arable fields at Collingham and Barnby Moor.

| Location | GR | Date | Recorder |
|------------------------------|--------------|---------|----------|
| Beeston Weir | SK5352735136 | 2009 | DCW |
| Beeston Weir | SK536351 | 2012 | DCW |
| River Trent, Newark-on-Trent | SK799544 | 2005 | DCW |
| Barnby Moor | SK630828 | 2002 | DCW |
| Collingham | SK8261 | Undated | EMP(?) |

Medicago sativa nothosubsp. *varia* (Martyn) Arcang.

Sand Lucerne

National Status: Nationally Scarce
Nottinghamshire Status: Rare
Monads: 1

Stace (2010) described this subspecies as a scattered native in Britain, being established or casual in sandy or rough ground, arising *in situ* or introduced as hybrid seed: a somewhat indeterminate statement that indicates the uncertainty about the origin of the parents and the present distribution. Howitt & Howitt (1963) provided three records from Newark Wharfs (1953), Toton sidings and Nottingham Dump (1961), which were all considered to be casual. The latter site is no longer extant and Newark Wharfs has been heavily modified in modern times, but suitable habitat is still present at Toton. The only modern record consists of a single large plant growing in rough grassland on a former colliery spoil tip with both parents nearby.

| Location | GR | Date | Recorder |
|--------------|--------------|------|----------|
| Phoenix Park | SK5312043831 | 2011 | PS(b) |

Medicago sativa subsp. *falcata* (L.) Arcang.

Sickle Medick

National Status: Nationally Scarce
Nottinghamshire Status: Scarce
Monads: 6

Away from the coast sickle medick *Medicago sativa* subsp. *falcata* is considered to be an introduced species, which has always been rare in the VC. Of the six modern records, three populations have persisted in grasslands next to the Rivers Trent and Leen. A single plant is present at Phoenix Park (a former colliery spoil tip) growing in rough grassland with *M. sativa* nothosubsp. *varia*. Another small population has persisted on a roadside at Dunkirk, Nottingham and a single plant, believed to be causal has been found on a landfill site at Bestwood on the north edge of Nottingham.

| Location | GR | Date | Recorder |
|---------------------------|------------|------|----------|
| Bestwood Landfill | SK564478 | 1999 | DCW |
| River Leen, Basford | SK553424 | 2012 | JSh, DCW |
| Phoenix Park | SK53124383 | 2011 | PS(b) |
| Dunkirk Roadside Verge | SK557384 | 2007 | DCW, PA |
| West Bridgford Grassland | SK570379 | 2008 | DCW |
| Birdcage Walk, River Leen | SK560385 | 2012 | WM |

Melampyrum cristatum L.

Crested Cow-wheat

National Status: Vulnerable, Nationally Scarce
Nottinghamshire Status: Extinct

The species was only ever recorded in 1905 on the edge of Eaton Wood, which is located on Keuper Marl. Howitt & Howitt (1963) stated that the site had been destroyed by roadworks, but considered that further searches could be worthwhile. Nowadays the road verges alongside Eaton Wood are classified as an SSSI, but despite protection and suitable management, surveys have failed to re-find the species.

| Location | GR | Date | Recorder |
|---------------------------|--------|------|----------|
| Eaton Wood Roadside Verge | SK7277 | 1906 | JWC |

Melampyrum pratense L.

Common Cow-wheat

National Status: Least Concern
Nottinghamshire Status: Rare
Monads: 1

By the early 1960s common cow-wheat *Melampyrum pratense* was already rare and declining and in recent years it has only been recorded at a single site in the east of the VC.

Melampyrum pratense (continued)

The population at Thorney consists of two large patches on light, sandy soils in open, oak-birch woodland. The population is probably the same one that was recorded by J.W. Carr in the early 20th Century. Some of the sites that historically supported the species have been destroyed, but suitable habitat is still present at sites that historically supported the species such as Wigsley Wood, Wellow Park, Harlow Wood and Combes Wood. Detailed surveys of extant sites may yet reveal small populations of the species.

| Location | GR | Date | Recorder |
|-------------------|----------|------|----------|
| The Ring, Thorney | SK871733 | 2011 | DCW, MW |

Melica nutans L.

Mountain Melick

National Status: Least Concern
Nottinghamshire Status: Extinct

Reverend Stonehouse was the first to record mountain melick *Melica nutans* in the VC between Pleasley and Mansfield, some time around 1650. G. Howitt also recorded the species at Pleasley Wood in the 19th Century. J. Brown was the last person to record the species in the VC, some time between 1942 and 1946. The parts of Scratta Wood, Shireoaks where the species was last seen are no longer extant and searches of Limestone Woodland in the Pleasley area have failed to find the species, although there is much suitable habitat.

| Location | GR | Date | Recorder |
|--------------|------|-----------|----------|
| Scratta Wood | SK58 | 1942-1946 | JBn |

Mentha pulegium L.

Pennyroyal

National Status: Endangered, Schedule 8: Wildlife & Countryside Act 1981, Nationally Rare
Nottinghamshire Status: Rare
Monads: 2 (as a possible native)

Howitt & Howitt (1963) considered that pennyroyal *Mentha pulegium* was probably extinct in the VC, being last recorded in 1888 by H. Friend somewhere in the Sherwood Forest area. In modern times, the prostrate form of pennyroyal has been recorded at Rushcliffe Country Park and Lound Gravel Pits where it is possibly native (the grid reference for the 2012 Lound records in bold are indicative rather than actual). The species has also been recorded at nine other sites in the VC, where it is upright and considered to be non-native, either introduced or a garden escape. It is no longer extant at Bunny Landfill (SK5728), because the site has been capped and landscaped.

| Location | GR | Date | Recorder |
|--------------------------------------|-----------------|-------------|-----------|
| Lound Gravel Pits | SK701868 | 2005 | DCW |
| Lound Gravel Pits | SK707866 | 2008 | DCW |
| Lound Gravel Pits | SK712871 | 2012 | JS |
| Lound Gravel Pits | SK712873 | 2012 | JS |
| Rushcliffe Country Park* | SK576321 | 2010 | MT |
| Bevercotes Colliery Yards* | SK695742 | 2011 | DCW, MW |
| Hoveringham Gravel Pits* | SK717475 | 2011 | RAJ, MW |
| North Muskham* | SK799595 | 2011 | RAJ |
| Linghurst Lakes * | SK698867 | 2011 | JC |
| Harcotes Colliery Tip* | SK616902 | 2011 | DCW, MW |
| Nottingham Road Cemetery* | SK542589 | 2004 | RAJ |
| Broomhill (Former dumpng materials)* | SK542475 | 2005 | DCW |
| Sherwood Rise, New Basford* | SK565421 | 2006 | DCW |
| Rhodesia Industrial Estate | SK569798 | 2013 | RAJ |
| Winthorpe Industrial Estate | SK816558 | 2013 | RAJ |

*Non-native populations

Menyanthes trifoliata L.

Bogbean

National Status: Least Concern
Nottinghamshire Status: Rare
Monads: 5(1 as a native)

Drainage and eutrophication have contributed to the rapid decline of native populations of bogbean *Menyanthes trifoliata* in the VC. Historically the species was a common component of bogs and pools and was widespread across the VC. As a native the species is now reduced to one site in the VC. The Nuthall population has been known for many years, being recorded by Howitt & Howitt (1963) and is still relatively abundant. The Gunthorpe population was first recorded in 1992 and consists of several marginal populations that are located in angling pools. Surveys since 2012 have confirmed extant populations (in bold) at Nuthall and Gunthorpe.

| Location | GR | Date | Recorder |
|-------------------------------|-----------------|-------------|------------|
| Temple Lake | SK514442 | 2013 | DCW |
| Temple Lake | SK513440 | 1996 | DCW, RCLH |
| Gunthorpe Gravel Pits* | SK680439 | 2015 | RAJ |
| Gunthorpe Gravel Pits* | SK679439 | 2015 | RAJ |
| Martins Pond* | SK526401 | 2011 | DCW |
| Vicar Water* | SK592628 | 2010 | MW |
| Burntstump Country Park* | SK579506 | 2008 | DCW |

*Non-native populations

Mercurialis annua L.

Annual Mercury

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 10

Before 1970 annual mercury *Mercurialis annua* was very rare and Howitt & Howitt (1963) suggested that the species could have been extinct in the VC. Since 1970, the species has been recorded 13 times, with most populations being located in the east of the VC near to Newark and the River Trent. With the exception of one garden record, all of the remaining populations have been recorded on disturbed or tipped soils and most populations are relatively small, consisting of less than 10 plants. The populations at Newark Landfill (SK85) and Bramcote Landfill (SK505388) are no longer extant and given the small size of many of the other populations it is very likely that some have disappeared or are increasingly vulnerable to extinction (marked with an asterix), particularly those that were recorded during the 1970s. Since 2012, a further population has been recorded in a disturbed garden at West Bridgford and extant populations have been confirmed at the North Clifton sites (in bold).

| Location | GR | Date | Recorder |
|-----------------------------------|-----------------|-------------|--------------------|
| North Clifton Dismantled Railway | SK821715 | 2010 | DCW |
| North Clifton Field | SK821714 | 2013 | DCW, MW, SP |
| Bunny Brickworks | SK582287 | 2011 | DCW |
| Bramcote Landfill* | SK505388 | 2009 | DCW |
| Worksop* | SK583796 | 1972 | JH |
| Worksop* | SK585795 | 1972 | JH |
| Worksop* | SK596790 | 1972 | JH |
| Holme Pierrepont | SK617389 | 2008 | DCW |
| Staunton-in-the-Vale Works | SK800441 | 1997 | DCW |
| Balderton | SK815501 | 2002 | DCW |
| River Trent, North Clifton | SK816723 | 2013 | DCW, MW, SP |
| Broxtowe | SK5242 | 2010 | WM |
| Hungerhill Allotment Gardens | SK582418 | 2006 | WM |
| Newark-on-Trent Landfill* | SK85 | 1969 | EMP |
| Magnus Street, Newark-on-Trent* | SK7953 | 1999 | EMP |
| West Bridgford | SK577367 | 2015 | SM |

Microthlaspi perfoliata (L.) F.K. Mey. Perfoliate Penny-cress

National Status: Vulnerable
Nottinghamshire Status: Extinct

Away from south and southwest midlands perfoliate penny-cress *Microthlaspi perfoliata* is rarely naturalised or is a casual, Stace (2010). In Nottinghamshire, the species has only been recorded once at Welbeck. The species appeared during a period when a very large number of army horses were stabled at West Park. Records from that time show an abundance of rare or 'one-off' casuals that soon disappeared and have not been recorded since. The species including perfoliate penny-cress were probably imported in the horse fodder.

| Location | GR | Date | Recorder |
|--------------------|-------|------|----------|
| West Park, Welbeck | SK57M | 1918 | RG |

Minuartia hybrida (Vill.) Schischk. Fine-leaved Sandwort

National Status: Endangered, Nationally Scarce, UK Biodiversity Action Plan
Nottinghamshire Status: Rare
Monads: 1

Upon completion of a new cycleway, which disturbed parts of a dismantled railway line, several small colonies of fine-leaved sandwort *Minuartia hybrida* were recorded on the track verge in 1987. This was the first VC record for the species and it was still present when visited in 2004. In 2012 the species was not found, but this could be the due to a lack of disturbance of the trackside verge habitat.

| Location | GR | Date | Recorder |
|--------------------------------|----------|------|----------|
| Hawton Dismantled Railway Line | SK804503 | 2004 | DCW |

Misopates oriontum (L.) Raf. Weasel's-snout

National Status: Vulnerable
Nottinghamshire Status: Rare
Monads: 1

In the VC, this rare archaeophyte has only been recorded once during 2007. Four plants, which were probably casual, were recorded on dumped spoil / rubble. The plants have not been re-found in subsequent years and the species is probably extinct in the VC. Further targeted surveys are planned.

| Location | GR | Date | Recorder |
|-----------------|----------|------|----------|
| Kirkby Bentinck | SK484551 | 2007 | DCW |

Moenchia erecta (L.) P. Gaertn., B. Mey. & Scherb. Upright Chickweed

National Status: Nationally Scarce
Nottinghamshire Status: Extinct

Howitt & Howitt (1963) stated that they were unable to find the species (as *Cerastium quaternellum*) despite the availability of suitable habitat within the VC. All of the many historical records originate from the 19th Century.

| Location | GR | Date | Recorder |
|-----------------|------|------|----------|
| Nottingham area | SK54 | 1839 | GH |

Myosotis secunda Murr. Creeping Forget-me-not

National Status: Least Concern
Nottinghamshire Status: Rare
Monads: 1

The only confirmed historical records originate from the 19th Century in turf bogs at Pleasley, Rainworth and Oxtun. The species is no longer extant at any of those sites and nowadays, it is confined to two locations within a wet, acidic valley mire community at Felley Mill Plantation.

| Location | GR | Date | Recorder |
|------------------------|----------|------|----------|
| Felley Mill Plantation | SK480510 | 2008 | DCW |

Myosotis x suzae Domin *M. laxa x scorpioides*

National Status: Data Deficient
Nottinghamshire Status: Rare
Monads: 1

The hybrid is represented by two large populations, which are confined to a single drain in Stapleford Wood close to the Lincolnshire border. The mature conifer plantation is located on peaty soils, which in places is overlaid by blown sands.

| Location | GR | Date | Recorder |
|-----------------|----------|------|----------|
| Stapleford Wood | SK851556 | 2012 | RAJ, DCW |

Myosurus minimus L. Mousetail

National Status: Vulnerable, Nationally Scarce
Nottinghamshire Status: Rare
Monads: 1

Mousetail *Myosurus minimus* has always been very rare in the VC, historically located in meadows and arable fields on gravel soils. Before the most recent find at Sutton-on-Trent, it was last seen in 1950 at a meadow at Rolleston. The Sutton-on-Trent population is located in barish cattle pens at the edge of Trent Valley floodplain grasslands and in 2007 consisted of thousands of plants. In June 2013, a few dying plants were found in the same location.

| Location | GR | Date | Recorder |
|-----------------------------|----------|------|------------------|
| Sutton-on-Trent Cattle Pens | SK802656 | 2013 | CL, DCW, RAJ, MW |

Myrica gale L. Bog Myrtle

National Status: Least Concern
Nottinghamshire Status: Rare
Monads: 2

Howitt & Howitt (1963) described bog myrtle *Myrica gale* as being very rare and confined to two boggy woods including Sutton Wood near Retford and Wigsley Wood near the Lincolnshire border, where it was undoubtedly native. The species is no longer extant at Sutton Wood and was last recorded at Wigsley Wood in 1986. At Monksbarn, Newstead and Boughton Brake the species has recently been recorded, it is an introduction or garden escape.

| Location | GR | Date | Recorder |
|-----------------|----------|------|----------|
| Wigsley Wood | SK8570 | 1986 | DCW |
| Monksbarn* | SK533543 | 1989 | DCW |
| Boughton Brake* | SK671701 | 2003 | DCW, RAJ |

*Probably introduced

Myriophyllum alternifolium DC.

Alternate Water-milfoil

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 7

Howitt & Howitt (1963) doubted the validity of the only record for the county, because of the Newark locality. Since 1970 however, the species has been recorded in peaty drains at Gringley and Everton and also in ballast pits at Misson Line Bank. In 1978, a herbarium specimen from Everton Carr was submitted to the Nottingham Natural History Museum and D.C. Wood also submitted a specimen from Misson Line Bank during 1997.

Myriophyllum alternifolium (continued)

| Location | GR | Date | Recorder |
|---|----------|------|----------|
| Magnus Drain, Everton Carr | SK705938 | 1978 | Woll. |
| Black Bank Drain, Everton Carr | SK697937 | 1978 | Woll. |
| Black Bank Drain, Everton Carr | SK702929 | 1978 | Woll. |
| Gringley Carr Drain, Carr Road East Drain | SK718943 | 1978 | KLJ |
| Gringley Carr Drain, Carr Road East Drain | SK715943 | 1978 | KLJ |
| Gringley Carr Drain | SK718942 | 1978 | Woll. |
| Gringley Carr Drain | SK717941 | 1978 | KLJ |
| Gringley Carr Drain | SK723943 | 1978 | KLJ |
| Gringley Carr Drain | SK702941 | 2011 | DCW, MW |
| Misson Line Bank | SK712959 | 1997 | DCW |
| Misson Line Bank | SK712960 | 1978 | NRL, KLJ |
| Misson Line Bank | SK716960 | 1978 | NRL, KLJ |
| Misson Line Bank | SK714961 | 1978 | NRL, KLJ |

Myriophyllum verticillatum L.

Whorled Water-milfoil

National Status: Vulnerable, Nationally Scarce
Nottinghamshire Status: Scarce
Monads: 7

The species is confined to base-rich waters and has always been rare in the VC. It has persisted since the early 1960s at Misterton and Shireoaks and was probably also present at Gringley. At Misterton and Gringley the populations are located in peaty drains, whilst the Shireoaks population is located in a drain on the Magnesian Limestone. Historically the species was also recorded at the Meadows near Nottingham, in the River Trent at Colwick and in a pool at Attenborough, but all of these populations have disappeared because of habitat destruction. Since 2012, extant populations have been confirmed in the Carr Road West Drain at Gringley (in bold).

| Location | GR | Date | Recorder |
|---------------------------------|-----------------|-------------|------------|
| Fox Covert Drain, Gringley Carr | SK722952 | 2002 | DCW |
| Shireoaks Park | SK552806 | 1972 | JH |
| Mother Drain, Gringley Carr | SK713950 | 1983 | JOM |
| Gringley Carr | SK728930 | 1984 | JNCC |
| Misterton Carr Drain | SK734954 | 2009 | DCW |
| Gringley Carr Drain | SK713949 | 2012 | DCW |
| Gringley Carr Drain | SK714946 | 2009 | DCW |
| Gringley Carr Drain | SK715942 | 2013 | DCW |
| Gringley Carr Drain | SK718936 | 2013 | DCW |
| Gringley Carr Drain | SK716943 | 2009 | DCW |
| Gringley Carr, Boundary Drain | SK723953 | 1978 | CGC |
| Misterton Carr, Mother Drain | SK726964 | 2012 | DCW |

Narthecium ossifragum (L.) Huds.

Bog Asphodel

National Status: Least Concern
Nottinghamshire Status: Extinct

The only record for bog asphodel *Narthecium ossifragum* originates from the early 19th Century when "two plants were found on Coddington Moor, by Mr Jacob Ordoyno", Howitt & Howitt (1963).

| Location | GR | Date | Recorder |
|-----------------|------|------|----------|
| Coddington Moor | SK85 | 1807 | JO |

Nasturtium x sterile Airy Shaw

Hybrid Watercress

National Status: Data Deficient
Nottinghamshire Status: Scarce
Monads: 10

There are no historical records for this hybrid, because it was not recognised when Howitt & Howitt's flora was published in 1963. Rich (1991) described hybrid watercress *Nasturtium x sterile* as the most common of the crucifer hybrids in Britain and it is possibly under-recorded in the VC. Since 1970 the hybrid has been recorded at ten sites, scattered across the VC, often, but not always with the parents.

| Location | GR | Date | Recorder |
|---------------------------|----------|---------|----------|
| Torworth Drain | SK666863 | 1972 | JH |
| Warsop Vale Stream | SK554678 | 1972 | JH |
| Welbeck Colliery Village | SK583697 | 1972 | JH |
| Sutton Railway Drain | SK669852 | 1972 | JH |
| Sutton Railway Drain | SK692833 | 1972 | JH |
| Shireoaks Park Cascade | SK549805 | 1997 | DCW, JH |
| Shireoaks Park Cascade | SK550805 | 1997 | DCW, JH |
| Shireoaks Park Cascade | SK552806 | 1997 | DCW, JH |
| Grantham Canal, Hickling | SK711293 | 1999 | DCW |
| Grantham Canal, Kinoulton | SK681305 | 2000 | DCW |
| Grantham Canal, Kinoulton | SK685296 | 2000 | DCW |
| Ruddington Drain | SK565329 | 2003 | DCW |
| Holme Pierrepont Stream | SK6038 | Undated | DCW |
| Kennel Wood | SK498512 | 2007 | DCW |

Neottia nidus-avis (L.) L.C. Rich.

Bird's-nest Orchid

National Status: Near Threatened
Nottinghamshire Status: Rare
Monads: 2

Formerly bird's-nest orchid *Neottia nidus-avis* was recorded in seven woodlands located on either base-rich clays or Magnesian Limestone. Since 1970 the species has not been found at any of those woodlands and is probably now confined to two ancient woodlands on the Keuper Marls. At Eaton Wood during 1995, the population consisted of one plant next to a ride in mixed woodland. At Gamston Wood during spring 2011 there were four spikes located in mixed woodland along a new ride under mature hazel *Corylus avellana* shrubs. None were found during 2012 and only one spike was located during 2013.

| Location | GR | Date | Recorder |
|--------------|----------|------|----------|
| Eaton Wood | SK727775 | 1995 | DCW |
| Gamston Wood | SK729769 | 2013 | NC |

Neottia ustulata (L.) R.M. Bateman, Pridgeon & M.W. Chase

Burnt Tip Orchid

National Status: Endangered, Nationally Scarce
Nottinghamshire Status: Extinct

In the VC, G. Howitt last recorded burnt tip orchid *Neottia ustulata* some time before 1839. In the 18th and 19th Centuries the species was recorded at several sites on Magnesian Limestone and base-rich Trent valley grasslands.

| Location | GR | Date | Recorder |
|-----------------|------|------|----------|
| Kirkby Hardwick | SK55 | 1839 | GLH |

Nepeta cataria L.

Catmint

National Status: Vulnerable
Nottinghamshire Status: Scarce
Monads: 7

The species has always been rare in the VC and between 1738 and 1963 was only recorded at fifteen, scattered localities, mostly on hedge banks. Since 1970, it has been recorded a further five times, but never in any great quantity. The largest population, which was recorded at Trowell on a canal towpath (SK495392), is no longer extant and a viaduct in Nottingham (SK576394) that supported a population has also been destroyed to facilitate a tramline. Of the remaining populations, only the Rainworth and Lound populations consist of more than a few plants. Since 2012, a small population was found at Cromwell Gravel Pits (in bold).

| Location | GR | Date | Recorder |
|---------------------------------|-----------------|-------------|------------|
| Nelson Street, Sneinton | SK579399 | 2011 | PS(b) |
| Ranskill | SK663880 | 2006 | DCW |
| Daneshill | SK674866 | 2004 | DCW |
| Sturton-le Steeple | SK785853 | 1999 | DCW |
| Black Hills Farm Roadside Verge | SK635670 | 2012 | DCW |
| Rainworth Water | SK604596 | 2012 | RAJ |
| Muspit Lane | SK761853 | 2012 | DCW |
| Cromwell Gravel Pits | SK801621 | 2015 | DCW |

Nymphaea alba L.

White Water-lily

National Status: Least Concern
Nottinghamshire Status: Rare (as a native)
Monads: 2 (124 as an introduction)

As a native, white water lily *Nymphaea alba* has always been rare in the VC and mostly confined to sites in the Trent valley. Other sites where it was possibly native, such as the River Erewash at Eastwood and Langford Fleet, have been heavily modified in recent times, or in the case of sites in Nottingham are no longer extant. Howitt & Howitt (1963) recorded the species as a native at Collingham and Besthorpe and both of the populations were still extant, when last visited. As an introduced species, it has been recorded in 126 monads in the VC. The increase in monads since 2012 is indicative of the survey effort and coverage.

| Location | GR | Date | Recorder |
|------------------------|----------|------|----------|
| Horse Pool | SK814618 | 1974 | EMP |
| Black Pool (Besthorpe) | SK820643 | 1997 | Woll. |

Oenanthe fistulosa L.

Tubular Water-dropwort

National Status: Vulnerable, UK Biodiversity Action Plan
Nottinghamshire Status: Uncommon
Monads: 45

Before the 1960s, tubular water-dropwort *Oenanthe fistulosa* was common in the valleys of the River Trent and its tributaries and it was also frequent in the north of the county on peatlands. The decline of the species in the VC reflects the national decline of the species, which has been of sufficient magnitude to classify the species as 'Vulnerable'. The decline in the VC can probably be attributed to drainage and habitat loss rather than agricultural intensification, because the species prefers eutrophic substrates. Although the species has declined in the county, it is still present in 45 rolling monads and its distribution has not significantly changed since the early 1960s. Since 2012, populations have been found in three new monads at Farndon, Sutton-on-Trent and South Muskham.

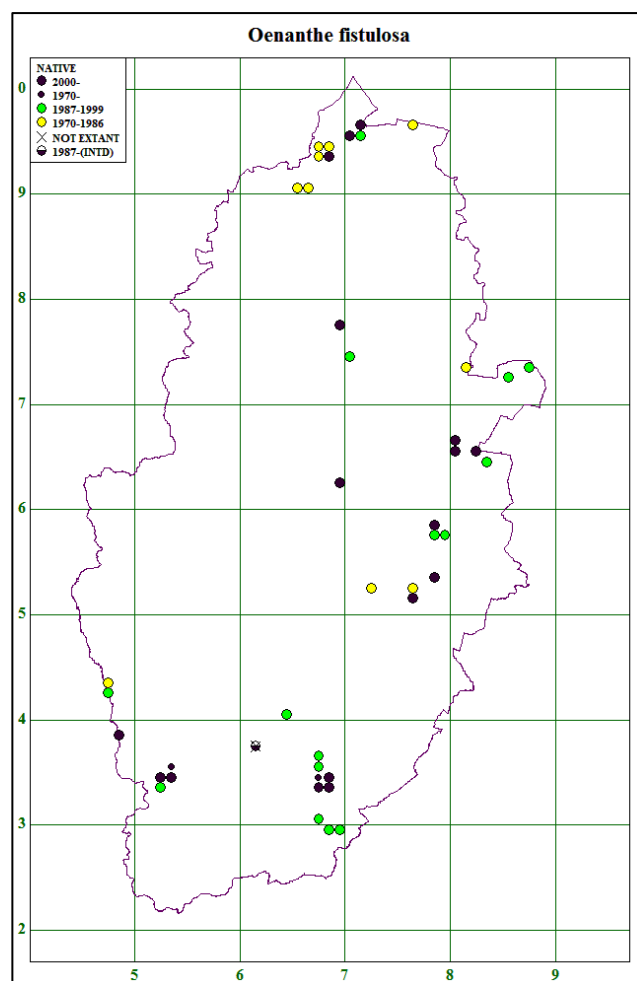
Oenanthe fluviatilis (Bab.) Coleman

River Water-dropwort

National Status: Least Concern
Nottinghamshire Status: Extinct

There is a D.A.J. Little specimen in the Aberyswyth University Herbarium that was not mentioned in Howitt & Howitt's (1963) Nottinghamshire Flora. The herbarium sheet describes the location as being near Kegworth, so the actual habitat is not known, but it is probably the River Soar. Given the grid reference, it is not known if the specimen originated from the Nottinghamshire or Leicestershire side. As the species has not been seen for many years it is assumed to be extinct and given the lack of clarity, it is reasonable for either county to lay claim to the record.

| Location | GR | Date | Recorder |
|-----------------|--------|------|----------|
| Kegworth (near) | SK4924 | 1948 | DAJL |

*Oenanthe lachenalii* C.C. Gemel.

Parsley Water-dropwort

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 5

Parsley water-dropwort *Oenanthe lachenalii* has a mainly coastal distribution and becomes rather less common inland. In the VC the species has never been common and traditionally it was associated with damp meadows on basic soils. Although the species is still extant on a few damp grasslands such as Warsop Hills and Holes and Kinoulton Marsh, nowadays it is also found on the margins of drains in the east of the VC. Whilst these populations may have recently colonised the drains, it is possible that the species has been long established, but was overlooked, because it was not generally recognised as being associated with such habitat.

Oenanthe lachenalii (continued)

The Car Colston Marsh population has never been confirmed. Since 2012, extant populations have been confirmed at Sookholme Moor and Balderton (in bold).

| Location | GR | Date | Recorder |
|---------------------------------|-----------------|-------------|------------|
| Balderton - Hawton Drain | SK809503 | 2009 | DCW, RAJ |
| Balderton - Hawton Drain | SK811503 | 2009 | DCW, RAJ |
| Balderton - Hawton Drain | SK810504 | 2009 | DCW, RAJ |
| Balderton - Hawton Drain | SK812503 | 2009 | DCW, RAJ |
| Balderton - Hawton Drain | SK804505 | 2009 | DCW, RAJ |
| Balderton - Hawton Drain | SK804503 | 2015 | DCW |
| Balderton - Hawton Drain | SK804501 | 2015 | RAJ |
| Shire Dyke, Bennington | SK812476 | 1998 | DCW, RAJ |
| Shire Dyke, Bennington | SK813483 | 1998 | DCW, RAJ |
| Kinoulton Marsh | SK679305 | 1991 | DCW |
| Warsop Hills and Holes | SK554677 | 2008 | DCW |
| Sookholme Moor | SK554678 | 2013 | RT |
| Car Colston Marsh | SK707418 | 1987 | Woll. |

Oenanthe silaifolia Bieb.

Narrow-leaved Water-dropwort

National Status: Near Threatened, Nationally Scarce

Nottinghamshire Status: Extinct

R.C.L. Howitt recorded narrow-leaved water-dropwort *Oenanthe silaifolia* at two locations in the VC, both in the east of the VC in close proximity to the River Trent. Before 1963, he recorded the species at Spalford and in 1976 he recorded six plants at Fledborough Holme. Neither of the two populations has been seen in recent years, but the habitat is still suitable at the latter site.

| Location | GR | Date | Recorder |
|-------------------|----------|------|----------|
| Fledborough Holme | SK813718 | 1976 | RCLH |

Ophrys insectifera L.

Fly Orchid

National Status: Vulnerable

Nottinghamshire Status: Scarce

Monads: 3

Fly orchid *Ophrys insectifera* has always been very rare in the VC, mostly in woods or scrub on Magnesian Limestone. Since 1970 it has been recorded at three sites, including Quarry Banks and Dyscarr Wood on Magnesian Limestone and at Eaton Wood on Keuper Marl. At Eaton Wood the species has also been recently recorded in close proximity to its original location, but on limestone chippings in a rarely used car park, rather than the woodland soils. The population at Dyscarr has steadily declined in recent years despite targeted management (clearance of vigorous field layer vegetation) and has not been seen in recent years.

| Location | GR | Date | Recorder |
|--------------|----------|------|------------------|
| Eaton Wood | SK7277 | 1991 | NRL |
| Eaton Wood | SK728773 | 2011 | GL, CL |
| Quarry Banks | SK536523 | 1998 | DCW, SC |
| Dyscarr Wood | SK578876 | 2007 | NRL, JF, DCW, NC |

Oreopteris limbosperma (All.) Holub

Lemon-scented Fern

National Status: Least Concern

Nottinghamshire Status: Scarce

Monads: 10

Before 1970 lemon-scented fern *Oreopteris limbosperma* was considered to be a rare species of moist woods on sandy or clay soils. In recent times, the species has been recorded at 11 sites, but is no longer extant at Coxmoor Plantation in Kirby-in-Ashfield (SK520567) and Forest Side, Sutton-in-Ashfield (SK520595). Since the early 1960s the species has persisted at Coxmoor, Misson and Spalford. Further searches at locations where it was originally recorded including Oxton, Farnsfield, Rufford and Wigsley may prove to be worthwhile as suitable habitat is still

present at these sites. The population at Oakfield Lane Quarry was confirmed as extant during 2015 (in bold).

| Location | GR | Date | Recorder |
|----------------------------------|-----------------|-------------|---------------|
| Spalford Woodland | SK833686 | 1968 | BH |
| Balderton Ballast Pits | SK8251 | 1975 | RCLH |
| Budby South Forest | SK608693 | 2009 | DCW |
| Budby South Forest | SK607693 | 2012 | DCW, RAJ, JC |
| Huthwaite Stream | SK456598 | 2000 | DCW |
| Misson Carr | SK714971 | 2006 | DCW |
| Misson Carr | SK717976 | 2006 | DCW |
| Stapleford Wood | SK855557 | 2008 | DCW, RAJ |
| Stapleford Wood | SK853562 | 2011 | DCW, RAJ, MW |
| Stapleford Wood | SK853553 | 2011 | DCW, RAJ, MW |
| Stapleford Wood | SK851552 | 2008 | DCW, RAJ |
| Coxmoor Golf Course | SK525579 | 2009 | DCW |
| Felley Mill Plantation | SK480510 | 2011 | MW |
| Oakfield Lane Sand Quarry | SK565666 | 2015 | JC, MW |

Ornithogalum pyrenaicum L.

Spiked Star-of-Bethlehem

National Status: Nationally Scarce

Nottinghamshire Status: Rare

Monads: 1

Spiked Star-of-Bethlehem *Ornithogalum pyrenaicum* is a nationally scarce species that was first recorded in ancient woodland habitat in the VC during 1993. Although it appears to be naturalised the single plant is located in close proximity to housing and could be a garden escape or a relic of cultivation.

| Location | GR | Date | Recorder |
|-------------------|----------|------|----------|
| Wallingwells Wood | SK573843 | 1993 | DCW |

Orobancha rapum-genistae Thuill.

Great Broomrape

National Status: Near Threatened, Nationally Scarce

Nottinghamshire Status: Extinct

Great broomrape *Orobancha rapum-genistae* has always been rare, being confined to sandy heaths in the north of the VC at Everton and Harworth and in the Sherwood area at Mansfield, Thoresby, Ollerton, Eakring and Farnsfield. It was last recorded in the mid-1960s at Barrow Hills, Everton by R. C. L. Howitt. Subsequent searches in the early 1970s failed to re-locate the species.

| Location | GR | Date | Recorder |
|--------------|----------|------|----------|
| Barrow Hills | SK674918 | 1964 | RCLH |

Osmunda regalis L.

Royal Fern

National Status: Least Concern

Nottinghamshire Status: Extinct (as a native)

Monads: 1

As a native, royal fern *Osmunda regalis* is probably extinct, because the single plant recorded in the 1970s and 1990s at Coxmoor Golf Course (SK524579) is likely to be introduced. A population at Oxton Bogs was the last of the native records to be seen during the early 1970s. Historically the species was recorded as a native at scattered localities throughout the VC including Wigsley Wood, Mansfield, Bulwell, Finningley, Stapleford, Collingham, and Coddington.

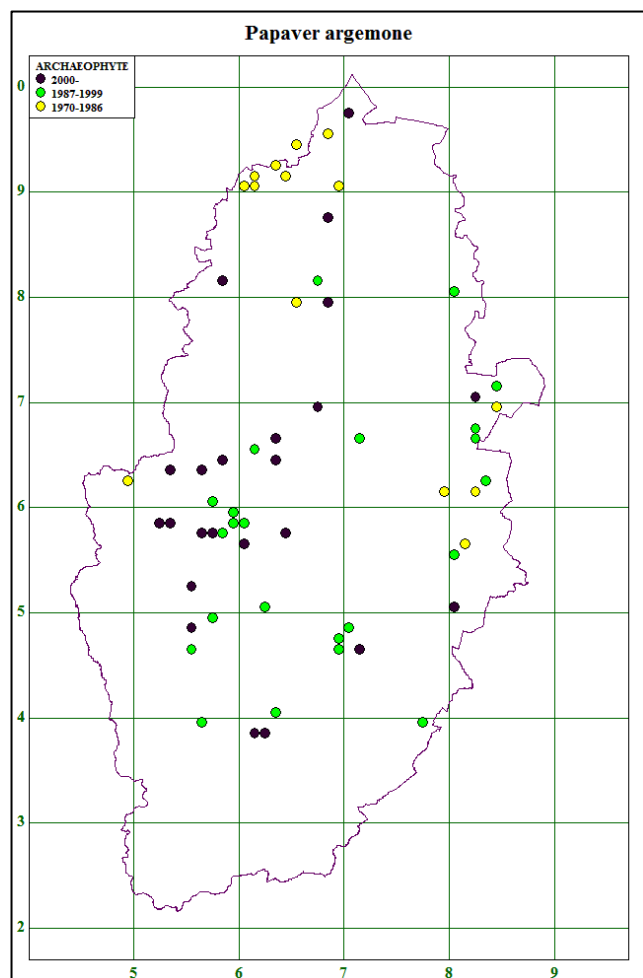
| Location | GR | Date | Recorder |
|------------|--------|------|----------|
| Oxton Bogs | SK6151 | 1972 | AJW |

Papaver argemone L.

Prickly Poppy

National Status: Vulnerable, Nationally Scarce**Nottinghamshire Status:** Occasional**Monads:** 60

Before 1970 prickly poppy *Papaver argemone* was locally frequent in arable crops on light soils, particularly in the Sherwood area, but also on gravels and blown sand in and around the Trent Valley. Nationally the species has declined in modern times, because of its susceptibility to pesticides, Preston *et al.* (2002) and similarly, declines have also occurred in the VC. Since 1970, the species has been recorded in 60 monads in the VC and it continues to be most frequent in the Trent Valley and the Sherwood area. Since 2012 the species has been recorded at Bestwood, Holme Pierrepont and Blidworth, all on sandy soils. See next page for the distribution map.

*Papaver lecoqii* Lamotte

Yellow-juiced Poppy

National Status: Least Concern**Nottinghamshire Status:** Rare**Monads:** 2

Howitt & Howitt (1963) described the distribution of yellow-juiced poppy *Papaver lecoqii* as being uncertain with only six confirmed records on arable land. On the Lower Lias clays in the east and south of the VC, they recorded the species at Owthorpe, Kinoulton and Thorpe-in-the-Glebe. On lighter soils they recorded the species at Bramcote, Farndon and Lowdham. Since 1970 the species has been recorded at only three sites and on the Lower Lias at Barnstone (SK742353) is no longer extant. The species is now only found on the trackbeds of two disused railway lines, including Bingham in the south of the VC and Teversal in the northwest of the VC.

| Location | GR | Date | Recorder |
|---------------------|----------|------|----------|
| Teversal Trail | SK493629 | 1972 | JH |
| Bingham Linear Park | SK707390 | 2004 | RP |
| Bingham Linear Park | SK701393 | 2004 | RP |

Parnassia palustris Thuill.

Grass-of-parnassus

National Status: Least Concern**Nottinghamshire Status:** Extinct

Grass-of-parnassus *Parnassia palustris* was very rare and decreasing by the early 1960s, because of habitat loss and drainage. It was last recorded at two sites in the Sookholme area and although Sookholme Moor is still extant, the site at Sookholme Bath Lane has been heavily disturbed and damaged by mining activity. Despite repeated searches, since 1971 the species has not been recorded at any of its traditional sites and is considered to be extinct in the VC. There is a specimen in Wollaton Hall Natural History Museum (NOT), collected in Wollaton Park, Nottingham in 1965, but sadly the collector is no longer alive. Suitable habitat still exists, but recent searches have been unsuccessful.

| Location | GR | Date | Recorder |
|---------------------|----------|------|----------|
| Sookholme Bath Lane | SK540665 | 1971 | RCLH |
| Sookholme Moor | SK554678 | 1971 | RCLH |
| Wollaton Park | SK53J | 1965 | WJH |

Pedicularis palustris L.

Red Rattle

National Status: Least Concern**Nottinghamshire Status:** Extinct

During the 19th Century, red rattle *Pedicularis palustris* was frequent and widespread in the VC, but declined through the early part of the 20th Century. The species was extinct by 1954, being last recorded by R.C.L. Howitt below the River Idle Barrier Bank at Scaftworth.

| Location | GR | Date | Recorder |
|------------|------|------|----------|
| Scaftworth | SK69 | 1954 | RCLH |

Pedicularis sylvatica L.

Lousewort

National Status: Least Concern**Nottinghamshire Status:** Extinct

Lousewort *Pedicularis sylvatica* was formerly frequent in all areas of the VC on old pastures and woodland rides, but has not been recorded since 1974. It is possible that the impacts of coal mining, which often lowered the water table in the surrounding area, could have contributed to declines in some of the mining areas such as Sookholme and Calverton. Several of the historical sites have been returned to sympathetic management in recent times, for example Mansey Common (formerly known as Manzer Gorse) and Sookholme Moor and this species could still reappear.

| Location | GR | Date | Recorder |
|-----------------------|-----------------|------|----------|
| Sookholme Moor | SK554678 | 1972 | JH |
| Laxton Castle Meadows | SK7167 / SK7267 | 1972 | RCLH |
| Calverton Mire | SK606486 | 1974 | RCLH |

Persicaria minor (Huds.) Opiz

Small Water-pepper

National Status: Vulnerable, Nationally Scarce**Nottinghamshire Status:** Scarce**Monads:** 11

Small water-pepper *Persicaria minor* has never been common in the VC and before 1963 was only recorded at three sites including the River Idle at Misson, a field in Sneinton and a ditch between Nottingham and Lenton.

Persicaria minor (continued)

The latter two sites are no longer extant, having succumbed to urban development in the 19th or 20th Centuries. The species could however, have been overlooked because there are many more modern records. Since 1970, the species has been recorded in 10 rolling monads along the River Trent and the River Idle. The species has been recorded in a variety of habitats including the banks of drains, inundation grassland, willow scrub, grazing marsh and seasonal pools. The white form of the species has been recorded at Attenborough, but elsewhere the plants are the red-flowered form. Since 2012, a small population was recorded at Everton Carr on a River Idle washland in 2015 (in bold).

| Location | GR | Date | Recorder |
|------------------------------------|-----------------|-------------|----------------|
| Misson Drain | SK687938 | 1972 | JH |
| Misson Drain | SK684943 | 1972 | JH |
| Misson Drain | SK713950 | 1972 | JH |
| West Bridgford | SK569362 | 1989 | Woll. |
| Shelford Carr | SK668434 | 1992 | DCW |
| Attenborough Gravel Pits | SK519337 | 2002 | DCW |
| Attenborough Gravel Pits | SK520338 | 2002 | DCW |
| Idle Washes, Misterton | SK721963 | 2002 | DCW, RAJ |
| Rolleston | SK763516 | 2006 | DCW |
| Clifton (near Holme Pit) | SK53423477 | 2010 | DCW |
| Clifton (near Holme Pit) | SK537347 | 2010 | DCW |
| Clifton (near Holme Pit) | SK53453463 | 2010 | DCW |
| Clifton (near Holme Pit) | SK53653466 | 2010 | DCW |
| Adbolton Grassland | SK60273854 | 2010 | DCW |
| Idle Washland, Everton Carr | SK690944 | 2015 | DCW, MW |

Persicaria mitis (Schränk.) Assenov Tasteless Water-pepper

National Status: Vulnerable, Nationally Scarce

Nottinghamshire Status: Locally Frequent

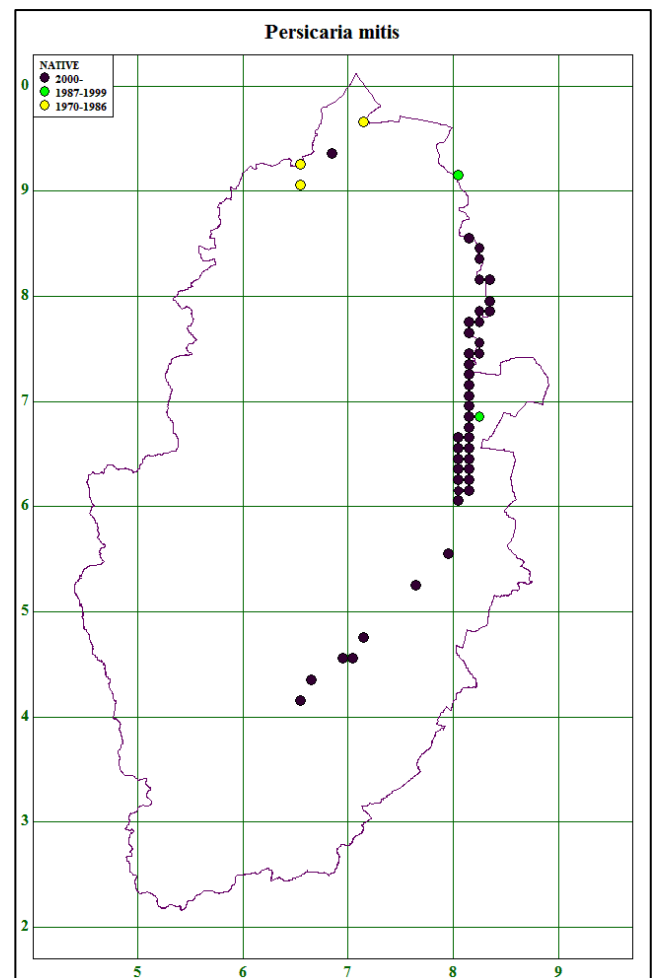
Monads: 39

Howitt & Howitt (1963) considered tasteless water pepper *Persicaria mitis* to be rare and they provided only five records for the VC. Since 1970 however, the species has been recorded in 39 rolling monads, mostly in the lower reaches of the tidal Trent valley, wherever suitable habitat is present. Preston et al (2002) stated that the species was often been confused with water pepper *P. hydropiper* and small water pepper *P. minor*. As such, it is considered likely that the species has always been locally frequent in the Trent valley and was probably overlooked before 1970. Since 2013, populations have been recorded on or close to the River Trent at Meering, Besthorpe, Grassthorpe, Collingham, Sutton-on-Trent, Low Marnham, High Marnham, Rampton, South Clifton, North Clifton, Giron, Cromwell, Carlton-on-Trent and Farndon. All of the post 2012 records are located within the 1970 to 2012 distribution of the species.

Tasteless water-pepper *Persicaria mitis* on the River Trent, Cottam



Source S. Hammonds



Petroselinum segetum (L.) W.D.J.Koch

Corn Parsley

National Status: Least Concern

Nottinghamshire Status: Rare

Monads: 3

Corn parsley *Petroselinum segetum* has always been rare in the VC and traditionally was associated with arable fields on basic soils. Howitt & Howitt (1963) listed three sites in the VC including Kilvington, Stanford-on-Soar and Barnby-in-the Willows, but none of those populations are extant. In recent times large populations have been recorded on unimproved grassland banks and the bank of a lagoon, well away from the historic locations. The Hoveringham population was re-visited in 2013 (in bold).

| Location | GR | Date | Recorder |
|--------------------------------|-----------------|-------------|-----------------|
| A1 Roadside Verge | SK823495 | 2004 | DCW |
| Clifton Hill | SK826696 | 2012 | DCW, MW, WM, AB |
| Clifton Hill | SK822697 | 2012 | DCW, MW, WM, AB |
| Hoveringham Gravel Pits | SK716475 | 2008 | DCW |
| Hoveringham Gravel Pits | SK716476 | 2013 | DCW |

Pinguicula vulgaris L.

Common Butterwort

National Status: Least Concern

Nottinghamshire Status: Extinct

Common butterwort *Pinguicula vulgaris* was formerly common in the VC in marshes and bogs, but by the early 1960s Howitt & Howitt (1963) considered that the species was probably extinct. J.W. Carr last recorded the species at Sookholme Moor in the early part of the 20th Century and approximately 80 years later it was recorded again in peaty flushes at the same site.

Pinguicula vulgaris (continued)

Unfortunately the species has not persisted at this site, due to a cessation of grazing and a series of dry summers, and was last seen in 1991.

| Location | GR | Date | Recorder |
|----------------|----------|------|----------|
| Sookholme Moor | SK554678 | 1991 | DCW |

Platanthera bifolia (L.) L.C. Rich Lesser Butterfly Orchid

National Status: Vulnerable
Nottinghamshire Status: Extinct

T. Ordoyno in the 1807 Flora Nottinghamiensis stated that lesser butterfly orchid *Platanthera bifolia* was recorded in "meadows and pastures; not common.

Platanthera bifolia (continued)

Southwell; and in the meadows leading to Oxton Wood; also closes between Winkburn and Kirklington." There are no later records for the species.

| Location | GR | Date | Recorder |
|--|------|------|----------|
| Southwell, near Oxton Wood, between Winkburn and Kirklington | SK65 | 1807 | TO |

Platanthera chlorantha (Cust.) Rchb. Greater Butterfly Orchid

National Status: Near Threatened
Nottinghamshire Status: Scarce
Monads: 4

In the VC, the species has a strong affinity with woodland and was common in clay woodlands in the 19th Century. In the 20th Century, before 1963, greater butterfly orchid *Platanthera chlorantha* was recorded in Hockerton Moor Wood, Lady Wood at Cauntun, Eaton Wood, Gamston Wood, Broadwaters Wood at Ossington and Beverley Springs at Headon. Since 1970 the species has persisted at Gamston Wood, Eaton Wood and Headon (at Darlton Wood, which is next to Beverley Springs). It has not been found at Moor Wood, Lady Wood and Broadwaters Wood in recent times. The species has also been recorded at Treswell Wood, which is close to the woods at Headon and Kirton Wood (SK7068), where it is probably no longer extant. Small population could have always been present in Treswell and Kirton Woods, but it is difficult to understand how it would have been overlooked in past times. Since 2012, surveys have confirmed extant populations at those locations highlighted in bold.

| Location | GR | Date | Recorder |
|----------------------------------|-----------------|-------------|------------|
| Darlton Holt | SK7378 | 1972 | RCLH |
| Eaton Wood Roadside Verge | SK726772 | 2015 | NC |
| Gamston Wood | SK728769 | 2006 | DCW |
| Gamston Wood | SK727769 | 2006 | DCW |
| Gamston Wood | SK726764 | 2006 | DCW |
| Gamston Wood | SK730768 | 2006 | DCW |
| Gamston Wood | SK727767 | 2006 | DCW |
| Gamston Wood | SK727765 | 2006 | DCW |
| Gamston Wood | SK727772 | 1984 | CS, RS |
| Gamston Wood | SK729768 | 2013 | NC |
| Treswell Wood | SK762793 | 2006 | DCW, Woll. |
| Eaton Wood | SK727776 | 2009 | DCW, JF |

Polygala vulgaris subsp. *collina* (Rchb.) Borbás Common Milkwort

National Status: Data Deficient
Nottinghamshire Status: Extinct

Stace (2010) describes the subspecies as being scattered throughout Britain, but the distribution is very uncertain. Sell & Murrell (2009), state that all of the plants in Britain are referable to subsp. *vulgaris*. If the existence of subspecies *collina* is accepted, then it was last seen at unspecified times in the early part of the

20th Century at two sites in the VC including Moorgreen Reservoir, Greasley and South Wheatley.

| Location | GR | Date | Recorder |
|---------------------|--------|------------|----------|
| Moorgreen Reservoir | SK4849 | 1909 -1939 | JWC |

Polygonatum multiflorum (L.) All.

Solomon's Seal

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 9

The species has never been common in the VC and is almost entirely confined to woods on the Magnesian Limestone. Although losses have undoubtedly occurred within the VC, populations at Bagthorpe, Banks Carr Wood, Broxtowe, Wallingwells and Pleasley have persisted for hundreds of years. At the Millington Springs, Burntstump, Robin's Wood and Maun valley sites, the populations all appear to be native and have probably been present for many years, being overlooked for some reason. Since 2012 populations at Pleasley Vale and Bagthorpe (in bold) have been re-visited and confirmed as extant.

| Location | GR | Date | Recorder |
|---------------------------|-----------------|-------------|-----------------|
| Bagthorpe Woodland | SK475516 | 1998 | DCW |
| Bagthorpe Woodland | SK475514 | 1998 | DCW |
| Bagthorpe Woodland | SK477514 | 1998 | DCW |
| Bagthorpe Woodland | SK475515 | 2015 | JC |
| Millington Springs | SK480521 | 2008 | DCW |
| Banks Carr Wood | SK599916 | 2003 | DCW |
| Broxtowe Wood | SK531429 | 2010 | WM |
| Broxtowe Wood | SK529430 | 1995 | DCW, SW, PA |
| Burntstump Country Park | SK579507 | 2008 | DCW |
| Burntstump Country Park | SK574508 | 2008 | DCW |
| Burntstump Country Park | SK576508 | 2008 | DCW |
| Maun Valley Woodland | SK53696027 | 2010 | PS(b) |
| Robin's Wood | SK537414 | 1999 | PA, RAJ, DCW |
| Pleasley Vale | SK519649 | 2013 | DCW, RAJ |
| Pleasley Vale | SK520650 | 2009 | DCW |
| Pleasley Vale | SK515647 | 2012 | KB |
| Pleasley Vale | SK516648 | 2012 | RAJ |
| Pleasley Vale | SK518649 | 2014 | DCW |
| Wallingwells Wood | SK574842 | 2011 | DCW, MW |

Polygonatum odoratum (Mill.) Druce

Angular Solomon's Seal

National Status: Nationally Scarce
Nottinghamshire Status: Extinct

In the VC, angular solomon's seal *Polygonatum odoratum* has been recorded only once. J. Roffey recorded the species at Menagerie Wood, Worksop Manor some time during the early 20th Century.

| Location | GR | Date | Recorder |
|----------------|--------|--------|----------|
| Menagerie Wood | SK5778 | c.1900 | JR |

Polygonum rurivagum Jordan ex. Boreau

Cornfield Knotgrass

National Status: Nationally Scarce
Nottinghamshire Status: Rare
Monads: 1

Cornfield knotgrass *Polygonum rurivagum* was recorded for the first time in the VC by R.C.L. Howitt in the Pusto Hill area of Everton. Ackeroyd cited in Stewart, Pearman, & Preston (1994), states that the species is superficially very similar to *P. aviculare*, of which it is probably a segetal ecotype, whilst Stace (2010) suggests that the species is probably best amalgamated with *P. aviculare*.

Polygonum rurivagum (continued)

The similarity between the two species and the difficulty of separating the species may go some way to explaining why there have been no other records in the VC.

| Location | GR | Date | Recorder |
|------------|--------|------|----------|
| Pusto Hill | SK6960 | 1972 | RCLH |

Polypogon monspeliensis (L.) Desf.

Annual Beard-grass

National Status: Nationally Scarce**Nottinghamshire Status:** Uncommon**Monads:** 11

In the VC, there are no historical records for this species and all inland records are considered by Preston *et al.* (2002) to be casual. In the VC, however, the species has persisted on colliery sites for several years and does not appear to be casual.

Polypogon monspeliensis (continued)

The species is presumably persisting because of the salinity of the substrates and the standing water in ditches and pools. Elsewhere the species is still present at Fiskerton on the edge of the lagoon, but the Bunny Landfill site (SK578287 and SK577284) has been destroyed and the populations are no longer extant. Since 2012, the species has been recorded at three new scattered sites (in bold) each with very different habitats including seasonally wet sandy gravels, artificial substrates on a brownfield site and the edge of a composting area in an arable field.

| Location | GR | Date | Recorder |
|-----------------------------|-----------------|-------------|-------------|
| Bilthorpe Colliery Yards | SK653613 | 2008 | DCW, RAJ |
| Bilthorpe Colliery Yards | SK651616 | 2008 | DCW, RAJ |
| Cotgrave Colliery Yards | SK641370 | 2009 | DCW |
| Cotgrave Colliery Yards | SK651363 | 2009 | DCW |
| Cotgrave Colliery Yards | SK649366 | 2009 | DCW |
| Cotgrave Colliery Yards | SK653364 | 2009 | DCW |
| Cotgrave Colliery Yards | SK641372 | 2009 | DCW |
| Cotgrave Colliery Yards | SK654361 | 2009 | DCW |
| Cotgrave Colliery Yards | SK653359 | 2009 | DCW |
| Cotgrave Colliery Yards | SK648361 | 2009 | DCW |
| Gotham | SK534294 | 2007 | DCW |
| Fiskerton Landfill | SK727524 | 2012 | DCW, MW |
| Calverton Colliery Tip | SK609516 | 2012 | DCW, SH, MW |
| Calverton Colliery Tip | SK607516 | 2012 | DCW, SH, MW |
| Calverton Colliery Tip | SK606508 | 2012 | MW |
| Calverton Colliery Tip | SK605509 | 2012 | MW |
| Cromwell Gravel Pits | SK802622 | 2015 | DCW |
| Colwick Oil Terminal | SK623406 | 2015 | DCW |
| Papplewick Field | SK582517 | 2015 | MW |

Polystichum x bicknellii (H. Christ) *P. setiferum x aculeatum* Hahne**National Status:** Data Deficient**Nottinghamshire Status:** Scarce**Monads:** 4

In the British Isles, this hybrid is scattered throughout the range of soft shield-fern *Polystichum setiferum*. It shows intermediate characters and is probably overlooked, Stace (2010). There are no historical records in the VC and single plants have been recorded at only two locations since 1970. At both sites the hybrid is present where both parents are found in close proximity to each other. Since 2012 two new sites have been found consisting of single plants in the vicinity of both parents (in bold).

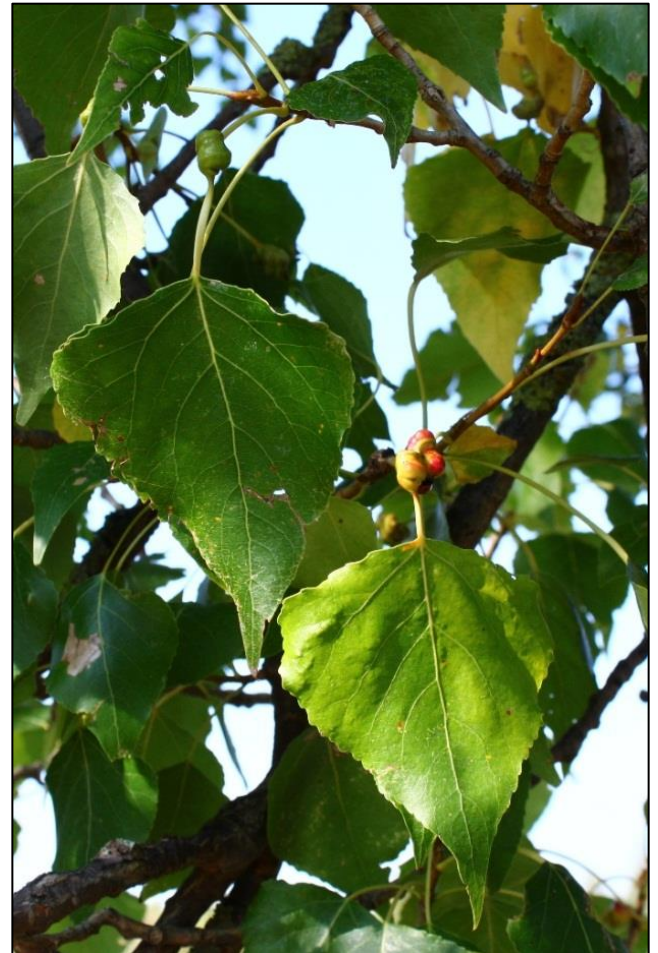
| Location | GR | Date | Recorder |
|--------------------------|-----------------|-------------|------------|
| Kelham Hills Wood | SK757561 | 2005 | DCW |
| Crock Dumble | SK631443 | 2005 | DCW |
| Epperstone Dumble | SK653513 | 2013 | DCW |
| Lambley Dumble | SK619450 | 2014 | RAJ |

Populus nigra subsp. *betulifolia* (Pursh) Dippel

Black Poplar

National Status: Least Concern**Nottinghamshire Status:** Scarce**Monads:** 10

Black poplar *Populus nigra* subsp. *betulifolia* at Holme Pierrepont Gravel Pits



Source S. Hammonds

Before 1963, Howitt & Howitt (1963) considered the distribution of native black poplar *Populus nigra* subsp. *betulifolia* to be uncertain, presumably because of confusion with black poplar clones such as the Manchester poplar, which was widely planted in parks and gardens. As a native species, most of the remaining trees are males and five of the populations are single trees. There have been recent efforts by the Forestry Commission and conservation organisations to plant young trees of both sexes in various locations within the VC. The young trees being propagated from mature trees found elsewhere within the VC. The records below are those populations, which are confirmed as being native. A further 22 records are not included here because they are considered to be unconfirmed, introductions, or are recognised as man-made clones such as the Manchester poplar. Since 2012, two further sites have been located and two historical records have been revealed (in bold). As such, the taxon is now considered to be uncommon rather than scarce.

| Location | GR | Date | Recorder |
|---------------------------|----------|------|----------|
| Brinsley Grassland | SK459492 | 2003 | DCW |
| Fairham Brook, Widmerpool | SK627278 | 2010 | DCW, MW |
| Fairham Brook, Widmerpool | SK623278 | 2010 | DCW, MW |
| Fairham Brook, Widmerpool | SK624277 | 2010 | DCW, MW |
| Fairham Brook, Widmerpool | SK627277 | 2010 | DCW, MW |
| Fairham Brook, Widmerpool | SK625278 | 2010 | DCW, MW |
| Holme Hedgerow | SK809591 | 2003 | DCW |

Populus nigra subsp. *betulifolia* (continued)

| Location | GR | Date | Recorder |
|------------------------------------|-----------------|-------------|----------------|
| Nettleworth Pasture | SK552658 | 2001 | DCW |
| Warsop | SK547660 | 2001 | MW |
| Road Wood | SK849732 | 1996 | DCW |
| County Boundary Hedgerow Sookholme | SK538657 | 2008 | DCW |
| Stanton-on-the-Wolds Hedgerow | SK633299 | 2010 | DCW |
| Lamb Close | SK477482 | 2010 | DCW, PO |
| Screveton Hedgerow | SK728446 | 2013 | DCW |
| Littlewood Lane Quarry | SK533649 | 2015 | DCW, MW |
| Upper Broughton | SK689274 | 1994 | NJH |
| Costock | SK573264 | 1994 | NJH |

Potamogeton coloratus Hornem.

Fen Pondweed

National Status: Nationally Scarce**Nottinghamshire Status:** Scarce**Monads:** 5

Howitt & Howitt (1963) described fen pondweed *Potamogeton coloratus* as being uncommon in the VC. Historically the species was recorded on the Magnesian Limestone at Shireoaks, Worksop and Styrrup; on fen peat at Misson and Gringley Carr, and in ballast pits at Misterton. Since 1970 the species has been recorded at five sites including the Shireoaks site where the species was recorded before 1963. The other sites include a flooded clay pit at Staunton and shallow drains elsewhere.

| Location | GR | Date | Recorder |
|--------------------|----------|------|-----------------|
| Shireoaks Park | SK544803 | 1972 | JH |
| Darnsyke, Thorney | SK8573 | 1975 | RCLH |
| Shire Dyke, Cotham | SK810470 | 1988 | DCW |
| Staunton Quarry | SK804457 | 2012 | DCW, MW, WM, AB |
| Ruddington Moor | SK561315 | 2007 | DCW |

Potamogeton compressus L.*

Grass-wrack Pondweed

National Status: Endangered, Nationally Scarce**Nottinghamshire Status:** Rare**Monads:** 32

Before 1963, Howitt & Howitt (1963) listed many records for grass-wrack pondweed *Potamogeton compressus*. Sites included Nottingham Canal, Erewash Canal, Beeston Canal and Grantham Canal and the Rivers Trent and Soar. In modern times the species has been recorded three times in the VC, including an unconfirmed 1990 record from the Erewash Canal near Eastwood. It still exists abundantly in the Erewash Canal at Eastwood, this stretch now forming the county boundary between VC's 56/57 (Derbyshire).

| Location | GR | Date | Recorder |
|-------------------------|---------------|-------|-------------|
| Many Records | Many Records | <1963 | RCLH |
| Erewash Canal, Eastwood | SK4546-SK4645 | 2013 | NL, DCW, MW |

Potamogeton friesii Rupr.

Flat-stalked Pondweed

National Status: Near Threatened, Nationally Scarce**Nottinghamshire Status:** Rare**Monads:** 1

Flat-stalked pondweed *Potamogeton friesii* was rather frequent and widespread in canals and ponds before the 1960s. Since 1960s the eutrophication and demise of the canals has resulted in dramatic losses in the VC and the species has not been found during recent searches of the Chesterfield and Grantham Canals. As a consequence, it is likely that the only extant location is the Ox-pasture Drain at Thorney. Since 2012, a further historical record from 1974 (also in Howitt & Howitt, 1963) has been found

and a survey of Ox-pasture Drain successfully relocated the species (in bold).

| Location | GR | Date | Recorder |
|---|-----------------|-------------|-----------|
| Grantham Canal, Kinoulton | SK63 | 1978 | RCLH |
| Grantham Canal, Cotgrave | SK6336 | 1975 | PAC |
| Grantham Canal, Cotgrave - Bassingfield | SK63I | 1975 | PAC |
| Ox-pasture Drain, Thorney | SK881733 | 2004 | DK |
| Ox-pasture Drain, Thorney | SK880736 | 2013 | JC |
| Chesterfield Canal, Misterton | SK7794 | 1978 | RCLH |
| Mons Pool, Collingham | SK817636 | 1974 | per GW |

Potamogeton gramineus L.

Various-leaved Pondweed

National Status: Least Concern**Nottinghamshire Status:** Scarce**Monads:** 4

Various-leaved pondweed *Potamogeton gramineus* has always been rare and by the 1960s was confined to peatland drains in the north of the VC. The species was frequent in the Sherwood Forest area, but was lost from the area during the late 19th and early 20th Centuries when many of the peat bogs were drained or destroyed. All of the thirteen records below need to be checked, because they are all more than ten years old. Eutrophication and the long-term impact of drainage schemes in the River Idle floodplain are likely to have caused further declines and most of the records are unlikely to be extant.

| Location | GR | Date | Recorder |
|-------------------------------------|----------|------|------------|
| Hundreds Lane Drain, Gringley Carr | SK7294 | 1973 | RCLH |
| Hundreds Lane Drain, Gringley Carr | SK714948 | 1973 | RCLH |
| Carr Road East Drain, Gringley Carr | SK7194 | 1973 | RCLH |
| Misson Line Bank | SK79 | 1973 | RCLH |
| Delve Drain, Everton Carr | SK699945 | 1980 | NCC |
| Misson Line Bank | SK7196 | 1982 | JNCC, EC |
| Misson Line Bank | SK712959 | 1983 | JOM |
| Gringley Carr | SK79 | 1984 | EC |
| Gringley Carr | SK728930 | 1984 | JNCC, EC |
| Magnus Drain | SK702941 | 1994 | RCLH |
| Gringley Carr | SK712941 | 1994 | RCLH |
| River Idle (near) | SK714960 | 1996 | RVL |
| Misson Ballast Pits | SK712959 | 1997 | DCW, Woll. |

Potamogeton lucens L.

Shining Pondweed

National Status: Least Concern**Nottinghamshire Status:** Rare**Monads:** 2

Howitt & Howitt (1963) stated that by the 1960s shining pondweed *Potamogeton lucens* was rare and decreasing, because of increasing pollution in the ponds, canals and rivers, where it occurred. In the Nottingham Canal it was out-competed by the more vigorous hybrid willow-leaved pondweed *Potamogeton x salicifolius*. In modern times, the species has been recorded four times in the VC, but is no longer extant in ponds next to the River Trent at Radcliffe-on-Trent (SK650405). The three remaining populations are located in deep pools in rivers with relatively good water quality. Targeted efforts making use of a grab may reveal further populations in the deeper parts of rivers.

| Location | GR | Date | Recorder |
|-------------------------------|----------|------|----------|
| River Smite, Colston Bassett | SK702341 | 1999 | DCW |
| River Soar, Ratcliffe-on-Soar | SK492285 | 2010 | DCW |
| River Soar, Ratcliffe-on-Soar | SK492287 | 2015 | RAJ |

Potamogeton obtusifolius Mert & W.D.J. Koch Blunt-leaved Pondweed

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 3

There are no historical records for blunt-leaved pondweed *Potamogeton obtusifolius* and rather than being a recent colonist of the county, it may have been overlooked. Preston *et al.* (2002) suggest that the species has been much better recorded since the publication of the 1962 Atlas. Since the publication of the Atlas, the species has been recorded at seven sites, but it is possibly no longer extant at Hockerton Pond (SK688589), Besthorpe Borrow Pit (SK818645), Oxtan Lake (SK6351) and Oxtan Bogs (SK6151) having not been seen in recent years.

| Location | GR | Date | Recorder |
|----------------|----------|------|----------|
| Rainworth Lake | SK586582 | 1984 | MAP, KLJ |
| Fouleil Brook | SK578583 | 1978 | CGC |
| Fouleil Brook | SK582584 | 1991 | DCW |

Potamogeton polygonifolius Pourr. Bog Pondweed

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 6

Bog pondweed *Potamogeton polygonifolius* has always been rare in the VC and is a characteristic species of drains and bogs on acid soils. Since 1970 the species has been recorded in the north of the VC in peaty drains and on the sandy soils of the Sherwood area. It has also been recorded on sandy acid soils in the east of the VC at Newark-on-Trent, Stapleford and Wigsley. A population at Vicar Water (SK592628), recorded by R.C.L. Howitt in the 1970s, has not been seen in recent years and is probably no longer extant, because of disturbance and eutrophication.

| Location | GR | Date | Recorder |
|-------------------------------------|-----------------|------|----------|
| Fiftyeights Road Drain, Misson | SK687986 | 1972 | JH |
| Newark Golf Course | SK8553 / SK8554 | 1975 | RCLH |
| Carr Road East Drain, Gringley Carr | SK7193 / SK7194 | 1978 | Woll. |
| Great Whin Covert Pond | SK645784 | 2012 | DCW |
| Stapleford Wood | SK852554 | 2008 | DCW |
| Stapleford Wood | SK849559 | 2012 | RAJ |
| Stapleford Wood | SK852553 | 2012 | RAJ |
| Wigsley Wood | SK852706 | 2011 | DCW |

Potamogeton praelongus Wulfen Long-stalked Pondweed

National Status: Near Threatened, Nationally Scarce
Nottinghamshire Status: Extinct

Long-stalked pondweed *Potamogeton praelongus* was last seen in 1965 in the VC and before that time it was always rare, but widespread. There are historic records from canals and rivers throughout the VC and between 1959 and 1965, eight records from drains in the north of the VC, mostly in the Gringley area. The most recent of those records are provided below. The losses from rivers and canals are probably linked with habitat degradation and pollution, and losses from the north of the VC are likely to be linked with drainage and eutrophication.

| Location | GR | Date | Recorder |
|-------------------------------|--------|------|----------|
| Gringley Carr | SK79 | 1965 | NDS |
| Gringley Carr Pumping Station | SK7194 | 1964 | RCLH |

Potamogeton trichoides Cham & Schltdl. Hairlike Pondweed

National Status: Nationally Scarce
Nottinghamshire Status: Rare
Monads: 1

Howitt & Howitt (1963) described the species as rare or overlooked with the only confirmed record being found in the Trent valley at Colwick Gravel Pit some time before 1963. A further unconfirmed record was also located in a gravel pit at North Muskham, approximately 20 miles downstream of the Colwick record. Research has located two other records; a pre-1970 record originating from Nottingham Canal was obviously not known to the Howitts. A further record, the last confirmed for the VC, originates from the Mother Drain, but the exact location is not known. A specimen from the Mother Drain was confirmed by C.D. Preston and is held in the University of Technology Herbarium (UTLH). The Mother Drain has been extensively surveyed in modern times and the species has not been refound there, but it is still likely to be overlooked. During 2013 J. Carruthers found a new population (in bold) in the Crow Wood Drain at Thorney, so the population is no longer considered to be extinct.

| Location | GR | Date | Recorder |
|---------------------------------|-----------------|-------------|-------------------|
| Colwick Gravel Pit | SK63 | 1954 | RCLH, det.GT |
| North Muskham Pond | SK793594 | 1977 | Woll. |
| Nottingham Canal | SK53 | 1947 | GT |
| Mother Drain | SK79 | 1982 | PMW, RDB, det.CDP |
| Crow Wood Drain, Thorney | SK867721 | 2013 | JC |

Potamogeton x cooperi (Fryer) Fryer *P. perfoliatus x crispus*

National Status: Data Deficient
Nottinghamshire Status: Extinct

Howitt & Howitt (1963) described this hybrid as being locally frequent wherever the parents occurred together and was located near Nottingham, West Bridgford, Retford and in the far north of the VC at West Stockwith. Since 1959, the hybrid has been recorded three times, but searches in recent years have failed to re-locate the hybrid at any of its former stations. The hybrid was presumably lost from its former stations because of habitat destruction and deteriorating water quality.

| Location | GR | Date | Recorder |
|-------------------------|----------|------|----------|
| Gringley Carr | SK79 | 1959 | RCLH |
| Mother Drain, Misterton | SK79 | 1965 | NDS |
| Mother Drain, Gringley | SK713950 | 1983 | JOM |

Potamogeton x sparganifolius Laest. ex *P. natans x gramineus* Fr.

National Status: Data Deficient
Nottinghamshire Status: Extinct

This hybrid has only been recorded once in the VC, in a drain by Cross Lane at Gringley Carr. An unknown recorder collected the hybrid and G. Taylor and J.E. Dandy determined its identity.

| Location | GR | Date | Recorder |
|---------------------------------|------|------|-----------------------|
| Cross Lane Drain, Gringley Carr | SK79 | 1955 | RCLH, det. GT and JED |

Potamogeton x nitens Weber *P. gramineus x perfoliatus*

National Status: Data Deficient
Nottinghamshire Status: Rare, probably extinct
Monads: 2

Howitt & Howitt (1963) lists historical records of this hybrid from drains at Gringley, Misterton, Misson and Finningley. After 1970 R.C.L. Howitt recorded the hybrid at a single drain at Gringley and at an unspecified location on the Misson Line Bank site.

Potamogeton x nitens (continued)

The reasons for the loss of populations are not known, but eutrophication of the peatland drains and drainage schemes may have been contributory factors. Targeted surveys are required to confirm the status of the species, but it is likely to be extinct.

| Location | GR | Date | Recorder |
|------------------------------------|----------|------|----------|
| Hundreds Lane Drain, Gringley Carr | SK716949 | 1973 | RCLH |
| Hundreds Lane Drain, Gringley Carr | SK719950 | 1983 | JOM |
| Misson Bank | SK79 | 1978 | RCLH |

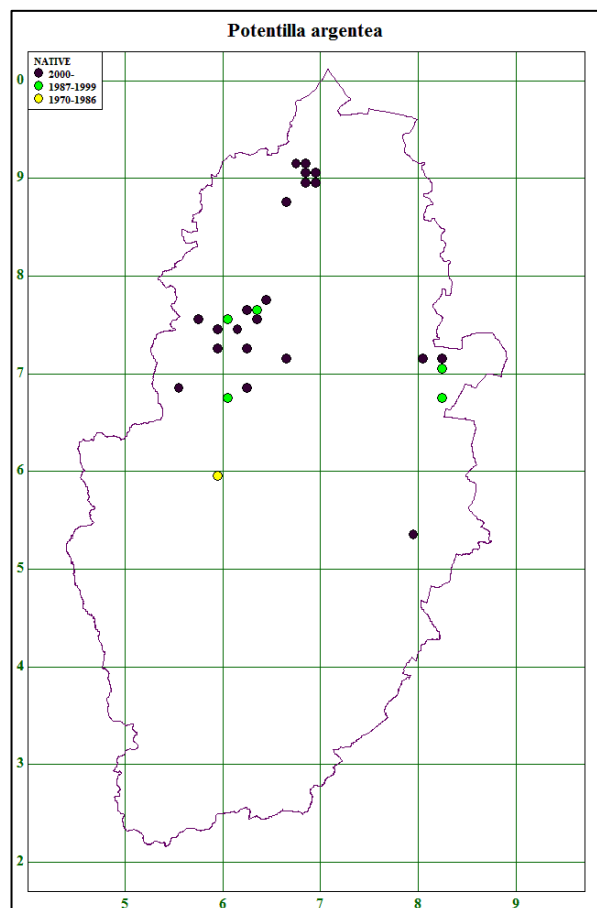
Potamogeton x salicifolius Wolfg.*P. lucens x perfoliatus***National Status:** Data Deficient**Nottinghamshire Status:** Rare**Monads:** 1

The hybrid was formerly abundant in the Nottingham Canal and because of hybrid vigour was probably responsible for the demise of a population of shining pondweed *Potamogeton lucens*. Since the 1960s, the destruction of parts of the Nottingham Canal and eutrophication of the remaining sections are probable reasons for the disappearance of the hybrid. Since 1970 a drain in the north of the VC is the only place where the hybrid has been recorded. The current status of the hybrid needs to be confirmed as it may be extinct in the VC.

| Location | GR | Date | Recorder |
|---------------------------------|----------|------|----------|
| Fox Covert Drain, Gringley Carr | SK723953 | 1978 | Woll. |

Potentilla argentea L.

Hoary Cinquefoil

National Status: Near Threatened, Nationally Scarce**Nottinghamshire Status:** Uncommon**Monads:** 21

The decline of hoary cinquefoil *Potentilla argentea* in the VC appears to follow the national trend. Howitt & Howitt (1963) described the species as being local in the VC, but also fairly frequent on the heaths and tracks of the Bunter Sandstone. Elsewhere the species was found on river gravels at Newark, Garton, North Clifton and Gringley. The post-1970 records follow a similar distribution to those before 1970; mostly on the Bunter Sandstone, but the populations are smaller and more scattered. Since 2012, extant populations have been confirmed at Ranskill, Clumber Park and North Clifton. New populations have been recorded on the Quenn's Sconce, Newark-on-Trent and Marnham Dismantled Railway.

Pyrola minor L.

Common Wintergreen

National Status: Least Concern**Nottinghamshire Status:** Extinct

Common wintergreen *Pyrola minor* has only been recorded twice in the VC. J. Thompson found the species in a wood near the Welbeck Toll Bar sometime before 1839. Nearly a century later the species was found in woodland on the Welbeck Estate and was recorded up until 1922. The plantation woodlands have been heavily disturbed since the early part of the 20th Century, but the estate still contains suitable habitat and further searches are planned.

| Location | GR | Date | Recorder |
|---------------|-------|------|----------|
| Welbeck | SK57 | 1839 | GH |
| Forest Screed | SK57X | 1917 | RG |

Pyrola rotundifolia L. subsp. *rotundifolia*

Round-leaved Wintergreen

National Status: Near Threatened, Nationally Scarce**Nottinghamshire Status:** Rare**Monads:** 1

During 2011, John Szczur notified the Reserve Manager of the Nottinghamshire Wildlife Trust's Idle Valley Nature Reserve that he had found a population of round-leaved wintergreen *Pyrola rotundifolia* subsp. *rotundifolia*, outside of the nature reserve in exhausted gravel works. The population consisted of 21 rosettes growing in sparse field layer vegetation below a canopy of willow. This was the first record for the VC and it is somewhat isolated from populations in neighbouring counties such as Derbyshire (SK 38 and SK27) and South Yorkshire (SK38). Searches during 2012 by D.C. Wood and M. Woods confirmed the identity and presence of the population and a further population of similar size was located within 50m. The second population was found in damp soils below a dense canopy of immature birch – willow woodland within a species-rich field layer. Both populations are located in immature carr woodland that has developed following the cessation of gravel extraction, so it is likely that the species is a recent colonist, rather than being overlooked. The vegetation in which the populations are located is difficult to search, so it is possible that further populations are present awaiting discovery.

| Location | GR | Date | Recorder |
|-------------------|--------------|------|----------|
| Lound Gravel Pits | SK7009586209 | 2011 | JSz |
| Lound Gravel Pits | SK7008786241 | 2012 | DCW, MW |
| Lound Gravel Pits | SK7002786241 | 2012 | DCW, MW |

Radiola liniodes L.

All-seed

National Status: Near Threatened**Nottinghamshire Status:** Extinct

All-seed *Radiola liniodes* has not been seen since 1839, but in the early part of the 19th Century it was recorded on the Bunter Sandstone about Farnsfield and Ollerton, and somewhere between Stapleford Moors and Sleaford Turnpike in the east of the VC.

Radiola linioides (continued)

| Location | GR | Date | Recorder |
|-------------------------------|---------|------|----------|
| About Farnsfield and Ollerton | SK65/66 | 1839 | GH |

Ranunculus arvensis L.

Corn Buttercup

National Status: Critically Endangered, Nationally Scarce
Nottinghamshire Rare
Monads: 1

Corn buttercup *Ranunculus arvensis* was formerly locally frequent in the VC and fairly common on clay soils. It has declined rapidly since the early 1960s, because of agricultural intensification, which has included improved seed screening and herbicide treatments. Since 1970, the species has only been recorded three times and populations recorded at Holme Pierrepont (SK619384) in 1989 and in a Collingham garden (SK8261) in 1987 are no longer extant. The population at Thorpe-in-the-Glebe needs checking, but it is unlikely to be extant. At Headon in 2010 approximately 15 plants were found in the corner of an arable field (rape crop). Flowers and ripe fruits were present so it is anticipated that regeneration will occur and the population will persist.

| Location | GR | Date | Recorder |
|---------------------|----------|------|----------|
| Headon Field | SK759770 | 2010 | DCW |
| Thorpe-in-the-Glebe | SK612257 | 1987 | Woll. |

Ranunculus baudotii L.

Brackish Crowfoot

National Status: Nationally Scarce
Nottinghamshire Scarce
Monads: 5

Brackish crowfoot *Ranunculus baudotii* was not recorded in the VC until 1951. Before 1963 it was recorded at Welbeck, Colwick Gravel Pits and in the Chesterfield Canal. Since 1978 the species has been confined to the Chesterfield Canal, being recorded at Babworth (SK68), Misterton (SK775946), Retford to Lady Bridge (SK68), Gringley-on-the-Hill (SK729916, SK724915, SK729917 and SK725915), Hayton (SK728853), and Wiseton to Drakeholes (SK709904, SK719897 and SK7190). However, since the start of the 21st Century the species had not been seen at any of the above locations, possibly because of turbidity caused by boat traffic, until R. A. Johnson found populations at Scofton, Babworth, Wiseton and Clayworth during 2011. Further survey work may re-locate the species at other sites on the canal, but recent surveys have not detected the species.

| Location | GR | Date | Recorder |
|-------------------------------|----------|------|----------|
| Chesterfield Canal, Scofton | SK623791 | 2011 | RAJ |
| Chesterfield Canal, Babworth | SK665829 | 2011 | RAJ |
| Chesterfield Canal, Babworth | SK674827 | 2011 | RAJ |
| Chesterfield Canal, Babworth | SK678824 | 2011 | RAJ |
| Chesterfield Canal, Babworth | SK679824 | 2011 | RAJ |
| Chesterfield Canal, Babworth | SK686819 | 2011 | RAJ |
| Chesterfield Canal, Babworth | SK685821 | 2011 | RAJ |
| Chesterfield Canal, Wiseton | SK719897 | 2011 | RAJ |
| Chesterfield Canal, Clayworth | SK726880 | 2011 | RAJ |

Ranunculus hederaceus L.

Ivy-leaved Crowfoot

National Status: Least Concern
Nottinghamshire Scarce
Monads: 8

Historically ivy-leaved crowfoot *Ranunculus hederaceus* was formerly rare outside of the Sherwood area, where it was frequent. Elsewhere it was confined to damp sandy places and was recorded at Hucknall, Edingley Moor, Haughton, Besthorpe Fleet and Langford Fleet. Since 1970, the species has been recorded in the north of the VC in drains and the margins of a stream and has also been recorded on a drain margin at Wollaton, Nottingham. In the Sherwood area, the declines have been dramatic and recently

the species has only been recorded in the Rainworth area. Since 2012, the species has been recorded at Wollaton (in the Ha-Ha) and a new site in a Houghton drain (in bold).

| Location | GR | Date | Recorder |
|----------------------|----------|------|----------|
| Everton Carr Drain | SK693923 | 1972 | JH |
| Everton Carr Drain | SK696925 | 1972 | JH |
| Watnall Grassland | SK5147 | 1973 | RCLH |
| Everton Carr Drains | SK6992 | 1977 | DC, MB |
| Mattersey Main Drain | SK669892 | 1983 | JOM |
| Fouleil Brook | SK581583 | 2000 | DCW |
| Fouleil Brook | SK579583 | 2000 | DCW |
| Torworth | SK667866 | 2000 | DCW |
| Torworth | SK667869 | 2001 | DCW |
| Wollaton Park | SK531386 | 2001 | DCW |
| Wollaton Park | SK529388 | 2013 | DCW |
| Rainworth Water | SK593588 | 2002 | DCW |
| Haughton Drain | SK663726 | 2015 | DCW, MW |

Ranunculus lingua L.

Greater Spearwort

National Status: Least Concern
Nottinghamshire Extinct (as a native)
Monads: 45 (occasional as a neophyte)

Mrs Sandwith last recorded good quantities of greater spearwort *Ranunculus lingua* as a native in 1918, somewhere in marshlands between Bawtry and Misson. J.W. Carr deposited a herbarium specimen from the above population in the Nottinghamshire Natural History Museum. The species is an attractive plant that is often used for landscaping schemes on the margins of new ponds and since 1970 the species has been recorded in 45 rolling monads as an introduction or garden escape. The possibility of some of the populations being relicts of a native population cannot be ruled out.

| Location | GR | Date | Recorder |
|---------------------------|------|------|--------------|
| Between Misson and Bawtry | SK69 | 1918 | Mrs Sandwith |

Ranunculus omiophyllus Ten.

Round-leaved Crowfoot

National Status: Least Concern
Nottinghamshire Rare
Monads: 2

This species has always been very rare and scattered in the VC. Before 1960 it was recorded at Warsop Hills and Holes, Rufford Abbey, Beeston and Eaton, but has not persisted at any of these sites beyond 1970. Since 1970 the species has been recorded at three sites in the Rainworth area and at two sites in Clumber Park. The populations at Clumber Park (SK644738 and SK633732) have been lost because of improvements to footpaths. At the Fouleil Brook site, a few plants were recorded in wet mud and at Harlow Wood the population consists of two large adjacent patches in pools formed by tyre ruts.

| Location | GR | Date | Recorder |
|---------------|----------|------|----------|
| Fouleil Brook | SK579583 | 1991 | DCW |
| Harlow Wood | SK559565 | 2010 | DCW |

Ranunculus parviflorus L.

Small-flowered Buttercup

National Status: Nationally Scarce
Nottinghamshire Status: Scarce
Monads: 9

Small-flowered buttercup *Ranunculus parviflorus* has always been very rare in the VC. There were only five pre-1970 records, which were located in dry meadows at Clifton Lane, Colwick Lodge, Clifton Wood, near Lea Pool, and at Gotham Hills. Only the Gotham Hills population has persisted into modern times with all other post 1970 records being new locations in close proximity to the River Trent or River Soar.

Ranunculus parviflorus (continued)

The species is now found in nine rolling monads. Recently, it has been lost from Lound Gravel Pits (SK711873), because of habitat destruction and the single plant at Holme Pierrepont (SK629396) was casual. However, a significant population was recorded in 2015 on former railway sidings at High Marnham Power Station. Populations at Ratcliffe-on-Soar, Gotham Hills and Toot Hill have been confirmed as extant (in bold).

| Location | GR | Date | Recorder |
|-----------------------------------|-----------------|-------------|----------------|
| Holme Pierrepont | SK629396 | 1990 | DCW |
| Fiskerton | SK733495 | 1997 | DCW |
| Kneeton | SK708459 | 1998 | DCW |
| Toot Hill | SK702455 | 2014 | DCW |
| Ratcliffe-on-Soar | SK509299 | 2000 | DCW |
| Ratcliffe-on-Soar | SK5093010 | 2000 | DCW |
| Red Hill and Wood Hill | SK493305 | 2003 | DCW |
| Red Hill and Wood Hill | SK496307 | 2003 | DCW |
| Red Hill and Wood Hill | SK500307 | 2003 | DCW |
| Wright's Hill | SK502307 | 2003 | DCW |
| Wright's Hill | SK506307 | 2003 | DCW |
| Wright's Hill | SK509304 | 2003 | DCW |
| Lound Gravel Pits | SK711873 | 2005 | DCW |
| Gotham Hills | SK533311 | 2009 | DCW |
| Gotham Hills | SK529309 | 2009 | DCW |
| Gotham Hills | SK531308 | 2009 | DCW |
| Gotham Hills | SK539313 | 2009 | DCW |
| Gotham Hills | SK535310 | 2014 | DCW |
| Gotham Hills | SK539311 | 2014 | DCW |
| Old Hill | SK696448 | 2010 | DCW |
| Old Hill | SK697452 | 2010 | DCW |
| Old Hill | SK698453 | 2010 | DCW |
| Old Hill | SK695448 | 2010 | DCW |
| Ratcliffe-on-Soar | SK509300 | 2014 | DCW |
| High Marnham Power Station | SK804714 | 2015 | RAJ |
| High Marnham Power Station | SK804713 | 2015 | RAJ |
| High Marnham Power Station | SK801712 | 2015 | DCW, MW |
| High Marnham Power Station | SK801717 | 2015 | DCW, MW |

Ranunculus sardous CR.

Hairy Buttercup

National Status: Least Concern**Nottinghamshire:** Scarce**Monads:** 10

In the 19th Century, G. Howitt stated that hairy buttercup *Ranunculus sardous* flowered everywhere in meadows and pastures, but Howitt & Howitt (1963) stated that there was no modern records. The decline of the species in the middle of the 20th Century reflects the national losses of inland populations that largely occurred before 1930, probably because many were casual, Preston *et al.* (2002). However, many of the populations recorded in the VC after 1970 are persistent and those populations occurring in arable land could be native. In addition to the established populations, the species has also been recorded as a casual at seven other sites in the VC. Since 2012, the population at Thurgarton has been confirmed as extant, although the distribution has slightly changed.

| Location | GR | Date | Recorder |
|----------------------|----------|------|----------|
| East Drayton Field | SK789749 | 1987 | Woll. |
| Wallingwells Track | SK571843 | 1998 | DCW |
| Epperstone Field | SK653507 | 2001 | DCW |
| Out Ings Grassland | SK824846 | 2002 | DCW, RAJ |
| Ompton Grassland | SK693661 | 2003 | DCW |
| Cauntton Field | SK756586 | 2004 | DCW |
| Bingham Linear Park* | SK710388 | 2004 | PA |
| Thurgarton Field | SK678507 | 2007 | DCW |
| Thurgarton Field | SK672509 | 2007 | DCW |
| Thurgarton Field | SK668507 | 2007 | DCW |
| Thurgarton Field | SK655513 | 2007 | DCW |

| Location | GR | Date | Recorder |
|-----------------------|----------|------|------------|
| Thurgarton Field | SK655514 | 2007 | DCW |
| Thurgarton Field | SK672510 | 2015 | MW |
| Thurgarton Track | SK669508 | 2015 | MW |
| Thurgarton Village | SK695492 | 2014 | DCW, RAJ |
| Darlton Field | SK773719 | 2010 | DCW, Woll. |
| Headon Field | SK758768 | 2010 | DCW |
| Oxton Field | SK633545 | 2003 | DCW |
| Colston Bassett Field | SK710317 | 2005 | DCW |

*Casual, probably no longer extant

Rhinanthus angustifolius C.C. Gmel.

Greater Yellow-rattle

National Status: Nationally Rare, Schedule 8: Wildlife & Countryside Act 1981**Nottinghamshire Status:** Extinct

Greater yellow-rattle *Rhinanthus angustifolius* has been recorded only once in the VC (as *R. major*) somewhere on a lane leading to Stapleford Moor. G. Howitt recorded the species some time before 1839.

| Location | GR | Date | Recorder |
|---------------------------------|------|------|----------|
| Lane leading to Stapleford Moor | SK85 | 1839 | GH |

Rhinanthus minor subsp. *stenophyllus* O. Scharwz

Yellow-rattle

National Status: Data Deficient**Nottinghamshire Rare****Monads:** 2

This subspecies is more common in the north of Britain and is associated with damp grassland and fens. The subspecies may have always been present in the VC wherever suitable habitats occur, but there are no historical records. Since 1970 it has been recorded at two localities including a wet and peaty grassland field near the middle of the VC at Southwell and the rides of wet woodland on fen peat in the north of the VC at Misson, where it is abundant.

| Location | GR | Date | Recorder |
|---------------------|----------|------|----------|
| Southwell Grassland | SK704534 | 2004 | RAJ |
| Misson Carr | SK710976 | 2007 | DCW |
| Misson Carr | SK710977 | 2012 | DCW |
| Misson Carr | SK709977 | 2012 | DCW |

Ribes alpinum L.

Mountain Currant

National Status: Nationally Scarce**Nottinghamshire Scarce****Monads:** 8

Howitt & Howitt (1963) described mountain currant *Ribes alpinum* as being very rare in the VC. Historically it was recorded at Felley Mill, Shireoaks, Pleasley Vale, Skegby, Dovedale Wood, and Wallingwells Wood. The species has persisted into modern times at Pleasley Vale, Skegby, Dovedale Wood and Wallingwells. It has also been recorded on the Magnesian Limestone at Carlton Wood (near Wallingwells Wood) and in a gorge of the River Maun at Mansfield. Away from the Magnesian Limestone, the species has also been recorded on Keuper Marl in Eakring Braille Wood. In addition to the presumed native populations, there are six other VC records, where the species is considered to be an introduction.

| Location | GR | Date | Recorder |
|--------------------|----------|------|----------|
| Pleasley Vale | SK520649 | 2012 | RAJ |
| Hollins Mill | SK521649 | 1972 | RCLH |
| Dovedale Wood | SK465632 | 2012 | DCW |
| Dovedale Wood | SK465630 | 2012 | DCW |
| Dovedale Wood | SK466633 | 2010 | DCW |
| Eakring Brail Wood | SK663609 | 2009 | DCW |
| Eakring Brail Wood | SK662610 | 2009 | DCW |
| Eakring Brail Wood | SK663606 | 2011 | MW |

Ribes alpinum (continued)

| Location | GR | Date | Recorder |
|------------------------------------|----------|------|----------|
| Pleasley Vale | SK515648 | 2009 | DCW |
| Pleasley Vale | SK518649 | 2009 | DCW |
| Skegby Mill (Stream-bank) | SK494607 | 2011 | DCW, JC |
| River Maun, Sutton-in-Ashfield | SK508590 | 2010 | DCW |
| Wallingwells Wood | SK573843 | 2011 | DCW, MW |
| Carlton Wood | SK583844 | 2011 | DCW, MW |
| West Bridgford Dismantled Railway* | SK589359 | 2012 | DCW |
| Rufford Park* | SK646651 | 1997 | DCW |
| Rufford Park* | SK649646 | 1976 | JH |
| Gringley-on-the-Hill Village* | SK736909 | 2001 | DCW |
| Bestwood Country Park* | SK570464 | 2004 | DCW |
| Warsop Vale Former Allotments* | SK545679 | 2004 | DCW |
| Bob's Rock, Stapleford* | SK494374 | 2007 | DCW |

*Introductions

Rosa micrantha Borrer ex Sm. Small-flowered Sweet-briar

National Status: Least Concern
Nottinghamshire Status: Extinct

This species was always very rare in the VC and was only recorded in a quarry at Bulwell in the 19th Century and in a meadow at Osberton in the 20th Century. It has not been seen in the VC since 1961 and is considered to be extinct.

| Location | GR | Date | Recorder |
|--|------|------|--------------|
| Between Chequer Bridge and Bilby, Osberton | SK68 | 1961 | RCLH, det.RM |

Rosa mollis Sm. Soft Downy-rose

National Status: Least Concern
Nottinghamshire Status: Extinct

Nottinghamshire is located some way to the south of the current distribution of soft downy-rose *Rosa mollis*. It has only been recorded three times in the VC in hedgerows at Bramcote Moor, Aspley and Wollaton. It has not been seen in the 20th and 21st Centuries.

| Location | GR | Date | Recorder |
|---------------|------------|------|----------|
| Near Wollaton | SK53 or 54 | 1839 | GH |

Rosa stylosa L. Short-styled Field Rose

National Status: Least Concern
Nottinghamshire Status: Scarce
Monads: 6

There is no historical data for the species and since 1970 it has only been recorded at six sites. In the VC, there is no detectable pattern to the distribution or ecological preferences of the species, because it occurs in a range of habitat types. At West Bridgford the species occurs on the edge of the dismantled railway trackbed; at Cossall it occurs in rough grassland on a former colliery tip. At Wilford it has been recorded in scrub in an ex-clay quarry (confirmed as extant since 2012); and on clay soils elsewhere, it is in woodland at Redgate Wood and hedgerows at Kneeton and Epperstone.

| Location | GR | Date | Recorder |
|--|----------|------|----------|
| West Bridgford Dismantled Railway Line | SK585368 | 1994 | DCW |
| Cossall Colliery Tip | SK476425 | 2009 | DCW |
| Kneeton Hedgerow | SK712457 | 2010 | DCW |
| Wilford Claypit | SK571355 | 2013 | DCW |

| Location | GR | Date | Recorder |
|---------------------|----------|------|----------|
| Epperstone Hedgerow | SK649506 | 2012 | MW, DCW |
| Redgate Wood | SK678598 | 1999 | DCW, MW |

Short-styled field rose *Rosa stylosa* at Wilford Claypit

Source: S. Hammonds

Rosa x irregularis Déségl. & Guillon *R. arvensis x canina*

National Status: Data Deficient
Nottinghamshire Status: Rare
Monads: 2

Although this hybrid has been recorded throughout the British Isles, there are no historical records for this hybrid in the VC and since 1970 it has been recorded only twice. It is however, probably overlooked. At both sites the populations consist of a single bush, so it is particularly vulnerable to extinction.

| Location | GR | Date | Recorder |
|-----------------------|----------|------|----------|
| Upper Broughton Scrub | SK678253 | 1999 | DCW |
| Broxtowe Hedgerow | SK513431 | 2005 | DCW |

Rubus x pseudoidaeus (Weihe.) Lej. *R. idaeus x caesius*

National Status: Data Deficient
Nottinghamshire Status: Rare
Monads: 2

This sterile hybrid is scattered throughout Britain, Sell & Murrell (2009), but there are no historical records for the VC. In recent times the hybrid has been recorded three times in scrubby habitats in close proximity to the parents. At Toton the hybrid is located in scrub on a riverbank and at Netherfield it is located in 'scrubby' tall-herb and tall grassland habitats.

| Location | GR | Date | Recorder |
|--|----------|------|----------|
| River Erewash, Toton | SK489345 | 2010 | DCW |
| Netherfield | SK629403 | 2010 | DCW |
| Netherfield Dismantled Railway Sidings | SK633402 | 2015 | DCW |

Rumex pulcher L. Fiddle Dock

National Status: Least Concern
Nottinghamshire Status: Extinct

In the VC fiddle dock *Rumex pulcher* was last recorded in the early part of the 19th Century at two locations near to the City of Nottingham.

| Location | GR | Date | Recorder |
|---------------------|------|------|----------|
| Near Radford Church | SK54 | 1839 | GH |

Rumex x knafii Čelak.*R. conglomeratus x maritimus*

National Status: Data Deficient
Nottinghamshire Rare
Monads: 1

The hybrid is scattered throughout Britain and it is usually found with both parents, Stace (2010). In the VC there are no historical records for this hybrid and there are only two recent records, one of which is an undated and unconfirmed record from Holme Pierrepont (SK623392). A single plant in marshy grassland is the only confirmed record.

| Location | GR | Date | Recorder |
|----------------|----------|------|----------|
| West Bridgford | SK574374 | 2001 | DCW |

Rumex x schulzei Hausskn.*R. conglomeratus x crispus*

National Status: Data Deficient
Nottinghamshire Rare
Monads: 1

In central and south Britain this hybrid is fairly common whenever the parents occur together, Stace (2010). In Nottinghamshire, this hybrid has been recorded only once in a disused gravel pit at Holme Pierrepont. Targeted searches in the VC may be worthwhile, because the hybrid could be under-recorded.

| Location | GR | Date | Recorder |
|------------------------------|--------|------|----------|
| Holme Pierrepont Gravel Pits | SK6138 | 1990 | DCW |

Rumex x steinii Becker*R. obtusifolius x palustris*

National Status: Data Deficient
Nottinghamshire Rare
Monads: 1

This hybrid has been recorded with one of its parents (marsh dock *Rumex palustris*) in southeast England and North Somerset, Stace (2010). In the VC, two plants have been recorded in former sewage tanks in association with abundant populations of both parents.

| Location | GR | Date | Recorder |
|---------------------|----------|------|----------|
| Bulcote Gravel Pits | SK673443 | 1999 | DCW |

Rumex x wirtgenii Beck.*R. conglomeratus x palustris*

National Status: Data Deficient
Nottinghamshire Rare
Monads: 1

This hybrid occurs with both parents in southeast and central England, Stace (2010). The species has been recorded only once in the VC at Girton Gravel Pits next to the River Trent, where both parents have been recorded. Both parents commonly occur together along this stretch of the River Trent and targeted searches may reveal further populations of the hybrid.

| Location | GR | Date | Recorder |
|--------------------|----------|------|----------|
| Girton Gravel Pits | SK816671 | 2003 | RAJ |

Sagina maritima Don

Sea Pearlwort

National Status: Least Concern
Nottinghamshire Rare
Monads: 1

The single record for this species originates from a roadside verge at Apleyhead near to the entrance to Clumber Park, presumably on the verge of the A614 Trunk Road. Inland, sea pearlwort *Sagina maritima* is less common than other halophytes that are

commonly associated with salt-treated roads. There have been no recent searches for the species, so the current status is unknown.

| Location | GR | Date | Recorder |
|--------------------------------|----------|------|----------|
| Apleyhead Verges, Clumber Park | SK646773 | 1972 | JH |

Sagina nodosa (L.) Fenzl.

Knotted Pearlwort

National Status: Least Concern
Nottinghamshire Scarce
Monads: 4

This species of drain-sides and damp places declined in the early part of the 20th Century and by 1963 was confined in the VC to the Magnesian Limestone in the west and the base-rich peatlands in the north, Howitt & Howitt (1963). Since 1963, the species has survived at Misson, Warsop and Sookholme. The species has also been recorded at Friezeand, Underwood, where it occurs in short fen vegetation and at Ranskill, which is located in a peatland area, but actually occurs in old gravel workings.

| Location | GR | Date | Recorder |
|------------------------|----------|------|----------|
| Snow Sewer, Misson | SK723982 | 1972 | JH |
| Ranskill | SK667890 | 1977 | Woll. |
| Sookholme Moor | SK554677 | 1989 | DCW |
| Warsop Hills and Holes | SK556680 | 1991 | CL |
| Friezeand | SK476506 | 2002 | DCW |
| Warsop Hills and Holes | SK558681 | 2007 | DCW |

Salix aurita L.

Eared Willow

National Status: Least Concern
Nottinghamshire Scarce
Monads: 4

This species of damp acid soils had almost disappeared in the VC by the early 1960s because of the progressive drying out of the VC, Howitt & Howitt (1963). It is now reduced to a handful of scattered sites across the VC and populations are usually small being no more than a few bushes. It is possible that some populations that occurred with grey willow *Salix cinerea* have been lost, because of introgression to the hybrid *Salix x multinervis*, which has also become scarce in the VC. The species has been planted on two colliery tips.

| Location | GR | Date | Recorder |
|---------------------------|----------|------|----------|
| Langford Moor Plantation | SK8555 | 1975 | RCLH |
| Delve Drain, Everton Carr | SK699946 | 1980 | NCC |
| Everton Carr Drain | SK703934 | 1980 | NCC |
| Everton Carr Drain | SK705931 | 1980 | NCC |
| Everton Carr Drain | SK706929 | 1980 | NCC |
| Ash Holt Lane, Askham | SK744752 | 2010 | DCW |
| Cinderhill Colliery Tip | SK536442 | 2010 | DCW |
| Bevercotes Colliery Tip* | SK696734 | 2010 | MW |
| Stapleford Wood | SK852554 | 2011 | DCW, MW |
| Freckland Wood* | SK529523 | 2012 | MW |
| Freckland Wood* | SK526524 | 2012 | MW |

*Planted

Salix myrsinifolia Salisb.

Dark-leaved Willow

National Status: Nationally Scarce
Nottinghamshire Extinct

R.C.L. Howitt found two bushes of dark-leaved willow *Salix myrsinifolia* in woodland by Ragged Rock, Newstead. A herbarium specimen was submitted to Nottinghamshire Natural History Museum. Despite searches the bushes have not been re-located and the species is likely to be extinct.

| Location | GR | Date | Recorder |
|-------------------------|----------|------|----------|
| Newstead, by Lower Lake | SK544532 | 1974 | RCLH |

Salix pentandra L.

Bay Willow

National Status: Least Concern**Nottinghamshire** Scarce (as a native)**Monads:** 8 (as a native)

Bay willow *Salix pentandra* is a native in the west of the VC in alder-carr and next to streams, Howitt & Howitt (1963). Elsewhere it is planted for ornamental purposes and nine recent records are believed to be deliberate introductions. Trees recorded in the 1960s at Norwood, Warsop and Haughton have persisted and have also been recorded since 1970. Since 2012, two further sites have been recorded (in bold), both in close proximity to known populations. As such, the number of occupied rolling monads remains unchanged.

Bay willow *Salix pentandra*

Source: S. Hammonds

| Location | GR | Date | Recorder |
|----------------------------------|-----------------|-------------|----------------|
| Grassland near Hormans Holt | SK77 | 1972 | RCLH |
| Spitfire Bottoms | SK665751 | 1977 | Woll. |
| Patmore | SK677746 | 2013 | RAJ |
| Norwood | SK4763 / SK4863 | 1978 | RCLH |
| Everton Carr Drain | SK693936 | 1980 | NCC, PA |
| Misson Drain | SK717980 | 1980 | NCC |
| Holme Pierrepont Gravel Pits+ | SK611382 | 1989 | DCW |
| Holme Pierrepont Gravel Pits+ | SK612380 | 1989 | DCW |
| Budby Carr | SK618702 | 1996 | DCW |
| Everton Carr Drain | SK6993 | 1998 | PA |
| Everton Carr Drain | SK704935 | 1998 | PA |
| Everton Carr Drain | SK705931 | 1998 | PA |
| Warsop Hills and Holes | SK555676 | 2012 | DCW, RAJ, JC |
| Norwood | SK477639 | 2008 | DCW |
| Norwood | SK479638 | 2013 | DCW, MW |
| Conjure Alders | SK662724 | 2011 | DCW, MW |
| Attenborough Gravel Pits* | SK528356 | 2000 | JBr, EP |
| Hockerton Housing Project* | SK717562 | 2004 | MW |
| Sutton Gravel Pits* | SK687838 | 2003 | MW, DCW |
| The Park, Nottingham* | SK5639 | 2011 | WM |
| Huthwaite Plantations* | SK467583 | 2012 | DCW |
| Holme Pierrepont Gravel Pits* | SK619392 | 1989 | DCW |
| Daneshill Gravel Pits, Torworth* | SK666864 | 2012 | DCW |

*Introductions / +Probably no longer extant

Salix repens L.

Creeping Willow

National Status: Least Concern**Nottinghamshire** Rare**Monads:** 1

Creeping willow *Salix repens* was once widespread in the VC on moist heaths, but has declined because of habitat destruction and drainage. By the 1960s the species was already rare, but according to Howitt & Howitt (1963) it still occurred in good quantity to the east of Newark. The species is now only confirmed at Stapleford Wood having been lost from its only other remaining location at Spalford Warren (SK8368), at some time before the 1990s. A further record from a clay pigeon shooting ground at Thoresby (SK6468) is unconfirmed, because of the poor condition of the specimens that were viewed. Recently cuttings from Stapleford Wood plants have been propagated by N.R. Lewis and planted at Budby South Forest.

| Location | GR | Date | Recorder |
|-----------------|----------|------|----------|
| Stapleford Wood | SK853553 | 2011 | DCW |
| Stapleford Wood | SK852554 | 2008 | DCW |
| Stapleford Wood | SK853552 | 2008 | DCW |
| Stapleford Wood | SK849559 | 2011 | DCW |
| Stapleford Wood | SK851561 | 2008 | DCW |
| Stapleford Wood | SK852557 | 2008 | DCW |

Salix x calodendron Wimm.

Holme Willow

National Status: Data Deficient**Nottinghamshire** Rare**Monads:** 7

This triple hybrid (*Salix viminalis* x *cinerea* x *caprea*) is native, but its distribution within the VC and the British Isles is not clear because of planting (most recently for biomass). Howitt & Howitt (1963) doubted the native status of the hybrid and stated that a few plants were found in every willow holt and by many streams in the Trent valley. Outside of willow holts in the VC, the plant is rare. In modern times, the hybrid has been found as a definite introduction at two sites and was planted on the Brackenhurst Estate by M. Woods. Of the six remaining records, the identity of the specimens at Holme Pit and Fairham Brook are as yet, unconfirmed, but likely to be correct. Since 2012, the hybrid has been found at two further sites (in bold).

| Location | GR | Date | Recorder |
|----------------------------|-----------------|-------------|----------------|
| Farndon Willow Holt* | SK767521 | 2004 | MW |
| Brackenhurst Estate* | SK704514 | 2003 | MW |
| Holme Pit | SK536344 | 1997 | PA |
| Fairham Brook, Clifton | SK563340 | 2001 | PA |
| Misson Line Bank | SK709959 | 2010 | DCW, MW |
| Wilwell Cutting | SK567352 | 2011 | DCW, PS |
| Mill Lakes* | SK549477 | 2003 | MW |
| Ferry Road, Torksey | SK828789 | 2013 | DCW, MW |
| Graham Canal | SK682342 | 2015 | DCW, NP |

*Planted

Salix x forbyana Sm.

Fine Osier

National Status: Data Deficient**Nottinghamshire** Scarce**Monads:** 8

The female of this triple hybrid (*Salix purpurea* x *viminalis* x *cinerea*) is frequent throughout the south of Britain, being a relic of cultivation in many counties. The male was not known until 1954 when it was discovered at Attenborough by R.C.L. Howitt and later determined by R.D. Meikle. The male was planted by R.C.L. Howitt at Farndon Willow Holt and subsequently, the male was also found in Holts at Lound and by Rufford Lake. Single female specimens are still present at Attenborough and several other scattered sites throughout the VC, but the male has not been seen in recent years. Male and female specimens are however, cultivated in the collections at Farndon Willow Holt and Brackenhurst Estate.

Salix x forbyana (continued)

In 2015, a single specimen of *S. x forbyana* was recorded in the original willow holt at Farndon. The origin of the specimen is not known, but it is probably planted (asterix in table) and may have been one of the source plants for establishing the new collection at Farndon and Brackenhurst.

| Location | GR | Date | Recorder |
|---------------------------------|----------|------|------------|
| Attenborough Gravel Pits | SK529349 | 2004 | DCW |
| River Leen, Basford | SK544438 | 1995 | DCW |
| Kinoulton Marsh | SK6730 | 1978 | RCLH |
| River Trent, Nottingham | SK565373 | 2006 | DCW |
| River Trent, Radcliffe-on-Trent | SK647401 | 2005 | DCW |
| River Trent, Radcliffe-on-Trent | SK635396 | 2011 | DCW, PS(B) |
| South Muskham Gravel Pits | SK797561 | 2005 | DCW |
| Brackenhurst Estate | SK704514 | 2004 | MW |
| Farndon Willow Holt* | SK767521 | 2003 | MW |
| Farndon Willow Holt | SK767521 | 2015 | MW |
| River Trent, Stoke Bardolph | SK637398 | 2010 | DCW |
| River Erewash, Toton | SK501344 | 2010 | DCW |

Salix x fruticosa Döll.

Eared Osier

National Status: Data Deficient**Nottinghamshire** Rare**Monads:** 2

This hybrid between osier *Salix viminalis* and eared willow *Salix aurita* has always been rare in the VC and before 1970 was recorded only once in an old brickyard at Besthorpe, Howitt & Howitt (1963). In modern times, the species has been recorded at two locations as a native, both in hedgerows and some distance apart. In addition, R.C.L. Howitt planted eared osier *Salix x fruticosa* at Farndon Willow Holt. Cuttings from the sole surviving specimen were re-planted* at the Holt and also at Brackenhurst Estate, where they have successfully established.

| Location | GR | Date | Recorder |
|---------------------------------------|----------|------|----------|
| B6386 Roadside Verge | SK630507 | 2003 | MW |
| Farndon Willow Holt* | SK767521 | 2004 | MW |
| Sheepwalks Pond, Brackenhurst Estate* | SK705515 | 1999 | MW |
| B600 Roadside Hedgerow | SK472494 | 2012 | DCW |

Salix x leiophylla auct. non E.G. & A. Camus*S. triandra x purpurea***National Status:** Data Deficient**Nottinghamshire** Extinct

Stace (2010) states that the hybrid was recorded from four sites in Britain, but all records are now considered erroneous. Howitt & Howitt (1963) attributes two of the records to willow holt at Lound and Beckingham in Nottinghamshire. Specimens from both sites were determined by R.D. Meikle and the Howitts cultivated the specimens along with a specimen from Long Ashton Research Centre, which they claimed was identical. The Long Ashton specimen was referred to as *S. purpurea x triandra* Kerksii, Stott (1971), which was described by Stott as an ornamental willow. Searches of Farndon Willow Holt, which held the Howitts' collection, have failed to detect any cuttings that fit the description provided by the Howitts. Even if the hybrid is *bona fide*, the Lound and Beckingham Willow Holts have long been derelict and basket willow varieties have disappeared from both sites, so any specimens are unlikely to have survived dereliction and it is considered that the hybrid is best considered to be extinct in the VC.

| Location | GR | Date | Recorder |
|------------------------|--------|-------|----------|
| Lound Willow Holt | SK7187 | <1963 | RCLH |
| Beckingham Willow Holt | SK7990 | <1963 | RCLH |

Salix x meyeriana Döll.

Shiny-leaved Willow

National Status: Data Deficient**Nottinghamshire** Scarce**Monads:** 2

There are two historical records, originating before 1963; a male plant in an old quarry next to the River maun at Mansfield and two male trees next to a railway bridge at North Muskham. Neither of these specimens has been found in recent times. In modern times the species has been found in two relic osier beds at Annesley and Bestwood and cuttings from Howitt's willow collection at Farndon Willow Holt have been re-planted at Farndon and also at the Brackenhurst Estate.

| Location | GR | Date | Recorder |
|---------------------------------------|----------|------|----------|
| Kodak Willow Holt | SK501527 | 2011 | MW |
| Farndon Willow Holt* | SK767521 | 1999 | MW |
| Sheepwalks Pond, Brackenhurst Estate* | SK705515 | 1999 | MW |
| Mill Lakes | SK549478 | 2003 | MW |

*Planted

Salix x rubra Huds.

Green-leaved Osier

National Status: Data Deficient**Nottinghamshire** Scarce**Monads:** 8

Howitt & Howitt (1963) described the hybrid (*Salix viminalis x purpurea*) as being planted on the tidal River Trent and elsewhere as an uncommon component of willow holts. In recent times most of the records have been single bushes on riverbanks and a single bush has also been recorded at Lound Holt. Only two of the records are comprised of more than a single bush; at Ratcliffe-on-Soar the population is locally abundant, but is probably planted; whereas the Holme Pit population, which consists of several shrubs is located in fen vegetation and appears to be native. The hybrid has been planted at Farndon Willow Holt and Brackenhurst Estate as part of the restoration of Howitt's willow collection at Farndon.

| Location | GR | Date | Recorder |
|--------------------------------------|----------|------|----------|
| Clifton Grove | SK547355 | 2010 | DCW |
| Holme Pit | SK535346 | 2007 | DCW |
| Lound Holt | SK715878 | 2006 | DCW |
| River Trent, Holme Pierrepont | SK607386 | 2002 | DCW |
| River Trent, Holme Pierrepont | SK592387 | 2002 | DCW |
| River Soar, Ratcliffe-on-Soar | SK492282 | 2000 | DCW |
| River Soar, Stanford-on-Soar | SK541219 | 2005 | DCW |
| Farndon Willow Holt | SK704514 | 2003 | MW |
| Sheepwalks Pond, Brackenhurst Estate | SK7652 | 1999 | MW |

Salix x subsericea Döll.*S. cinerea x repens***National Status:** Data Deficient**Nottinghamshire** Rare, probably extinct**Monads:** 1

This rare hybrid has only been recorded once in modern times, in woodland to the east of Newark-on-Trent. The woodland has been surveyed in recent years, but specific searches for the hybrid have not been undertaken. Although grey willow *Salix cinerea* is still present, the nearest known population of creeping willow *Salix repens* is 1km to the north in Stapleford Woods.

| Location | GR | Date | Recorder |
|--------------|--------|------|----------|
| Brown's Wood | SK8453 | 1975 | RCLH |

Salvia verbenaca L.

Wild Clary

National Status: Least Concern**Nottinghamshire Rare****Monads:** 8

This species of dry soils on roadsides and waste ground declined in Nottinghamshire and was very rare by the beginning of the 1960s, probably because of habitat loss and modification. In modern times the species persisted at Nottingham Castle and until 1986 was present at Barrow Hills Sand Pit at Everton (SK682917). The three other populations consisted of two robust, extant populations, one at Netherfield on a spoil mound and the other at Collingham on a roadside verge. The third population at Bunny (SK589292) consisted of a single plant and is no longer extant. Since 2012, new populations have been recorded at Hawton and Wilford and the population at Collingham has been recorded again (in bold).

| Location | GR | Date | Recorder |
|-----------------------------------|-----------------|-------------|-----------|
| Nottingham | SK582396 | 2009 | PS(b) |
| Netherfield Spoil mound | SK634397 | 2010 | DCW |
| Nottingham Castle Rock | SK570394 | 2000 | PA, RAJ |
| Sneinton Hermitage | SK584394 | 2012 | PA |
| Westfield Lane, Collingham | SK821616 | 2015 | JC |
| Westfield Lane, Collingham | SK820616 | 2012 | RAJ |
| Rainworth Water Piece | SK592587 | 2012 | RAJ |
| Hawton Works | SK796499 | 2015 | DCW |
| Wilford Lane, Wilford | SK568366 | 2015 | SM |

Sambucus ebulus L.

Danewort

National Status: Least Concern**Nottinghamshire Rare****Monads:** 1

Historically danewort *Sambucus ebulus* was scattered throughout the VC on roadsides and building ruins. There were records from Blidworth and Ollerton on the Bunter Sandstones, Gamston, Bunny, Normanton, Bleasby, Beeston and Wakeringham on the Keuper Marls, Great Leake on the Lias Clays and Greasley on the Permian Marls. The species has disappeared at all of the above sites except Beauvale Priory at Greasley and despite the destruction of the Priory is still present. It is hoped that a large population located <5m outside of VC56 at Hose Lane, Kinoulton (SK722305), will eventually spread from Leicestershire into Nottinghamshire and double the number of modern records.

| Location | GR | Date | Recorder |
|-----------------|----------|------|-------------|
| Beauvale Priory | SK493490 | 1996 | RCLH, Woll. |

Scandix pecten-veneris L.

Shepherd's-needle

National Status: Critically Endangered, Nationally Scarce, UK Biodiversity Action Plan**Nottinghamshire Scarce****Monads:** 7

This archaeophyte has dramatically declined across south and east England since 1950, because of herbicide treatments, Preston *et al.* (2002). In the VC the species was once frequent in cornfields on Keuper Marl and Lias Clay and was also recorded at several sites on calcareous loams and at a single site on sandy soils at Everton. The species has been recorded at six locations since 1970, but has not been seen recently at the North Clifton (SK832715) and Cotham (SK803477) sites. A small population was recorded in a rape crop during 2015 (in bold) at a new site near Sutton-on-Trent, which is not far from the historical sites.

| Location | GR | Date | Recorder |
|-------------------|----------|------|----------|
| Laxton Mill Field | SK709664 | 1996 | DCW |
| Laxton Mill Field | SK717664 | 1996 | DCW |
| Laxton Mill Field | SK715666 | 1996 | DCW |
| Laxton Mill Field | SK716664 | 2007 | DCW, MW |

| Location | GR | Date | Recorder |
|------------------------------|-----------------|-------------|-----------|
| Hayton Field | SK737852 | 1997 | DCW |
| Kneesall | SK726639 | 1998 | RAJ |
| Kneesall | SK727640 | 1998 | RAJ |
| Ossington Airfield | SK749644 | 1998 | RAJ |
| Broadwaters Farm, Ossington | SK756636 | 1998 | RAJ |
| Sutton-on-Trent Field | SK779651 | 2015 | SM |

Schoenus nigricans L.

Black Bog-rush

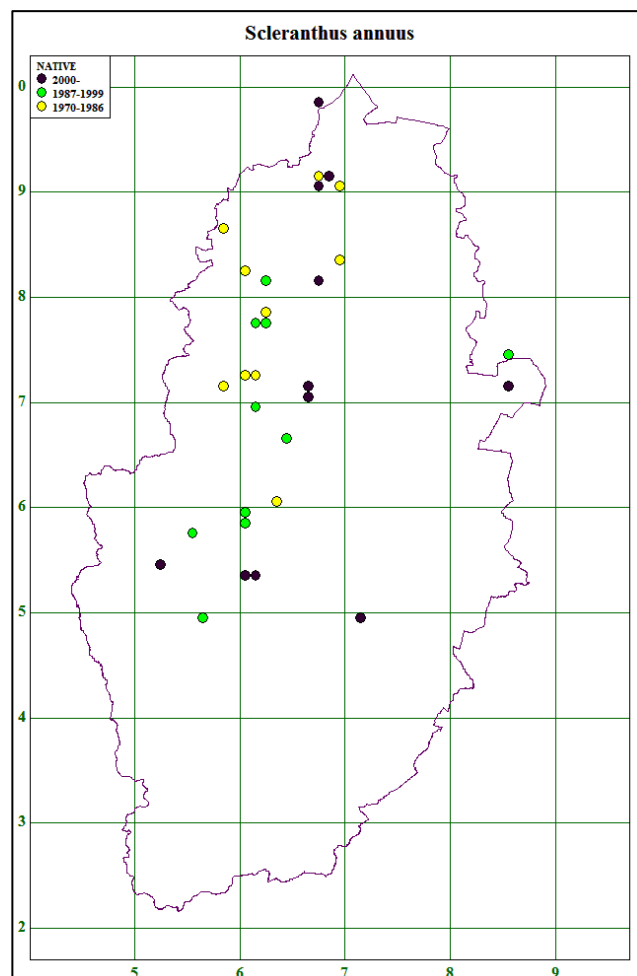
National Status: Least Concern**Nottinghamshire Rare****Monads:** 1

Black bog-rush *Schoenus nigricans* is a species of base-rich peat bogs that has steadily declined and is now reduced to a single site in a peaty flush, where, despite no discernible change in habitat quality or management, it has declined to a very small population. In the 18th and 19th Centuries the species was found at Edingley, Bulwell, Papplewick, Lindhurst, Basford, Pleasley, Newboundmill, Teversal and Sookholme Moor. Drainage and to a lesser extent habitat destruction has contributed to the 20th Century decline.

| Location | GR | Date | Recorder |
|----------------|----------|------|----------|
| Sookholme Moor | SK554678 | 2013 | RT |

Scleranthus annuus L.

Annual Knawel

National Status: Endangered**Nottinghamshire Uncommon****Monads:** 29

Scleranthus annuus (continued)

Howitt & Howitt (1963) described annual knawel *Scleranthus annuus* as being locally common in sandy fields. It was once particularly common in the Sherwood area and to a lesser extent on the blown sands and light soils in the east of the VC. In the latter part of the 20th Century, the decline of the species in the VC appears to have reflected the national decline, presumably because of factors such as habitat loss and agricultural intensification. However, in the VC it has not yet declined to the level where it has become scarce and since 1970 it has been recorded in 29 monads, mostly in the Sherwood area.

Sedum telephium L.

Orpine

National Status: Least Concern
Nottinghamshire Rare
Monads: 2

As a native this species of woods and hedges has always been rare and scattered. Before 1960, the species was recorded in hedgerows at Worksop on Magnesian Limestone and Bunter Sandstone, in sandy woodland at Barrow Hills Everton and at Gamston Wood on Keuper Marl. Since 1970 the species has not been recorded at any of its historic sites, but the population at Stone Hill Lane, Everton is less than 1km to the south of Barrow Hills and the Osberton location is near to Worksop. There are a number of other modern VC records for orpine *Sedum telephium*, which are considered to be introductions such as Pleasley Vale (SK516650) and Whitwell Church (SK526768).

| Location | GR | Date | Recorder |
|-----------------------------|----------|------|----------|
| Osberton Railway Embankment | SK634786 | 1972 | JH |
| Stone Hill Lane, Everton | SK682909 | 1999 | DCW |

Selinum carvifolium L.

Cambridge Milk Parsley

National Status: Vulnerable, Nationally Rare
Nottinghamshire Extinct

In 1909 J. W. Carr recorded Cambridge milk parsley *Selinum carvifolium* in a boggy meadow beside the River Meden at Newboundmill near Teversal. In 1952 when R. C. L. & B. M. Howitt visited the site the farmer informed them that the plant had disappeared when the field was drained a few years before their visit.

| Location | GR | Date | Recorder |
|---------------------|------|-------|----------|
| Newboundmill Meadow | SK46 | <1952 | JWC |

Senecio x baxteri Druce*S. squalidus x vulgaris*

National Status: Scattered
Nottinghamshire: Extinct
Monads: 2

Nationally this hybrid occurs spontaneously wherever both parents are present, Stace *et al* (2015). In Nottinghamshire, the hybrid has been recorded twice. The Bassingfield site is no longer extant and searches in neighbouring areas on similar habitat have yet to find any further plants. A second specimen has been recorded more recently at Cossall in scrubby grassland by Nottingham Canal SK478429.

| Location | GR | Date | Recorder |
|---------------------------|----------|------|----------|
| Bassingfield Gravel Pit | SK625377 | 1996 | DCW |
| Nottingham Canal, Cossall | SK478429 | 2014 | RAJ |

Senecio x londonensis Lousley*S. jacobaea x aquaticus*

National Status: Scattered
Nottinghamshire: Locally Scarce
Monads: 4

This hybrid is usually found in disturbed man-made habitats, Stace *et al* (2015) and usually occurs as just one or a few plants with both parents. In Nottinghamshire, it has been recorded at eight sites, but is probably no longer extant at Bunny Brick Works (SK581286), the former factory at Dunkirk (SK553376), Bramcote Landfill (SK503388) and Cotgrave Colliery (SK653364 and SK656363), because of development or landscaping work. The extant populations are associated with disturbed, sandy soils.

| Location | GR | Date | Recorder |
|------------------------------|----------|------|----------|
| Bestwood Sand Quarry | SK567480 | 1995 | DCW |
| Holme Pierrepont Gravel Pits | SK618384 | 1987 | DCW |
| Holme Pierrepont Gravel Pits | SK621388 | 1993 | DCW |
| Boughton Dismantled Railway | SK676673 | 1996 | DCW |
| River Trent, Staythorpe | SK765533 | 1995 | DCW |

Senecio x ostenfeldii Druce*S. jacobaea x aquaticus*

National Status: Scattered
Nottinghamshire: Locally Rare
Monads: 2

The distribution map in Stace *et al* (2015) shows this hybrid to be much more common in the west of the UK where it is usually found in moist habitats similar to those preferred by marsh ragwort *Senecio aquaticus*. Although it can occur in drier sites, the two sites in Nottinghamshire are both seasonally wet grasslands in the west of the county.

| Location | GR | Date | Recorder |
|---------------------------|----------|------|----------|
| Moorbridge Lane Grassland | SK484385 | 1997 | DCW |
| Moorbridge Lane Grassland | SK484386 | 2011 | DCW |
| Moorbridge Lane Grassland | SK485381 | 2001 | DCW |
| Moorbridge Lane Grassland | SK486385 | 1995 | DCW |
| Attenborough Gravel Pits | SK523345 | 2002 | DCW |

Silene conica Jacq.

Sand Catchfly

National Status: Vulnerable
Nottinghamshire: Extinct

Sand catchfly was recorded as a casual in 1935, described in Howitt & Howitt (1963) as a weed in lawn seed at Farndon, probably in his garden. Stace (2010) considers the species to be native in sandy places in East Anglia (and perhaps only there) and is a scattered casual elsewhere. The grid reference assumes the origin of the record to be the Howitt's residence in Farndon village.

| Location | GR | Date | Recorder |
|----------|-------|------|----------|
| Farndon | SK75Q | 1935 | RCLH |

Silene gallica Jacq.

Small-flowered Catchfly

National Status: Endangered, Nationally Scarce
Nottinghamshire: Rare
Monads: 1

Before 1839 G. Howitt recorded small-flowered catchfly *Silene gallica* growing in sandy arable fields at several locations in the VC. L. Allen then recorded the species in 1877 and H. Fisher recorded the species between 1878 and 1894. The species was not seen at all during the 20th Century, but during the 2003 Local Change survey work, a few plants were located in a 'weedy' raised flowerbed in a Municipal Park. Unfortunately the raised flowerbed was destroyed before seed-set, because of on-going refurbishment work at the park. Despite searches since 2003, no plants have been seen again.

Silene gallica (continued)

In 2012, a small population of 17 plants was found growing in open, species-rich vegetation on a disturbed, sandy slope at the edge of the former colliery yards at Calverton. The population is located in an area that is unlikely to be under any threat, at least in the short-term, but searches in following years have failed to locate any plants. The site may need to be disturbed in order to encourage germination.

| Location | GR | Date | Recorder |
|--------------------------|----------|------|----------|
| Titchfield Park | SK536485 | 2003 | MW |
| Calverton Colliery Yards | SK601504 | 2012 | MW |

Silene noctiflora L.

Night-flowering Catchfly

National Status: Vulnerable, Nationally Scarce
Nottinghamshire: Rare
Monads: 3

This archaeophyte has always been uncommon in the VC and has been mostly recorded on basic peat soils or soils overlying Magnesian Limestone. Howitt & Howitt (1963) described 11 historical records, but only one population survived beyond 1970; at Balderton three plants were found in the margin of an arable field. Since 1970 small numbers of plants have also been recorded at Bramcote, South Clifton and Barnstone, but the Bramcote population is no longer extant, because the landfill site (SK503388) has been capped and landscaped.

| Location | GR | Date | Recorder |
|-------------------------------|----------|------|----------|
| Balderton Field by Shire Dyke | SK830487 | 1987 | DCW |
| Barnstone Field | SK734351 | 2004 | DCW |
| South Clifton | SK822700 | 2008 | RAJ |

Silene nutans L.

Nottingham Catchfly

National Status: Near Threatened, Nationally Scarce
Nottinghamshire: Extinct

Mr Willisel first recorded Nottingham catchfly *Silene nutans* on Nottingham Castle Rock some time before 1670. J. Ray subsequently published the record. Howitt & Howitt (1963) described the decline of the species during the 19th Century stating that restoration works to the castle and grounds c.1890 all but exterminated the species. V. Leather was the last person to record the species in 1934 when one flower was seen in a new rockery. Unfortunately the flower was destroyed before it could set seed.

| Location | GR | Date | Recorder |
|------------------------|----------|------|----------|
| Nottingham Castle Rock | SK569394 | 1934 | VL |

Silene uniflora Roth

Sea campion

National Status: Least Concern
Nottinghamshire: Rare
Monads: 1

Sea campion is common around the coast of Britain, but inland is usually associated with lake and stream margins in mountainous areas. In Nottinghamshire, three plants were recorded in rubble at the end of a field track. The origins of the plants are not known, but it is likely to have been a garden throwout. No further populations have been recorded and it is likely that the Ruddington plants were casual and are now extinct.

| Location | GR | Date | Recorder |
|------------|----------|------|----------|
| Ruddington | SK569394 | 2002 | DCW |

Greater Water-parsnip

Sium latifolium L.

National Status: Endangered, Nationally Scarce
Nottinghamshire: Extinct

Howitt & Howitt (1963) described greater water-parsnip *Sium latifolium* as rare and decreasing on the sides of drains and fen pools. R.C.L. Howitt subsequently recorded the species at Misson and Misterton in the early 1970s, but neither of these populations has been recorded since 1973. The Gate Inn pond is still a likely habitat but the water table is now much lower. As a consequence, it is considered that the species is likely to be extinct in the VC.

| Location | GR | Date | Recorder |
|--------------------------|-------------|------|----------|
| Gate Inn Pond, Misterton | SK765964 | 1971 | RCLH |
| Dales Lane Drain, Misson | SK7095/7195 | 1973 | RCLH |

Solidago virgurea L.

Goldenrod

National Status: Least Concern
Nottinghamshire: Scarce
Monads: 4

By the early 1960s goldenrod *Solidago virgurea* had become very rare in the VC with the loss of most of the historical populations. The Bramcote Hills population was the only one to survive into the modern era and it still remains to this day. Of the three other populations that have been recorded since 1970, only the Pleasley Vale population consists of more than a single plant. Surveys since 2012 have confirmed that the Bramcote Hills, Pleasley Vale and Birdcage Walk populations are extant.

| Location | GR | Date | Recorder |
|---------------------------------------|----------|------|-------------|
| Bramcote Hills | SK522385 | 2015 | RAJ |
| Bramcote Hills | SK519385 | 2015 | RAJ |
| Bramcote Hills | SK520386 | 2008 | PA, RAJ, DS |
| Bramcote Hills | SK515389 | 2015 | RAJ |
| Bramcote Hills | SK515387 | 2015 | RAJ |
| Pleasley Vale Dismantled Railway Line | SK521648 | 2012 | KB |
| Pleasley Vale Dismantled Railway Line | SK517648 | 2013 | DaS |
| Littlewood Lane Quarry | SK533649 | 2009 | DCW |
| Birdcage Walk, Nottingham* | SK560384 | 2015 | DCW |

*Possibly introduced

Sparganium angustifolium Michx.

Floating Bur-reed

National Status: Least Concern
Nottinghamshire: Rare

The species has only ever been recorded three times in the VC at Kirkby Hardwick, Scrooby and possibly at Trent Bridge during the 18th Century. The Trent bridge record is likely to be erroneous and was probably *S. emersum*.

| Location | GR | Date | Recorder |
|-----------------------|------|------|----------|
| Kirkby Hardwick Ponds | SK55 | 1839 | Hurt |

Spergula arvensis L.

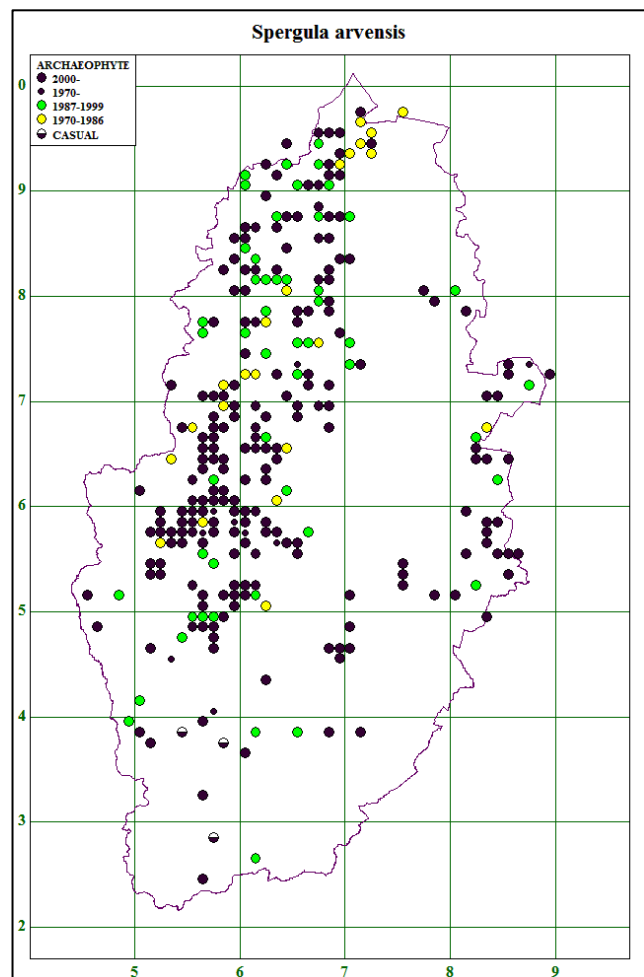
Corn Spurrey

National Status: Vulnerable
Nottinghamshire: Occasional to Locally Frequent
Monads: 283

Since the early the 1960s, agricultural intensification has been responsible for the national decline of corn spurrey *Spergula arvensis*. In the VC it was once common and widespread on arable fields with light soils. Although, to some extent, it has declined the species has probably fared better in Nottinghamshire than it has in many other VCs.

Spergula arvensis (continued)

This is probably because of the abundance of light sandy soils in the VC, agricultural systems (root crops) and the availability of alternative habitats to arable fields such as sand and gravel pits. See the next page for the distribution map



Spiranthes spiralis (L.) Chevall.

Ladies' Tresses

National Status: Near Threatened
Nottinghamshire Extinct

This species has been recorded only four times since 1756 at scattered locations across the VC. J. Brown was the last to record the species some time between 1942 and 1946. Ten plants were recorded on a gravel heap by the Idle Stop near Misson.

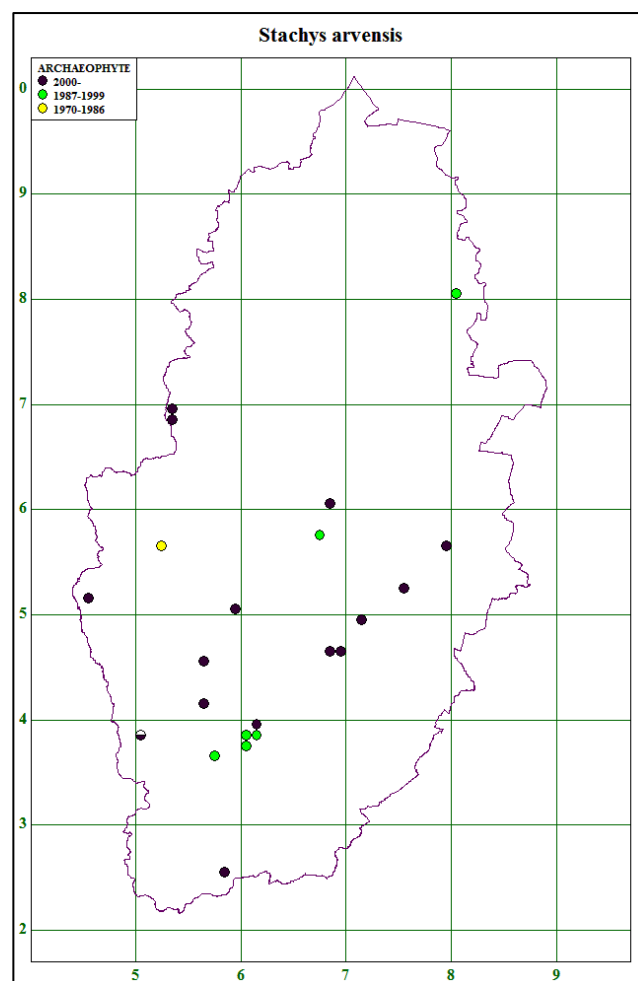
| Location | GR | Date | Recorder |
|-------------------|--------|-----------|----------|
| Idle Stop, Misson | SK7296 | 1942-1946 | JBn |

Stachys arvensis (L.) L.

Field Woundwort

National Status: Near Threatened
Nottinghamshire Uncommon
Monads: 20

This arable weed of sandy fields has never been common in the VC, but was most frequent in the west of the VC. Although field woundwort *Stachys arvensis* declined before the 1950s, the rate of decline accelerated in the latter part of the 20th Century. Since 1970 the species has been recorded in 20 rolling monads, scattered throughout the VC on a variety of soils, but often on lighter soils. Since 2012, the population at Warsop Vale has been confirmed as extant.



Stellaria nemorum subsp. *nemorum* L.

Wood Stitchwort

National Status: Least Concern
Nottinghamshire Rare
Monads: 1

Wood Stitchwort *Stellaria nemorum* subsp. *nemorum* is a species of damp woodland that has always been very rare in the VC. The population in Budby that was recorded by Bradley in the late 19th Century has not been seen in recent times. The population at Clifton Grove in the City of Nottingham is located in woodland overlooking the River Trent from SK547355 to SK544353. It was first recorded in the early 20th Century and persisted despite the need for translocation, because of partial habitat destruction in the mid-1980s. There are now two adjacent patches.

| Location | GR | Date | Recorder |
|---------------|----------|------|----------|
| Clifton Grove | SK547355 | 2013 | DCW |

Stellaria palustris Retz.

Marsh Stitchwort

National Status: Vulnerable
Nottinghamshire Scarce
Monads: 8

Marsh stitchwort *Stellaria palustris* is a species of marshy meadows on light soils, being absent from the heavier marls in the centre and west of the VC. By the 1960s, Howitt & Howitt (1963) described the species as decreasing in the VC, which followed the national declines that started before the 1930s. Losses were caused by drainage and direct habitat destruction and the remaining populations in the VC are located close to Nottingham in the Trent Valley and in the north of the VC at Misson. Recent losses include populations at Girtton in the east of the VC and in the north of the VC at Scrooby.

Stellaria palustris (continued)

In addition, the Holme Pit population at Clifton has not been seen during recent visits and may no longer be extant. Since 2012, archival searches have revealed historic records from Barton-in-Fabis (close to Holme Pit) and Lound Gravel Pits (grid reference provided is indicative). The population at Netherfield has been confirmed as extant and a further population has been recorded at Jacksdale.

| Location | GR | Date | Recorder |
|--------------------------------|-----------------|-------------|--------------|
| Everton Carr Drain | SK667904 | 1972 | JH |
| Misson Drain | SK678945 | 1972 | JH |
| Snow Sewer, Misson | SK723982 | 1972 | JH |
| Idle Stop | SK716962 | 1994 | DCW |
| Holme Pit | SK537346 | 1990's | DCW |
| Snow Sewer, Misson | SK720981 | 1995 | DCW |
| Misson Carr | SK7197 | 2001 | DCW |
| Idle Stop | SK718964 | 2010 | DCW, MW |
| Attenborough Gravel Pits | SK528354 | 2010 | DCW, RAJ, PA |
| Netherfield Gravel Pits | SK639400 | 2015 | JC |
| Netherfield Gravel Pits | SK642402 | 2010 | DCW |
| Barton-in-Fabis Drain | SK530335 | 1998 | MW |
| Lound Gravel Pits | SK712823 | 2012 | JS |
| Jacksdale Meadows West | SK448506 | 2014 | JC |

Stratiotes aloides L.

Water Soldier

National Status: Near Threatened, Nationally Scarce**Nottinghamshire** Extinct (as a native)**Monads:** 10 (as a neophyte)

As a native, the presence of this nationally declining species has only ever been confirmed twice in the VC. G.Howitt last recorded the species some time before 1839 in a moat in Strelley. At some time before 1855 J.K. Miller recorded the species somewhere between Morton in Lincolnshire and Walkeringham in Nottinghamshire. After 1855 there were no further records until the modern era, when water soldier *Stratiotes aloides* become commercially available. All of the ten modern records are considered to be introductions or garden escapes. The most recent record since 2012, from the canal marina, is highlighted in bold.

| Location | GR | Date | Recorder |
|---|-----------------|-------------|------------|
| Strelley Moat | SK5041 | <1839 | GH |
| Brackenhurst Gardens* | SK695523 | 2012 | MW |
| Brinsley Pond* | SK465490 | 2012 | MS, CS, PO |
| Shireoaks Colliery Yards* | SK559807 | 2011 | DCW, MW |
| Thorpe-in-the-Glebe* | SK621261 | 2004 | DCW |
| Newark-on-Trent* | SK804559 | 2000 | DCW |
| Nottingham Canal, Cossall* | SK478429 | 2001 | DCW |
| Nottingham Canal, Trowell* | SK485399 | 2001 | DCW |
| Nottingham Canal, Trowell* | SK481398 | 2001 | DCW |
| Martins Pond, Wollaton* | SK527401 | 1995 | DCW |
| Grantham Canal, Owthorpe* | SK67932 | 1994 | DCW |
| Chesterfield Canal, West Stockwith | SK785946 | 2015 | RAJ |

*Introduction or garden escape

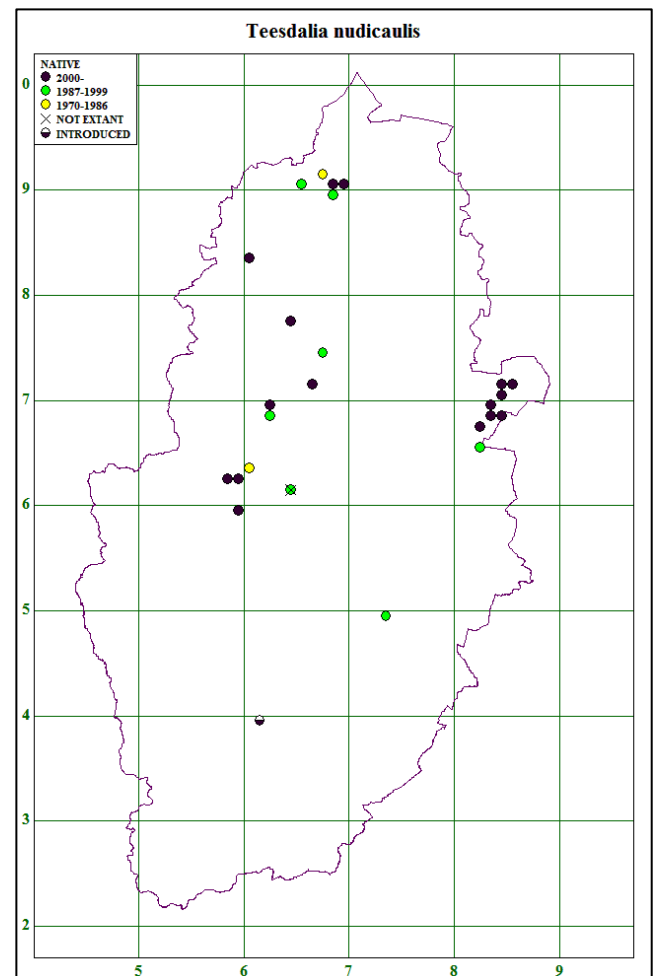
Teesdalia nudicaulis (L.) R. Br.

Shepherd's Cress

National Status: Near Threatened, Nationally Scarce**Nottinghamshire** Uncommon**Monads:** 25

On sandy heaths, shepherd's cress *Teesdalia nudicaulis* was once locally common, but scattered on the Bunter Sandstone, blown sands and gravels in the VC. Habitat loss and intensification of

agriculture has contributed to county and national declines, but sand and gravel workings and to a lesser extent post-industrial land has created new habitats and opportunities for the species. As a consequence, the species is not considered to be at threat of extinction in the VC. Since 2012, populations have been found at Clipstone Heath and Spalford, both in close proximity to other known populations.

*Thelypteris palustris* Schott...

Marsh Fern

National Status: Nationally Scarce**Nottinghamshire** Extinct

R.M. Payne last recorded marsh fern *Thelypteris palustris* in 1944 at Oxtan Bogs. Subsequent searches failed to find the species, presumably because the bogs dried out. There is an unconfirmed record for fern that developed at the former Wilford claypit. Unfortunately this cannot now be confirmed, because the area where it probably occurred has been developed.

| Location | GR | Date | Recorder |
|------------|--------|------|----------|
| Oxtan Bogs | SK6151 | 1944 | RMP |

Thymus pulegioides L.

Large Thyme

National Status: Least Concern**Nottinghamshire** Extinct (as a native)**Monads:** 2

R.C.L. Howitt recorded large thyme *Thymus pulegioides* during 1950 at West Leake Hills. This was the only record before 1970 and R.C.L. Howitt considered that population to be native. Since 1970 the population at West Leake has not been seen and given the habitat types, the two extant populations are considered to be non-native.

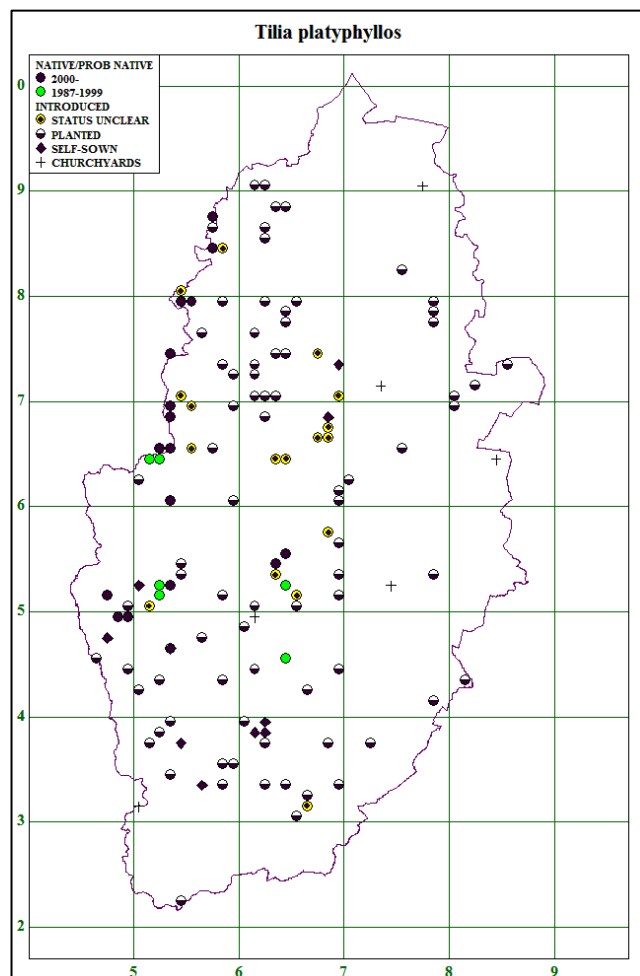
Thymus pulegioides (continued)

The population at Bingham (SK713386) consists of scattered plants on the track-bed ballast of a dismantled railway line. The population at Silverhill Colliery Tip (SK471622) consists of several plants growing on bare introduced limestone rubble. Since 2012, both populations have been confirmed as extant.

| Location | GR | Date | Recorder |
|--------------------------------|-----------------|-------------|------------|
| West Leake Hills | SK52 | 1950 | RCLH |
| Bingham Linear Park | SK713386 | 2015 | RAJ |
| Silverhill Colliery Tip | SK471622 | 2011 | DCW, MW |
| Silverhill Colliery Tip | SK468623 | 2015 | RAJ |

Tilia platyphyllos Scop.

Large-leaved Lime

National Status: Nationally Scarce**Nottinghamshire** Uncommon**Monads:** 96 (24 as a native)

Scratta Wood at Shireoaks was the only site in the VC where large-leaved lime *Tilia platyphyllos* was recorded before 1963 and Howitt & Howitt (1963) considered that the species was a denizen rather than native. The lack of records seems extraordinary considering the number of mature trees that have been recorded since 1970 and 23 of the records are almost certainly native given the location and circumstances. For example there are numerous records of mature limes that are located in ancient woodlands growing out of rocky outcrops on the Magnesian Limestone. In addition to the native records, there are a further 63 records that are definitely planted trees. Since 2012, the species has been recorded a further 17 times with four of the records being of known populations or specimens. The remaining trees are all likely to be introductions or regenerating from planted specimens given the location and substrates.

| Location | GR | Date | Recorder |
|------------------------------------|----------|------|----------|
| Bagthorpe | SK476513 | 1998 | DCW |
| Morning Springs, Annesley | SK489496 | 2005 | DCW |
| Morning Springs, Annesley | SK492493 | 2011 | DCW |
| Aldercar Wood, Newstead | SK521519 | 1993 | DCW |
| Aldercar Wood, Newstead | SK521520 | 1993 | DCW |
| Pleasley Vale | SK519649 | 1996 | DCW |
| Pleasley Vale | SK524649 | 1996 | DCW |
| Northfield Plantation | SK527651 | 2002 | MW |
| Northfield Plantation | SK532652 | 2007 | DCW |
| Quarry Banks, Linby | SK535523 | 2002 | DCW |
| River Maun Rock Outcrop, Mansfield | SK535603 | 2012 | RAJ |
| Minster Wood | SK536689 | 2001 | MW |
| Boon Hills Wood | SK531694 | 2012 | DCW |
| Creswell Crags | SK534741 | 2012 | DCW |
| Scratta Wood | SK542796 | 1992 | DCW |
| Holme Carr Wood, Shireoaks | SK557799 | 2012 | DCW, JC |
| Wallingwells Wood | SK573843 | 2011 | DCW, MW |
| Dyscar Wood, Langold | SK578875 | 2006 | DCW |
| Bulcote Wood | SK648452 | 1995 | DCW |
| Coomb's Wood, Farnsfield | SK639548 | 2001 | DCW |
| Oxton Dumble | SK643524 | 1994 | DCW |
| Riddings Hill, Farnsfield | SK647556 | 2003 | DCW |

Torilis arvensis L.

Spreading Hedge Parsley

National Status: Endangered, Nationally Scarce**Nottinghamshire** Rare**Monads:** 1

This archaeophyte has shown dramatic national declines, because of increasing agricultural intensity, vulnerability to herbicides and an inability to compete in dense crop swards, Preston *et al.* (2002). The decline has been less dramatic in the VC, because the species has never been common. Before 1970 the species was recorded on Keuper Marls at Gamston Moor, Clifton (near Nottingham), Kingston-on-Soar and Fiskerton, and on the Lias Clays, somewhere between Gotham and West Leake. Since 1970, the species has only been recorded at Cotgrave Colliery in a former arable field, which is heavily grazed by rabbits. When the population was first recorded in 1999 it was abundant on a former arable field over an area of approximately 100m². In subsequent years the population has declined and now consists of a few plants, which were seen most recently during the summer of 2012.

| Location | GR | Date | Recorder |
|-------------------------|----------|------|----------|
| Cotgrave Colliery Yards | SK654365 | 2012 | DCW |

Torilis nodosa (L.) Gaertn.

Knotted Hedge Parsley

National Status: Least Concern**Nottinghamshire** Rare**Monads:** 9

Since the early 1960s knotted hedge parsley *Torilis nodosa* has remained stable at its coastal sites, but has declined at many of its inland sites, Preston *et al.* (2002). In the VC this species of dry clay banks has never been common, but historically was widely distributed on Keuper Marls and on the Lias Clays was recorded near Owthorpe, Kilvington and Balderton. Since 1970 the species has been recorded in nine rolling monads, which are for most part located on the Lias Clays in the south and east of the VC. The loss of species on the Keuper Marls is likely to be caused by agricultural intensification and habitat loss.

| Location | GR | Date | Recorder |
|-------------------------------------|----------|-------|------------|
| Collingham | SK8261 | <1986 | EMP |
| Balderton Disused Airfield | SK808492 | 1988 | DCW |
| Gotham Hills | SK532309 | 1990 | DCW |
| River Witham, Barnby-in-the-Willows | SK857522 | 1998 | DCW, Woll. |

Torilis nodosa (continued)

| Location | GR | Date | Recorder |
|-------------------------------------|----------|------|------------|
| River Witham, Barnby-in-the-Willows | SK854516 | 1998 | DCW, Woll. |
| River Witham, Barnby-in-the-Willows | SK856522 | 1998 | DCW, Woll. |
| Dunham-on-Trent Floodbank | SK820742 | 1999 | DCW |
| Wright's Hill | SK506307 | 2003 | DCW |
| Langar Grassland Pond | SK719319 | 2004 | DCW |
| Orston Field | SK774399 | 2005 | DCW |
| Orston Field | SK776399 | 2005 | DCW |
| South Clifton Hill | SK821697 | 2007 | DCW |
| South Clifton Hill | SK823697 | 2007 | DCW |
| South Clifton Hill | SK825696 | 2007 | DCW |
| Balderton Disused Airfield | SK824490 | 2007 | DCW |
| Balderton Disused Airfield | SK810490 | 2007 | DCW |
| Balderton Disused Airfield | SK814494 | 2007 | DCW |
| Balderton Disused Airfield | SK813489 | 2007 | DCW |
| Gotham Hills | SK538312 | 2008 | DCW |
| Gotham Hills | SK531307 | 2009 | DCW |
| Granby Pasture Bank | SK748359 | 2009 | DCW |

Trichophorum germanicum Palla

Deergrass

National Status: Least Concern
Nottinghamshire Extinct

In the 19th Century deergrass *Trichophorum germanicum* was relatively common on wet heaths. The species was not recorded during the 20th Century, presumably because of habitat loss and drainage, so Howitt & Howitt (1963) considered the species to be extinct.

| Location | GR | Date | Recorder |
|---------------|----------------|------|----------|
| On wet heaths | Not Applicable | 1839 | GH |

Trifolium ochroleucon Palla

Sulphur Clover

National Status: Near Threatened, Nationally Scarce
Nottinghamshire Extinct

Sulphur clover *Trifolium ochroleucon* has only been recorded once in the VC, in a meadow near Wilford Osier Holt. It is considered to be extinct having not been recorded after 1839.

| Location | GR | Date | Recorder |
|--------------------|------|------|----------|
| Wilford Osier Holt | SK53 | 1839 | GH |

Triglochin maritima L.

Sea Arrow-grass

National Status: Least Concern
Nottinghamshire Extinct

Inland, sea arrow-grass *Triglochin maritima* is rare and many of the inland brackish pastures it once frequented have been destroyed. A specimen located in the Bolton Museum Herbarium was obviously unknown to the Howitts, because there is no mention in the 1963 Flora of Nottinghamshire. The quarry at Barnstone, from where the specimen was collected by J.T. Harris in 1867, is no longer extant, but it was probably somewhere in the vicinity of the Cement Works, which is located to the south of Barnstone Village. A further record has recently been found in the papers of Richard Gouldings, which was known to the Howitts only after they had published their flora in 1963. The second record originates from the edge of Welbeck Abbey gardens where it was recorded in 1916 and not seen again.

| Location | GR | Date | Recorder |
|-----------------------|--------|------|----------|
| Barnstone Quarry | SK73 | 1867 | JTH |
| Welbeck Abbey Gardens | SK5674 | 1916 | RG |

Typha x glauca Godr.*T. latifolia x angustifolia*

National Status: Data Deficient
Nottinghamshire Scarce
Monads: 6

This highly sterile hybrid occurs in scattered places throughout England, usually with both parents and is probably overlooked, Stace (2010). There are no historical records for the species, but it has probably always been present in the VC, wherever the parents occur together. Although the hybrid is only found at five sites, it is locally abundant at three of the sites. Since 2012, populations in the Grantham Canal have been confirmed as extant (in bold) and a further population has been found on Calverton Colliery Tip (in bold) in amongst both parents in a wet ditch.

| Location | GR | Date | Recorder |
|---------------------------------------|-----------------|-------------|------------|
| Grantham Canal, West Bridgford | SK5838 | 2009 | DCW, RW |
| Grantham Canal, West Bridgford | SK590380 | 2015 | RAJ |
| Grantham Canal, West Bridgford | SK598375 | 2015 | RAJ |
| Grantham Canal, Cotgrave | SK634365 | 2015 | RAJ |
| Colwick Country Park | SK6038 | 2010 | DCW |
| Colwick Country Park | SK609393 | 2010 | DCW |
| Colwick Country Park | SK608390 | 2010 | DCW |
| Martin's Pond, Wollaton | SK526402 | 2011 | DCW |
| Gateford Fox Covert | SK563819 | 2012 | GC |
| Calverton Colliery Tip | SK601513 | 2013 | MW |

Umbilicus rupestris (Salisb.) Dandy

Navelwort

National Status: Least Concern
Nottinghamshire Rare
Monads: 1

Stace (2010) describes navelwort *Umbilicus rupestris* as being rare in the East of England and often only naturalised. There are no historical records and Preston *et al* (2002) shows native populations to the south, west and north, but only non-native populations to the east and southeast. Given the location in Nottingham, on the external faces of garden walls, it is likely that the population is naturalised and may be a recent introduction rather than being overlooked.

| Location | GR | Date | Recorder |
|------------------------------|------------|------|----------|
| Melton Road, West Bridgford, | SK58763676 | 2015 | SM |
| Taunton Road, West Bridgford | SK58713675 | 2016 | SM |

Urtica dioica subsp. *galeopsifolia* (Wierzb. ex Opiz) Chrtk.

Fen Nettle

National Status: Data Deficient
Nottinghamshire Rare
Monads: 3

Nationally and also in the VC fen nettle *Urtica dioica* subsp. *galeopsifolia* is a plant of wet woodlands rather than weedy situations. Howitt & Howitt (1963) does not include any information about the presence of the species in the VC and the BSBI species accounts³ indicates that further work is needed to understand the species ecology and distribution. The populations at Clifton are widespread and frequent, but are less abundant at Shelford and Haughton. A further population has been detected during 2015 at Kirkby Park in marshy grassland.

³ <http://sppaccounts.bsbi.org.uk/content/urtica-dioica-and-u-galeopsifolia>

Urtica dioica subsp. *galeopsifolia* (continued)

| Location | GR | Date | Recorder |
|-----------------------|----------|------|----------|
| Haughton Lower Ponds | SK689723 | 1999 | DCW |
| Shelford Carr | SK668433 | 2010 | DCW |
| Holme Pit, Clifton | SK535346 | 2011 | DCW |
| Holme Pit, Clifton | SK536345 | 2011 | DCW |
| Kirkby Park Grassland | SK471548 | 2015 | MW |

Utricularia minor L.

Lesser Bladderwort

National Status: Least Concern
Nottinghamshire Extinct

Lesser bladderwort *Utricularia minor* was only ever recorded twice in the VC. It was recorded in the central part of the VC at Edingley Moor in the early 19th Century and 150 years later it was recorded in the north of the VC in a drain at Misson Bombing Range, Howitt & Howitt (1963). The reason for the loss at Misson is not known, but drainage of the surrounding land is likely to have been a contributory factor.

| Location | GR | Date | Recorder |
|----------------------------|------|------|----------|
| Misson Bombing Range Drain | SK79 | 1952 | RCLH |

Utricularia vulgaris sensu lato L.

Greater Bladderwort

National Status: Least Concern
Nottinghamshire Extinct

In the VC greater bladderwort *Utricularia vulgaris* sensu lato was always more common than lesser bladderwort *U. minor*, but by the 1950s it was confined to the north of the VC. Since the early 1960s the species has not been found. In the 19th century the species was found at scattered localities throughout the county such as Mansfield, Kirklington, Thurgarton and Muskham, in addition to Misson, Misterton and Gringley in the north. Factors such as habitat destruction, drainage and eutrophication are likely to have contributed to the loss of the species.

| Location | GR | Date | Recorder |
|----------------------------------|------|-------|----------|
| Misson; Misterton; Gringley Carr | SK79 | <1963 | RCLH |

Vaccinium myrtillus L.

Bilberry

National Status: Least Concern
Nottinghamshire Scarce
Monads: 7

This formerly frequent species of heaths and sandy woods was rapidly declining by the early 1960s, Howitt & Howitt (1963). Bilberry *Vaccinium myrtillus* was most frequent in the Sherwood area, but was also present on the blown sands in the east of the VC. In modern times, the species disappeared from Wigsley Wood (SK850702) and Spalford Warren (SK833680) in the east of the VC and Coxmoor Plantation (SK518566) in the Sherwood area. It is now confined to five sites; four of the sites are located on sandy soils in the Sherwood area and the population at Lord Stubbins Wood is located close to the Derbyshire border on the Permian Marls. Since 2012, populations at Birklands and Clipstone have been confirmed as extant (in bold).

| Location | GR | Date | Recorder |
|----------------------------|-------------------|-------------|----------------|
| Ratcher Hill, Mansfield | SK576599 | 1996 | DCW |
| Lord Stubbin's Wood | SK540691 | 2012 | DCW |
| Lord Stubbin's Wood | SK541691 | 2012 | DCW |
| Lord Stubbin's Wood | SK541690 | 2012 | DCW |
| Newlands Plantation | SK58076434 | 2013 | DCW, MW |
| Robin Hood Hills | SK510545 | 2009 | DCW |
| Birklands | SK617679 | 2009 | DCW |
| Birklands | SK6168 | 2015 | WH |
| Thieves Wood | SK546567 | 2011 | DCW |
| Thieves Wood | SK549565 | 2011 | DCW |
| Thieves Wood | SK545572 | 2011 | DCW |

| Location | GR | Date | Recorder |
|--------------|----------|------|----------|
| Thieves Wood | SK547573 | 2011 | DCW |

Vaccinium oxycoccus L.

Cranberry

National Status: Least Concern
Nottinghamshire Extinct

Oxton Bogs is the only site in the VC where cranberry *Vaccinium oxycoccus* was recorded and it was last seen during the late 19th Century. There is a specimen in the Nottingham Natural History Museum (NOT). The loss of the species probably coincided with adverse changes to the local water table.

| Location | GR | Date | Recorder |
|------------|--------|------|----------|
| Oxton Bogs | SK6151 | 1886 | HFi |

Vaccinium vitis-idaea L.

Cowberry

National Status: Least Concern
Nottinghamshire Extinct

This characteristic species of wet acid peat was recorded on bogs alongside Rainworth Water, at Papplewick Forest and bogs near Mansfield, where it was last seen in 1875. The losses probably coincided with drainage and habitat loss.

| Location | GR | Date | Recorder |
|---------------------|------|------|----------|
| Bogs near Mansfield | SK55 | 1875 | JCr |

Valerianella dentata (L.) Pollich.

Narrow-fruited Cornsalad

National Status: Endangered, Nationally Scarce
Nottinghamshire Scarce
Monads: 6

Narrow-fruited cornsalad *Valerianella dentata* was once widespread, but uncommon in the VC, being found on arable fields with basic soils. Since 1970 it has been recorded nine times at seven sites, but a population in a wheat field at Sookholme (SK539667) has been buried under a colliery spoil tip and a population in an arable field at West Leake Hills (SK541283) in the south of the VC has not been seen since 1987. Of the extant populations, the Teversal and Warsop populations are located on Limestone chippings or Magnesian Limestone, the Thurgarton populations are located on Keuper Marl and the Everton Carr population is located on base-rich peat of a drain-bank.

| Location | GR | Date | Recorder |
|-------------------------------------|----------|------|----------|
| Everton Carr Drain | SK693929 | 1972 | JH |
| Newbound Farm | SK493629 | 1972 | JH |
| Teversal Trail | SK4962 | 1978 | Woll. |
| Teversal Trail | SK493630 | 1997 | DCW |
| Thurgarton Footpath | SK694481 | 2002 | RAJ, DCW |
| Thurgarton Footpath | SK692479 | 2002 | RAJ, DCW |
| Warsop Vale Dismantled Railway Line | SK549677 | 2007 | DCW |

Verbascum lychnitis L.

White Mullein

National Status: Nationally Scarce
Nottinghamshire Rare
Monads: 2

Before 1970, white mullein *Verbascum lychnitis* was only ever recorded during the early part of the 19th Century at Clifton Hill on the east bank of the River Trent, to the north of Newark-on-Trent. Between 1970 and 2015, the species has only been recorded at Toton Sidings where it still persists, after more than twelve years, on railway ballast and clinker. In 2015, a new population of three plants was found on an abandoned section of the A52 Trunk Road, near Elton-on-the Hill in South Nottinghamshire.

Verbascum lychnitis (continued)

| Location | GR | Date | Recorder |
|-----------------------------------|----------|------|----------|
| Toton Sidings | SK489349 | 2015 | DCW |
| Toton Sidings | SK489350 | 2015 | DCW |
| Toton Sidings | SK490351 | 2015 | DCW |
| Toton Sidings | SK490351 | 2015 | DCW |
| Toton Sidings | SK488354 | 2012 | DCW |
| A52 Trunk Road, Elton-on-the-Hill | SK761385 | 2015 | DCW |

Verbascum nigrum L.

Dark Mullein

National Status: Least Concern
Nottinghamshire Scarce
Monads: 11 (7 as a native)

Dark Mullein *Verbascum nigrum* is a species of hedgerows and dry woodlands in the VC. Before 1970 it was mostly found on the sandy soils of the Sherwood area, but was also recorded at Annesley and as a garden escape to the south of the River Trent at Barton-in-Fabis. In modern times the species has continued to be most abundant on the Sherwood sands, but small and presumably non-native populations have also been recorded in the south of the VC at Wiverton Hall, Bingham Linear Park, Burntstump Landfill, Bunny Landfill (SK578285) and Hawton Gypsum Works. The population at Bunny is no longer extant, because of landscaping and only a single plant was recorded at Hawton, so it too may be no longer extant. Since 2012, extant and new populations are highlighted in bold. The status of the new populations has yet to be confirmed, but the High Marnham population is probably native.

| Location | GR | Date | Recorder |
|--|-----------------|-------------|---------------------|
| Wiverton Hall* | SK709361 | 1987 | Woll. |
| Rufford Abbey | SK646648 | 1997 | DCW |
| Rainworth Plantations | SK592615 | 2003 | DCW |
| Hawton Works* | SK801504 | 2004 | DCW |
| Clipstone Forest | SK602613 | 2004 | DCW, MW |
| Clipstone Forest | SK614619 | 2004 | DCW, MW |
| Clipstone Forest | SK622634 | 2004 | DCW, MW |
| Clipstone Forest | SK6162 | 2004 | DCW, MW |
| Rufford | SK627639 | 2006 | DCW |
| Rufford Abbey | SK646649 | 2013 | RAJ, MW |
| Rufford Track | SK634643 | 2012 | DCW |
| Rufford Track | SK629642 | 2012 | DCW |
| Rufford Track | SK627639 | 2012 | DCW |
| Burntstump Landfill* | SK589499 | 2012 | MW |
| Burntstump Landfill* | SK586502 | 2012 | DCW |
| Bingham Linear Park* | SK713385 | 2012 | DCW |
| Bingham Linear Park* | SK709388 | 2012 | DCW |
| Bingham Linear Park* | SK716384 | 2012 | DCW |
| Farndon Gravel Pits* | SK769527 | 2015 | RAJ, DCW |
| High Marnham Dismantled Railway | SK797711 | 2015 | RAJ, DCW, MW |
| Butler's Hill, Hucknall* | SK549486 | 2015 | DCW |

*Garden escapes

Verbascum pulverulentum Vill.

Hoary Mullein

National Status: Nationally Rare
Nottinghamshire Extinct

The species was last recorded in the 18th Century, growing out of walls at Wollaton Hall and in the City of Nottingham.

| Location | GR | Date | Recorder |
|--|------|------|----------|
| Wollaton, High Pavement, and Sheep Lane, Nottingham: | SK53 | 1748 | CD |

Verbascum x duernsteinense
Teyber*V. thapsus x speciosum*

National Status: Data Deficient
Nottinghamshire Rare
Monads: 1

This native hybrid has only ever been recorded once in Nottinghamshire at Toton Sidings; elsewhere Sell & Murrell (2009) state that the hybrid has been recorded in Norfolk and Cambridgeshire. In 2001 D.C. Wood recorded several plants on railway ballast that were present where the parents were growing together.

| Location | GR | Date | Recorder |
|---------------|----------|------|----------|
| Toton Sidings | SK488352 | 2001 | DCW |

Verbena officinalis L.

Vervain

National Status: Least Concern
Nottinghamshire Scarce
Monads: 10

Vervain *Verbena officinalis* is a species of waysides that has always been very rare, but widespread in the VC, being only absent from the Lias Clays, Howitt & Howitt (1963). The species appears to be somewhat casual in appearance, because none of the populations described by Howitt & Howitt (1963) were re-located after 1970. Since 1970 the species has been recorded in scattered localities throughout the VC including the Lias Clays. Most of the plants appear on track verges or dumped materials and consist of no more than one plant. Four modern populations at Kirkby-in-Ashfield (SK506576), Bramcote Landfill (SK502388), Radford in Nottingham (SK548403) and Rainworth (SK595578) are no longer extant. Since 2012, extant populations have been detected at Barnstone, Spalford and Hawton and a new population has been found at Clipstone Forest, presumed to be The Hundred Acres (all in bold).

| Location | GR | Date | Recorder |
|-------------------------------|-------------------|-------------|-----------------|
| Barnstone Cement Works | SK738352 | 2015 | DCW, NP |
| Bingham Railway Line | SK696403 | 2004 | DCW |
| Spalford Warren | SK834681 | 2014 | DCW, RAJ |
| Cotgrave Gorse | SK658344 | 2012 | DCW |
| Ranskill Sandpit | SK663881 | 2011 | DCW |
| Carlton Forest Sand Quarry | SK601823 | 2012 | DCW, MW |
| Hawton Works | SK80195067 | 2015 | DCW |
| Hawton Works | SK800502 | 2015 | DCW |
| Hawton Works | SK801487 | 2015 | DCW |
| East of Nether Langwith | SK546703 | 2012 | KB |
| The Hundred Acres | SK611596 | 2014 | DaS |

Veronica scutellata L.

Marsh Speedwell

National Status: Least Concern
Nottinghamshire Scarce
Monads: 9

Marsh speedwell *Veronica scutellata* has never been common, but has been historically recorded throughout the VC in bogs and marshes. Comparison of pre- and post-1970 records indicates that the only populations that have persisted are those at Misson. All other extant populations were not recorded before 1970. Whilst this is not surprising for gravel pit and reservoir populations at Torsworth, Gorton and Greasley respectively, other populations occur in long standing semi-natural habitats at sites such as Selston, Rempstone and Underwood and these may have been overlooked before 1970. One other population recorded at Gamston Brickyards (SK696771) in 1972 has not been seen in recent years and is therefore, considered to be no longer extant. Since 2012, a further population has been detected in at Clumber Park (in bold).

Veronica scutellata (continued)

| Location | GR | Date | Recorder |
|--------------------------|-----------------|-------------|------------|
| Misson Drain | SK677944 | 1972 | JH |
| Daneshill Gravel Pits | SK667863 | 1975 | JH |
| Girton Gravel Pits | SK86C | 1986 | LNU |
| Moorgreen Reservoir | SK481491 | 1995 | DCW |
| Daneshill Gravel Pits | SK666859 | 1997 | DCW |
| Daneshill Gravel Pits | SK669862 | 1997 | DCW |
| Selston Common | SK474527 | 1998 | DCW |
| Friezeland | SK476505 | 2004 | DCW |
| Friezeland | SK475506 | 2004 | DCW |
| Rempstone Old Churchyard | SK568250 | 2010 | DCW |
| Misson Carr Drain | SK713973 | 2010 | DCW, RAJ |
| Misson Carr Drain | SK717974 | 2010 | DCW, RAJ |
| Misson Carr Drain | SK715973 | 2010 | DCW, RAJ |
| Misson Carr Drain | SK715976 | 2012 | DCW, JC |
| Misson Carr Drain | SK711973 | 2012 | DCW, JC |
| Retford Grassland | SK717816 | 2012 | JC, DCW |
| Clumber Park | SK632736 | 2014 | DCW |

Veronica triphyllos L.

Fingered Speedwell

National Status: Endangered, Nationally Rare
Nottinghamshire Extinct

Howitt & Howitt (1963) includes an extract from J. W. Carr. Transactions of Nottinghamshire Naturalists, 1904, which states: "There is one specimen of this species in the Herbarium at Nottingham Natural History Museum gathered at Barrow Hills, Everton. No date or collectors name are given, but the specimen is probably fifty or sixty years old." Searches during the 20th and 21st Centuries have not re-located the species and it is, therefore, considered to be extinct.

| Location | GR | Date | Recorder |
|--------------|------|------|-------------------------|
| Barrow Hills | SK69 | 1820 | Anon. (pers. comm. JWC) |

Vicia bythnica (L.) L.

Bythnian Vetch

National Status: Vulnerable, Nationally Scarce
Nottinghamshire Extinct

During 1952 R. C. L. Howitt recorded Bythnian vetch *Vicia bythnica* at Hare Hills among scrub. This was the only record for the VC and it has not been seen since.

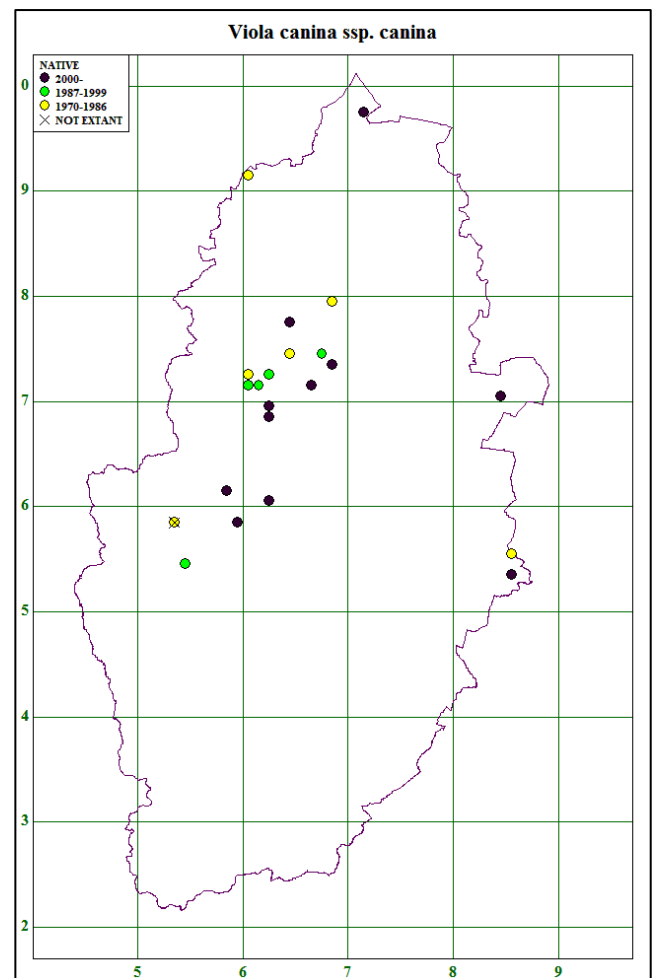
| Location | GR | Date | Recorder |
|------------|--------|------|----------|
| Hare Hills | SK7062 | 1952 | RCLH |

Viola canina subsp. *canina* L.

Heath Dog-violet

National Status: Near Threatened
Nottinghamshire Uncommon
Monads: 21

Declines in the VC appear to reflect the national declines, brought about by habitat loss, drainage, agricultural improvement and under-grazing. Howitt & Howitt (1963) described the species as being a locally frequent native of heathlands and sandy woods. It was formally common on Sherwood heaths and sandy soils of the River Idle valley, but was also found on the blown sands to the east of the River Trent and elsewhere, wherever sandy soils were present. Since 1970 the species has become generally uncommon, being recorded in only 21 rolling monads, but it still occupies similar soils and range of habitat types. Since 2012, populations at Clumber Park and Ollerton have been confirmed as extant.

*Viola canina* subsp. *montana* (L.) Fries.

Heath Dog-violet

National Status: Endangered
Nottinghamshire Extinct

R.C.L. Howitt last recorded subspecies *montana* before 1963 in peaty meadows at two locations in the VC. Prof. D. H. Valentine determined both records. The species has not been seen since 1970 at either location or anywhere else in the VC, probably because of drainage or the direct destruction of fens.

| Location | GR | Date | Recorder |
|-----------|------|-------|----------|
| Gonalston | SK64 | <1963 | RCLH |
| Clifton | SK53 | <1963 | RCLH |

Viola palustris L.

Marsh Violet

National Status: Least Concern
Nottinghamshire Rare
Monads: 3

Preston *et al* (2002) states that marsh violet *Viola palustris* is now absent from large areas of the Midlands. Howitt & Howitt (1963) stated that the species occurred in bogs and boggy woodlands and was "less frequent than formerly." Historically the species was recorded throughout the VC, but was only considered to be frequent in the Sherwood area. Since 1970 the species has persisted at only three sites in the Sherwood area. Other populations at Rainworth Lakes (SK583579), Newstead Reedwater Pond (SK539542), Newstead Dumbles (SK532537) Spalford (SK8369) and Ling's Wood Scaftworth (SK668908) are probably no longer extant, because of habitat change or loss.

Viola palustris (continued)

| Location | GR | Date | Recorder |
|------------------------|----------|------|------------|
| Fountain Dale | SK573573 | 1972 | JH |
| Hollinwell Golf Course | SK526544 | 1972 | Woll. |
| Fouleil Brook | SK577583 | 1991 | DCW, Woll. |
| Fouleil Brook | SK580583 | 1991 | DCW, Woll. |
| Fountain Dale | SK568569 | 2001 | DCW |
| Hollinwell Golf Course | SK526545 | 2009 | DCW |

Viola lutea Huds.

Mountain Pansy

National Status: Least Concern
Nottinghamshire Extinct

G. Howitt recorded mountain pansy *Viola lutea* in the early part of the 19th Century at Bramcote in what was described as "upland pastures". This was the only record and it has not been seen since 1839.

| Location | GR | Date | Recorder |
|------------------|------|------|----------|
| Bramcote Pasture | SK53 | 1839 | GH |

Viola persicifolia Schreb.

Fen Violet

National Status: Endangered, Schedule 8: Wildlife & Countryside Act 1981, Nationally Rare
Nottinghamshire Extinct

Fen violet *Viola persicifolia* (recorded as *V. stagnina*) was located at three locations in the north of the VC in peaty meadows. The species was found in a dyke at Gringley Carr, in meadows between Misson and Misterton and between Misson and Lewington. Howitt & Howitt (1963) stated that the species was flourishing between Misson and Newington in 1952, but by 1956 was no longer extant, because of ploughing and re-seeding. In 2014 J.O. Mountford of the Centre for Ecology and Hydrology (formally the Institute of Terrestrial Ecology (ITE)) contacted the authors to enquire about former Misson Fenny Fields described by the Howitts in their 1963 flora. J.O. Mountford is currently working with the Fen Violet Recovery Steering Group and wanted to know about recent botanical records.

It was confirmed by M. Woods, what J.O. Mountford suspected that the ditches he had visited in the 1980s had deteriorated further and were now even less suitable and in some cases completely overgrown or lacking any peat.

J. O. Mountford kindly provided M. Woods with a summary of research regarding the historical records and current status. Reproduced below is an extract from his Nottinghamshire research. "In 1982, Margaret Miller found one flowering plant of *Viola persicifolia* on the north bank of the drain separating the Misson Line Bank from the arable land which had once been "Fenny Fields" (43/705957). A colour slide taken by Dr L. Storer was confirmed as Fen Violet by Dr S.M. Walters. It was growing in a more open area with *Galium palustre* and *Ranunculus repens*, among *Epilobium hirsutum* with some *Sium latifolium* and *Oenanthe fistulosa*. Mrs Miller revisited the site in 1983 with Mrs G. Crompton, Ms L. Farrell and Dr Storer.

Despite a careful search of the area, the violet was not re-found and Ms Farrell believed that the banks were too overgrown and the water level too high, rendering the site unsuitable for *V. persicifolia*. However, she felt that were the banks cleared and the ground somewhat disturbed, there was some possibility that the violet might return. The 1983 visit recorded the following species as present where the violet had occurred in the previous year: *Achillea ptarmica*, *Carex rostrata*, *Equisetum fluviatile*, *Myosotis scorpioides* and *Stellaria palustris*.

In 1983, the ITE made a detailed survey of the fields and drainage channels around the villages of Misson, Misterton and Gringley (Mountford & Sheail, 1985). In consultation with Leaver Howitt, they made a thorough search of those areas where *Viola persicifolia* (and other fen specialities e.g. *Lathyrus palustris*) had

been recorded during the 1950s (Howitt, *pers.comm.* 1983). All the fields concerned were under intense arable cultivation. The drainage ditches appeared unlikely to be able to act as refugia: some had been eliminated; others were derelict and overgrown with coarse grassland and bramble, whilst those which retained a drainage function were very frequently scoured by an excavator to produce an open vegetation, with bare sand and ruderals. Their assessment of the Miller site agreed with that of Farrell." Mountford (undated).

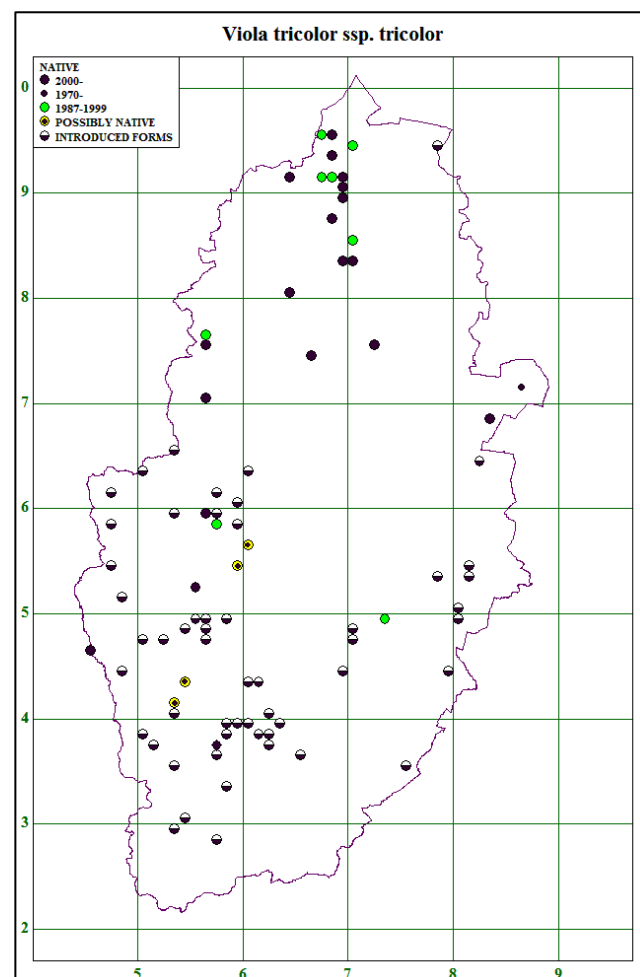
Subsequent searches in the 1990s by the ITE proved fruitless and it is probably now extinct. Additional correspondence during 2014 regarding possible sites for re-introduction such as Misson Carr and Misson Line Bank (if properly managed) has yet to be taken any further, but watch this space!

| Location | GR | Date | Recorder |
|------------------------------|----------|------|----------|
| Between Misson and Newington | SK69 | 1952 | RCLH |
| Misson Drain | SK705957 | 1982 | MM |

Viola tricolor subsp. *tricolor* L.

Heartsease

National Status: Near Threatened
Nottinghamshire Uncommon
Monads: 24



Howitt & Howitt (1963) described heartsease *Viola tricolor* subsp. *tricolor* as a common and widespread native in arable fields. The decline in the VC since 1963 reflects the national declines described by Preston *et al.* (2002) and has presumably been caused by habitat loss and agricultural improvement. Many of the modern records are associated with sand pits, conifer forest tracks and sandy verges that to some extent have provided replacement habitat for the huge losses of sandy grasslands and heathlands, which have occurred in the VC.

Viola tricolor subsp. *tricolor* (continued)

The majority of records are introduced forms, which are found scattered throughout the VC. Since 2012, three new populations, all on arable sandy soils, have been detected at Welbeck, Gilletdale and Everton.

Viola x bavarica Schrank*V. riviniana x reichenbachiana***National Status:** Scattered**Nottinghamshire Rare****Monads:** 1

Stace (2010) describes this hybrid as "only sparsely scattered throughout the range of early dog violet *Viola reichenbachiana* despite the frequent cohabitation of the parents." This observation goes some way to explaining why the hybrid, despite searches of sites where both parents occur, has not been recorded in the VC until 2012.

| Location | GR | Date | Recorder |
|-----------------|----------|------|----------|
| Wilwell Cutting | SK567349 | 2012 | DCW |

Viola x intersita Beck*V. riviniana x canina***National Status:** Data Deficient**Nottinghamshire Rare****Monads:** 1

Howitt & Howitt (1963) listed one record for this sterile hybrid at Lound in the north of the VC, but details of the recorder and the date were not provided. In modern times, the hybrid has been recorded once on the north side of the Apleyhead road verges at Clumber Park from SK644773 to SK642773. The hybrid was first seen in 2004 with both parents and was frequent in 2009 and when last recorded in 2014.

| Location | GR | Date | Recorder |
|--------------------------------|----------|------|----------|
| Apleyhead Verges, Clumber Park | SK643773 | 2014 | DCW |

Viola x scabra F. Braun*V. odorata x hirta***National Status:** Data Deficient**Nottinghamshire:** Scarce**Monads:** 4

Howitt & Howitt (1963) described two records for the partially fertile *Viola x scabra*, which is found throughout England whenever the parents occur together, Stace (2010). J.W. Carr recorded the hybrid some time before 1909 at Widmerpool in the south of the VC and at Clipstone near Mansfield. Since 1970, the hybrid has been recorded at three scattered localities on Keuper Marl at East Markham, on Magnesian Limestone at Rhodesia and on Lias Clays at Owthorpe. Since 2012 a further population (in bold) has been detected at Kirkby-in-Ashfield in a disused limestone quarry.

| Location | GR | Date | Recorder |
|---|-----------------|-------------|------------|
| Cliff Gate, East Markham | SK724737 | 1999 | DCW |
| Lady Lee Quarry | SK563794 | 2007 | DCW |
| Herrywell Lane, Owthorpe | SK665329 | 2010 | DCW |
| Kirkby-in-Ashfield Hills and Holes | SK499553 | 2013 | DCW |

X Conyzigeron huelsenii (Vatke)
Rauschert

Erigeron acris x Conyza
canadensis

National Status: Sporadic**Nottinghamshire Rare****Monads:** 2

Nationally, this sterile, generic hybrid is of sporadic occurrence wherever the parents occur together, Stace (2010). It is generally associated with disturbed habitats, is intermediate in hairiness and capitulum size and has mauve ligules. At Lound, several plants were recorded growing on barish sandy/gravelly overburden. At Fernwood, three plants were recorded. In both cases, the parents are growing in close proximity and it is probably worthwhile searching for the hybrid, wherever the parents grow together.

| Location | GR | Date | Recorder |
|-----------------------|----------|------|----------|
| Lound Gravel Pits | SK701871 | 2004 | DCW |
| Grange Lane, Fernwood | SK806491 | 2015 | DCW, NP |

X Dactylodenia heinzelliana
(Reichardt) Garay & H.R. Sweet

Gymnadenia conopsea x
Dactylorhiza fuchsii

National Status: Scattered**Nottinghamshire Rare****Monads:** 1

Nationally this hybrid has been recorded in scattered localities throughout most of Britain. There are no known pre-1970 records. This single record originates from Magnesian Limestone grassland in a Nottinghamshire Wildlife Trust Nature Reserve. The single plant was recorded in close proximity to both parents.

| Location | GR | Date | Recorder |
|----------------|------------|------|----------|
| Kirkby Bentick | SK49475510 | 2008 | RAJ |

Vulnerable Taxa

This section includes those taxa that still occupy more than 10 (but less than 30) rolling monads in the VC, but have been included because of their conservation interest or concerns regarding their vulnerability to declines. Most of the taxa included here have undergone significant historical declines and without targeted action will be vulnerable to further declines.

In addition to the reasons provided above, it is more than 50 years since the publication of the last county flora and whilst work is being undertaken to prepare a new county flora, publication is not imminent. The publication of this register provides an opportunity to describe taxa that are still a priority for conservation action, but are of slightly less priority than those taxa in the section above.

Asplenium ceterach L.

Rustyback Fern

National Status: Least Concern

Nottinghamshire Status: Uncommon, but increasing

Monads: 11

With the exception of the record for Creswell Crags, all others in the VC for rustyback fern *Asplenium ceterach* are associated with walls, particularly the mortar. Although it is scarce in the VC there are more recent records than pre-1970 ones. Whilst this may represent a genuine expansion of the species range, given the number of records in the City of Nottingham it may also be due to increased survey effort in urban areas. Since 2012 the Derby Road, Nottingham population has been re-visited to confirm that it is still present and two other populations on Hucknall walls within 200m of each other have been recorded. The additional records have increased the number of monads above the threshold for status as a scarce species. All recent records are highlighted in bold.

| Location | GR | Date | Recorder |
|--|-----------------|-------------|-----------------|
| Collingham | SK86 | 1979 | per. RCLH |
| Manor Farm, Cotham | SK7947 | 1980 | RCLH |
| Creswell Crags | SK534740 | 1997 | DCW |
| Oxpasture Lane / A632 Trunk Road Wall, Nether Langwith | SK527702 | 1999 | MW |
| Alexandra Park, Nottingham | SK577421 | 2001 | MW |
| Stanford-on-Soar Railway Viaduct | SK542217 | 2007 | DCW |
| Arboretum Street Wall, Nottingham | SK56594081 | 2011 | DCW, PA |
| Derby Road Wall, Nottingham | SK556396 | 2015 | DCW |
| The Forest Recreation Ground, Nottingham | SK567413 | 2011 | PA |
| Farnsfield | SK644568 | 2012 | DCW, RAJ |
| Yorke Street, Hucknall | SK533491 | 2013 | MW |
| Hucknall Churchyard | SK533493 | 2014 | MW |

Blechnum spicant

Hard Fern

National Status: Least Concern

Nottinghamshire Status: Declining

Monads: 14

Howitt & Howitt (1963) described hard fern *Blechnum spicant* as rare and decreasing in the VC, probably caused by the same factors that have been responsible for national declines including land drainage, loss of suitable woodland habitat and the agricultural improvement of heathlands. It is, however, apparent that many of the records described by Howitt & Howitt (1963) have not been recorded since 1970, but several of the records in the table below were not known before the 1970s. Therefore, it is possible that the species has colonised new sites (eg railway cuttings and quarry faces) and to some extent, compensated for the losses elsewhere. Although it is still relatively uncommon, it is possibly no longer declining in the county. Populations re-found in 2015 are highlighted in bold.

| Location | GR | Date | Recorder |
|--|-----------------|-------------|---------------|
| Broom Hill Wood | SK627832 | 1972 | JH |
| Everton Carr Drain | SK695943 | 1978 | Woll., JH |
| Budby South Forest | SK608693 | 2006 | DCW |
| Misson Carr | SK717974 | 2012 | DCW |
| Calverton Dismantled Railway Line | SK588521 | 2007 | DCW |
| River Maun, Mansfield Woodhouse | SK559636 | 2007 | DCW |
| River Maun, Mansfield Woodhouse | SK557635 | 2012 | DCW |
| River Maun, Mansfield Woodhouse | SK558635 | 2012 | DCW |
| River Maun, Mansfield Woodhouse | SK556634 | 2012 | DCW |
| Oakfield Lane Sand Quarry | SK565665 | 2015 | MW, JC |
| Papplewick Dismantled Railway Line | SK568508 | 2011 | DCW |
| Papplewick Dismantled Railway Line | SK564506 | 2011 | DCW |
| Stapleford Wood | SK853560 | 2008 | DCW, RAJ |
| Stapleford Wood | SK852562 | 2008 | DCW, RAJ |
| Stapleford Wood | SK854558 | 2012 | RAJ |
| Stapleford Wood | SK854554 | 2008 | DCW, RAJ |
| Stapleford Wood | SK857556 | 2008 | DCW, RAJ |
| Stapleford Wood | SK851552 | 2008 | DCW, RAJ |
| Felley Mill Plantation | SK481510 | 2011 | DCW |
| Mansey Common | SK682608 | 2012 | RAJ, DCW |
| Papplewick Dismantled Railway Line | SK566507 | 2011 | DCW |
| Wigsley Wood | SK853704 | 2011 | DCW, MW |
| Papplewick Dismantled Railway Line | SK581516 | 2012 | DCW |
| Papplewick Dismantled Railway Line | SK578514 | 2012 | DCW |
| Calverton Dismantled Railway Line | SK589521 | 2015 | MW |
| Calverton Dismantled Railway Line | SK590521 | 2012 | MW |

Bromus racemosus L.

Smooth Brome

National Status: Least Concern

Nottinghamshire Status: Uncommon

Monads: 17

Smooth brome *Bromus racemosus* is an annual of unimproved grasslands, usually on damp, periodically flooded alluvial soils. Nationally the species has declined since the 1930s through drainage and agricultural improvement and it is likely that the declines in Nottinghamshire are for similar reasons. Since 2012, the species has been recorded at an additional four scattered locations (in bold) increasing the number of monads to 17.

| Location | GR | Date | Recorder |
|----------------------------|----------|------|----------|
| Shire Dyke, Balderton | SK8349 | 1987 | DCW |
| River Trent, North Muskham | SK804605 | 1996 | DCW |
| South Muskham Field | SK759578 | 1998 | DCW |
| Halarn Grassland | SK663543 | 1999 | DCW |
| The Beck Grassland | SK710618 | 1999 | DCW |

Bromus racemosus (continued)

| Location | GR | Date | Recorder |
|---|-----------------|-------------|------------|
| Upper Broughton Grassland | SK671255 | 1999 | DCW |
| Upper Broughton Grassland | SK669256 | 1999 | DCW |
| Brinsley Grassland | SK449503 | 2002 | DCW |
| Hickling Grassland | SK659272 | 2008 | DCW |
| Holme Pierrepont Grassland | SK621381 | 2009 | DCW |
| Cotgrave Forest | SK648331 | 2010 | DCW |
| Manor Farm Grassland | SK559255 | 2010 | DCW |
| Woodside Farm Meadow | SK615258 | 2010 | DCW |
| Eakring Meadows | SK709619 | 2011 | MW |
| Brierley Forest Park / Herrod Hill Area | SK467602 | 2011 | MW |
| Brinsley Grassland | SK450500 | 2011 | DCW |
| Staunton Quarry | SK805457 | 2015 | JC |
| Wakeringham | SK7791 | 2015 | SHe |
| Kneesall Stream | SK687632 | 2015 | MW |
| River Soar, Sutton Bonnington | SK498242 | 2015 | MW |

Callitriche brutia subsp. *hamulata* Intermediate Water-starwort
(Kutz., ex W.D.J. Koch) O. Bolòs & Vigo

National Status: Least Concern

Nottinghamshire Status: Uncommon

Monads: 17

Nationally this perennial herb is found in deep still-water or fast-flowing rivers. In the VC, the species is mainly found in disused gravel-pits close to major rivers, but has recently been found in a nearly dry pond in scrub. Before 1970 the species was recorded only once in the VC, in a pond in Martin Wood, by Hesley in 1959. Since 1980 the species has been recorded in monads throughout the county, which suggests that although the species is uncommon, before 1970 the species was probably overlooked. Since 2012, a further population has been recorded at Hoveringham Gravel Pits (in bold) in shallow lagoons.

| Location | GR | Date | Recorder |
|--------------------------------|------------------|-------------|------------|
| Magnus Drain, Everton Carr | SK7093 to SK7094 | 1980 | NCC |
| Mother Drain, Haxey Gate | SK765960 | 1983 | JOM |
| Newington Drive, Misson | SK675936 | 1983 | JOM |
| Gringley Carr | SK728930 | 1984 | JOM |
| Gringley Carr | SK79 | 1984 | EC |
| Bulwell Wood | SK519465 | 1989 | DCW |
| Black Pool, Besthorpe | SK821645 | 1990 | DCW |
| Clifton Pond | SK533347 | 1991 | DCW |
| Rampton Ballast Pit | SK833786 | 1991 | DCW |
| Misson Line Bank | SK715960 | 1994 | DCW |
| Misson Line Bank | SK716961 | 1994 | DCW |
| Attenborough Gravel Pits | SK520337 | 2001 | DCW |
| Fiskerton Pond | SK732502 | 2001 | DCW |
| Adbolton Pool | SK603385 | 2001 | DCW |
| Newark-on-Trent Drain | SK793547 | 2002 | DCW |
| Hollinwell Golf Course | SK524546 | 2009 | DCW |
| Houghton Decoy | SK683718 | 2011 | DCW, MW |
| Scrooby Sand Pit | SK654903 | 2012 | DCW, JC |
| Hoveringham Gravel Pits | SK684269 | 2013 | DCW |

Carduus x stangii H. Buek ex Nyman

C. crispus x nutans

National Status: Data deficient

Nottinghamshire Status: Uncommon

Monads: 13

This hybrid is found with the parents scattered in Britain, north to Yorkshire. It is partially fertile and intermediate in characters. In the VC it is largely confined to the Trent valley, with one locality in a quarry on the Magnesian Limestone in the west of the county. There is no information in Howitt & Howitt (1963), so the historic distribution of the species in the VC is not known. Stace *et al* (2015) suggests that the hybrid is present where the parents occur

together, but each parent has slightly different ecological requirements. As such the hybrid is not common and is scattered throughout the UK. Since 2012 a further three populations have been recorded in the east side of the county (in bold).

| Location | GR | Date | Recorder |
|--|-----------------|-------------|------------|
| Attenborough Gravel Pits | SK524334 | 2008 | MS, CS |
| Lady Lee Quarry | SK564795 | 1997 | DCW |
| River Trent, Fiskerton | SK737497 | 2001 | DCW |
| Holme Pierrepont Gravel Pits | SK625387 | 2001 | DCW |
| Holme Pierrepont Gravel Pits | SK609383 | 2001 | DCW |
| Holme Pierrepont Gravel Pits | SK613383 | 2001 | DCW |
| Colwick Country Park | SK6039 | 2010 | WM |
| Beeston Weir, Clifton | SK536351 | 2002 | DCW |
| River Trent, Holme-on-Trent | SK807577 | 2003 | DCW |
| Netherfield Dismantled Railway Sidings | SK634403 | 2011 | PA |
| River Trent, Wilford | SK560366 | 2012 | MW |
| Grove Farm Playing Fields | SK5536 | 2010 | WM |
| Carlton-on-Trent Roadside Verge | SK799632 | 2015 | DCW |
| Cromwell Gravel Pits | SK804619 | 2015 | DCW |
| River Trent, Rolleston | SK756505 | 2015 | MW |

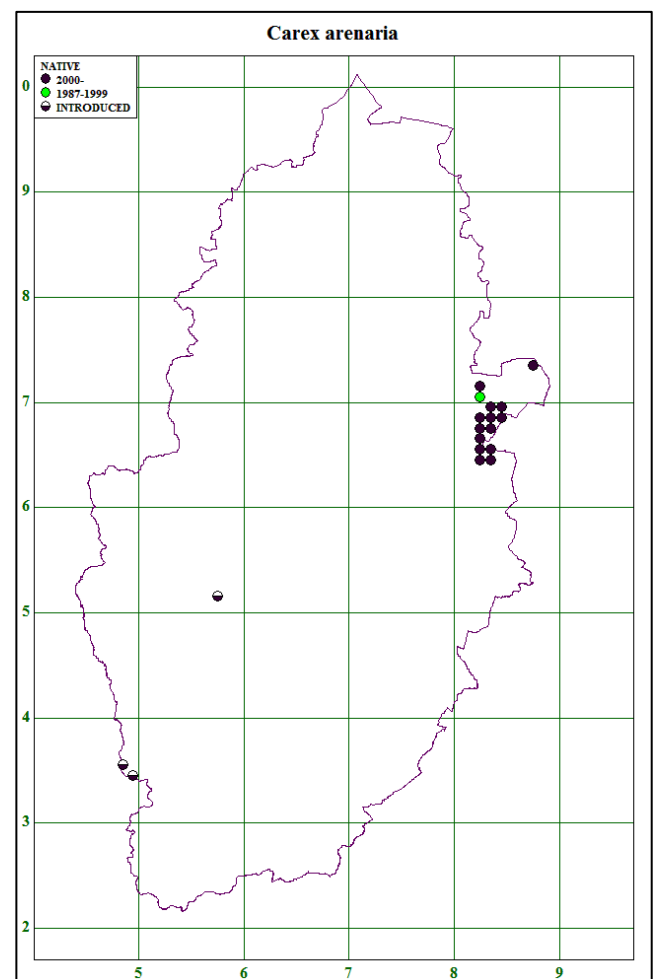
Carex arenaria L.

Sand Sedge

National Status: Least Concern

Nottinghamshire Status: Uncommon

Monads: 15



Carex arenaria (continued)

As a native species, sand sedge *Carex arenaria* is confined to a relatively small area of the county to the east of the River Trent on blown sands. The distribution of the species has changed little since the 1960s, but the number of sites has decreased, because of factors such as habitat loss and change of land use. Where it still occurs, the species is still locally abundant in relict grasslands, roadside verges, hedgebanks and fixed inland sand dunes. Surveys since 2012 have identified a sufficient number of new sites on the blown sands to change the native status of the species in Nottinghamshire from scarce to uncommon. Two populations further to the west of the county at Papplewick and Toton are likely to be introductions, given their distance from the native populations and locations. Since 2012, new populations have been located in grasslands, but the range of the species has not expanded beyond the blown sands area.

Carex lepidocarpa Tausch.

Long-stalked Yellow Sedge

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 13

The species is associated with base-rich streams and marshes and has never been common in the county. Before 1970, the species was considered by Howitt & Howitt (1963) to be rare and all but one of the records was located on the Magnesian Limestone. Since 1970, the species has also been recorded on base-rich clays at Gonalston, Wilford and Ruddington. The species is considered to be vulnerable to further declines, because several of the populations are located outside of designated sites or nature reserves. Since 2012, surveys of known sites have confirmed that populations are still extant at six sites and a new site at a disused quarry in Mansfield (in bold).

| Location | GR | Date | Recorder |
|--------------------------|-----------------|-------------|-----------------|
| Gonalston Grassland | SK6647 / SK6747 | 1974 | RCLH |
| Quarry Banks | SK536519 | 1978 | NRL, CGC, KLJ |
| Rempstone Old Churchyard | SK5625 | 1982 | DCW |
| Jarvis's Quarry, Linby | SK533522 | 1988 | Woll., GL |
| Wilwell Cutting | SK5634 | 1996 | MW |
| Skegby | SK494616 | 2013 | DCW, RAJ |
| Skegby | SK495617 | 2005 | RAJ |
| Bogs Farm Quarry | SK481533 | 2005 | DCW |
| Dyscarr Wood | SK578876 | 2013 | DCW, RAJ |
| Dyscarr Wood | SK579874 | 2015 | RAJ, JC |
| Shireoaks Park | SK548804 | 2007 | DCW |
| Shireoaks Park | SK544802 | 2007 | DCW |
| Sookholme Moor | SK554678 | 2013 | RT |
| Teversal | SK490637 | 2008 | DCW |
| Wilwell Cutting | SK567351 | 2012 | DCW |
| Bentinck Void | SK489534 | 2013 | DCW |
| The Dumbles | SK497509 | 2015 | DCW |
| Wilford Claypit | SK570355 | 2013 | DCW |
| Wilford Claypit | SK569356 | 2012 | DCW |
| Mansfield Quarry | SK534599 | 2013 | DCW, MW |

Carex pallescens L.

Pale Sedge

National Status: Least Concern**Nottinghamshire Status:** Declining**Monads:** 13

Howitt & Howitt (1963) considered that pale sedge *Carex pallescens*, a species of woodland rides and grassy places, was formerly frequent in the VC, but was declining in the latter part of the 20th Century. They listed records from many parts of the VC with the exception of areas overlying the Bunter Sandstone. Since 1970 the species has been recorded at 13 sites including two sites on the Bunter Sandstone at Thieves Wood and Jack'O' Sherwood. Since 2012, surveys at two sites have confirmed that the populations are still extant (in bold).

| Location | GR | Date | Recorder |
|-----------------------------|-----------------|-------------|----------------|
| Bentinck Void | SK489534 | 2013 | MW, DCW |
| Bentinck Void | SK488533 | 2009 | MW, DCW |
| Bagthorpe Meadows | SK468518 | 1997 | DCW |
| Bulwell Hall Park | SK534470 | 2002 | PA, DCW, RAJ |
| Bulwell Hall Park | SK534470 | 2010 | DCW |
| Gamston Wood | SK7276 | 1984 | DCW |
| Langold Country Park | SK580867 | 2015 | RAJ |
| Rempstone Old Churchyard | SK565250 | 1998 | DCW |
| Rushcliffe Golf Course | SK546278 | 1994 | DCW |
| Rushcliffe Golf Course | SK542284 | 2009 | DCW |
| Thieves Wood | SK544566 | 1992 | DCW, PA |
| Jack 'O' Sherwood | SK544524 | 1978 | CGC |
| Wellow Park | SK690673 | 2005 | DCW |
| Wellow Park | SK693675 | 2005 | DCW |
| Leake New Wood | SK540284 | 1994 | DCW |
| Brinsley Grassland | SK448505 | 2011 | DCW |
| Park Springs Wood | SK723584 | 2012 | DCW |

Catabrosa aquatica (L.) P. Beauv.

Whorl Grass

National Status: Least Concern**Nottinghamshire Status:** Declining**Monads:** 18

Before 1970, the species was widespread in Nottinghamshire on the margins of canals and streams. The modern declines are likely to be caused by the same factors that have caused national declines and include the destruction and/or neglect of ponds and the canalisation of streams. In recent times, the population on the Nottingham Canal at Awsworth (SK476434) has not been seen since 1978 and the fly-ash lagoon at Meering (SK819658) was reclaimed for agriculture some time between 2005 and 2009. All sites in SK69 have been lost as a result of the Idle pump drainage scheme that commenced in the late 1970's. Since 2012, further populations (in bold) have been recorded at known sites such as Wollaton Park and South Holme Dyke and a new site at Collingham in the vicinity of known populations.

| Location | GR | Date | Recorder |
|--|-----------------|-------------|----------------|
| Everton Carr Drain | SK693923 | 1972 | JH |
| Everton Carr Drain | SK691923 | 1972 | JH |
| Everton Carr Drain | SK695942 | 1972 | JH |
| Everton Carr Drain | SK693947 | 1972 | JH |
| Everton Carr Drain | SK694943 | 1972 | JH |
| Scrooby Drain | SK654923 | 1972 | JH |
| Scrooby Drain | SK656917 | 1972 | JH |
| South Holme Dyke, Sutton-on-Trent | SK807663 | 1972 | JH |
| Delve Drain, Everton Carr | SK690942 | 1978 | Woll. |
| Garden Lake, Newstead | SK5453 | 1978 | Woll. |
| Scrooby Drain | SK653922 | 1983 | JOM |
| Shelford Field Drain | SK665418 | 1987 | CJ |
| The Beck Grassland | SK710618 | 1988 | Woll. |
| River Leen, Papplewick Moor | SK546505 | 1991 | GL, PS |
| River Meden, Sookholme Moor | SK556680 | 2001 | Woll., GL |
| River Meden, Sookholme Moor | SK554678 | 2006 | DCW, MW |
| Spalford Gravel Pits | SK827686 | 2006 | DCW |
| South Holme Dyke, Sutton-on-Trent | SK804659 | 2013 | RAJ |
| South Holme Dyke, Sutton-on-Trent | SK805655 | 2006 | DCW |
| South Holme Dyke, Sutton-on-Trent | SK807663 | 2006 | DCW |
| River Trent, Collingham | SK807625 | 2013 | MW, DCW |
| River Meden, Meden Vale | SK583697 | 2008 | DCW |
| Wollaton Park | SK527384 | 2012 | DCW |
| Thompsons Wood, Wollaton Park | SK527385 | 2013 | DCW |

Catabrosa aquatica (continued)

| Location | GR | Date | Recorder |
|---------------------------------|-----------------|-------------|------------|
| Wollaton Park Ha-Ha Pond | SK527393 | 2013 | DCW |
| Wollaton Park Ha-Ha | SK531386 | 2008 | DCW |
| Shelford Drain | SK667420 | 2010 | DCW |
| River Trent, Collingham | SK805624 | 2011 | MW, DCW |

Chrysosplenium alternifolium L.Alternate-leaved Golden
Saxifrage**National Status:** Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 17

The species is generally associated with wet alder type woods, often by streams. Before 1970 the species was recorded at nine locations in the VC. Since 1970, the number of sites has increased to thirteen sites with new records at Carlton-in-Lindrick, Edingley, Oxtun, Halam, Annesley, Wellow Park and Papplewick, but losses have occurred at Farnfield, Fountindale and Thurgarton. Given the locations of the new records, for the most part in old woodlands, it is likely that the species was present before 1970 and overlooked. Since 2012, surveys have identified three new sites in wet woodlands and confirmed that populations at Middle Ashes and Wellow Park are extant.

| Location | GR | Date | Recorder |
|----------------------------|-----------------|-------------|---------------------------|
| Chequer Bottoms | SK636804 | 1970s | JH |
| Middle Ashes | SK657717 | 1992 | DCW |
| Middle Ashes | SK654717 | 2013 | DCW |
| Chequer Bottoms | SK646811 | 1995 | DCW |
| Chequer Bottoms | SK647814 | 1995 | DCW |
| River Ryton Woodland | SK623797 | 1995 | DCW |
| River Ryton Woodland | SK618792 | 1995 | DCW |
| River Ryton Woodland | SK617791 | 1995 | DCW |
| Cumber Park | SK617734 | 2004 | DCW, JH |
| Nab's Ashes Wood | SK5824582440 | 2006 | DCW |
| River Greet Woodland | SK686569 | 2007 | DCW, RW |
| Oxtun Dumble | SK639521 | 2007 | DCW, RW |
| Oxtun Dumble | SK640522 | 2007 | DCW, RW |
| Oxtun Dumble | SK638518 | 1995 | DCW |
| Oxtun Dumble | SK643524 | 2007 | DCW, RW |
| Oxtun Dumble | SK642523 | 2007 | DCW, RW |
| Oxtun Dumble | SK646528 | 1995 | DCW |
| Oxtun Dumble | SK646529 | 2007 | DCW, RW |
| Margaret's Spring | SK639539 | 2012 | DCW |
| Budby Carr | SK617701 | 2009 | DCW |
| Budby Carr | SK619703 | 1970s | JH |
| Wellow Park | SK684671 | 2013 | DCW, RAJ, JC et al |
| The Dumbles | SK488502 | 2011 | DCW, MW |
| The Dumbles | SK490503 | 2011 | DCW, MW |
| The Dumbles | SK494503 | 2011 | DCW, MW |
| The Dumbles | SK491502 | 2011 | DCW |
| Church Plantation | SK544514 | 2012 | MW |
| Radley Lane Dumble | SK667535 | 2012 | DCW |
| Spitfire Bottoms | SK668751 | 2013 | DCW |
| Conjure Alders | SK662723 | 2015 | JC, DCW, MW |
| Bothamsall Woodland | SK663727 | 2015 | DCW, MW |

Dactylorhiza purpurella T. & T.A.
Stephenson

Northern Marsh-orchid

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 11

There are no specific pre-1970 records for northern marsh-orchid *Dactylorhiza purpurella* although it may have been recorded under the epithet marsh orchid *Orchis latifolia* sens. lat. Between 2010 and 2012 the population was recorded at two sites including Netherfield Lagoons and Bevercotes Country Park. Since 2012, targeted searches have been carried out following visits by the

authors to populations in Scotland and Northern England. As a consequence, several new populations have been identified and the species is now categorised as uncommon in Nottinghamshire.

| Location | GR | Date | Recorder |
|--|----------|------|-----------------|
| Netherfield Lagoons | SK635400 | 2010 | DCW |
| Netherfield Lagoons | SK636399 | 2010 | DCW |
| Netherfield Lagoons | SK639401 | 2013 | DCW |
| Netherfield Lagoons | SK637399 | 2013 | DCW |
| Netherfield Lagoons | SK638399 | 2013 | DCW |
| Holme Pierrepont Gravel Pits | SK617386 | 2013 | DCW |
| National Water Sports Centre, Holme Pierrepont | SK625399 | 2013 | DCW |
| Portland Park | SK501551 | 2013 | DCW |
| Tranker Woods | SK571802 | 2013 | DCW |
| Bevercotes Country Park | SK710737 | 2013 | DP, MW, DCW, MG |
| Bevercotes Country Park | SK700738 | 2013 | DP, DCW, MW |
| Bevercotes Country Park | SK699738 | 2013 | DP, DCW, MW |
| Bevercotes Country Park | SK709737 | 2013 | DCW, MW |
| Cottam Power Station | SK829794 | 2013 | Jacobs |
| Cottam Power Station | SK829792 | 2013 | Jacobs |
| Cottam Power Station | SK827792 | 2013 | Jacobs |
| Newstead Sidings | SK524525 | 2014 | MW |
| Newstead Sidings | SK528525 | 2014 | MW |

Epilobium x floridulum Smejkal*E. ciliatum x parviflorum***National Status:** Data Deficient**Nottinghamshire Status:** Uncommon**Monads:** 13

This partially sterile hybrid between an introduced species and a native species is found in disturbed places scattered throughout the British Isles, Sell & Murrell (2009). In the VC it has been found at ten locations in varying quantities, but there are no records before 1970. The locations include fly-ash lagoons, quarries, dismantled railway lines, arable land, a woodland ride and gravel works. Since 2012 the species has been recorded at two locations at Holme Pierrepont Gravel Pits and a further three sites (in bold) and is now no longer scarce in the county.

| Location | GR | Date | Recorder |
|---|-----------------|-------------|------------|
| River Trent, Staythorpe | SK765533 | 1995 | DCW |
| Lady Lee Quarry | SK565795 | 1997 | DCW |
| Meering Fly-ash Lagoon | SK819658 | 2005 | DCW |
| Rampton Fly-ash Lagoon | SK822782 | 2006 | DCW |
| Skylarks Nature Reserve | SK617388 | 2006 | DCW |
| Skylarks Nature Reserve | SK620391 | 2006 | DCW |
| Stanford-on-Soar Great Central Railway Line | SK538223 | 2009 | DCW |
| Attenborough Gravel Pits | SK525354 | 2012 | DCW, MW |
| Holme Pierrepont Gravel Pits | SK616386 | 2013 | DCW |
| Holme Pierrepont Gravel Pits | SK619387 | 2015 | DCW |
| Epperstone Park | SK642497 | 2012 | DCW |
| Markham Moor | SK716739 | 2011 | DCW |
| Bentinck Colliery | SK489589 | 2013 | DCW |
| Bestwood Dismantled Railway | SK550487 | 2015 | RAJ |
| West Stockwith Field | SK784949 | 2015 | RAJ |
| Chilwell Tram Line | SK502539 | 2015 | DCW |

Epilobium x interjectum Smejkal*E. ciliatum x montanum***National Status:** Data Deficient**Nottinghamshire Status:** Uncommon**Monads:** 14

This partially fertile hybrid is widespread in Great Britain and is associated with disturbed ground such as roadside verges, quarries, felled woodland, shrubberies and amenity plantings. There are no pre-1970 records for the VC, but in recent times the hybrid has been recorded in twelve monads. This hybrid is perhaps under-recorded given the abundance of the parents and the regularity with which the two species occur together. Since 2012, the hybrid has been recorded in two further locations (in bold), both of which are urban.

| Location | GR | Date | Recorder |
|-------------------------------|----------|------|----------|
| East Leake Disused Railway | SK553284 | 1994 | DCW |
| East Leake Disused Railway | SK5425 | 1994 | DCW |
| Wilwell Cutting | SK567350 | 1994 | DCW |
| Wilwell Cutting | SK5634 | 2002 | DCW |
| Holme Pierrepont Gravel Pits | SK619392 | 1997 | DCW |
| Kilvington Dismantled railway | SK7942 | 1998 | DCW |
| Boughton Colliery | SK679674 | 1999 | DCW |
| Stanton-on-the-Wolds | SK62730 | 2000 | DCW |
| Cotgrave Disused Railway Line | SK641370 | 2001 | DCW |
| Hucknall Colliery | SK539490 | 2002 | DCW |
| Wilford | SK565365 | 2004 | DCW |
| Nottingham Factory Site | SK562386 | 2011 | DCW |
| Lenton | SK566376 | 2015 | RAJ |
| Southwell | SK703541 | 2015 | RAJ |

Epilobium x limosum Schurl.*E. montanum x parviflorum***National Status:** Data Deficient**Nottinghamshire Status:** Uncommon**Monads:** 11

This native, partially sterile hybrid is capable of producing F₂ progeny. There are no pre-1970 records for the VC, but in recent times the species has been recorded in eleven rolling monads on dismantled railway line verges, a track-side ditch, a car park, arable fields and a landfill site. A population at Bunny Land-fill (SK504387) is no longer extant, because the site has been capped and landscaped. It is probably under-recorded.

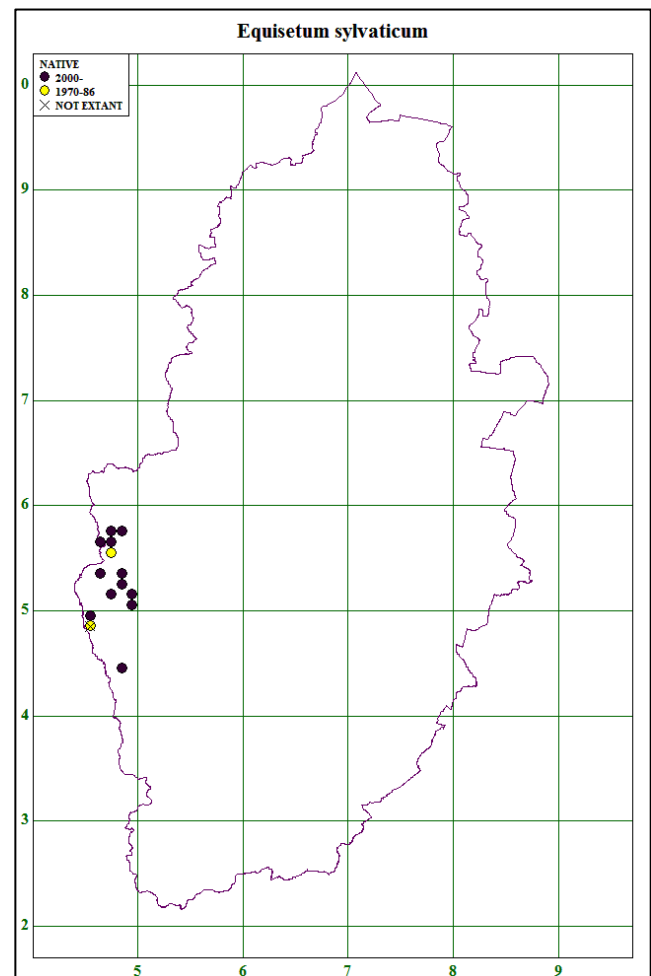
| Location | GR | Date | Recorder |
|---|----------|------|----------|
| Bramcote Landfill | SK504387 | 2007 | DCW |
| Carlton-in-Lindrick | SK594851 | 1997 | DCW |
| Dukes Wood | SK679602 | 1997 | DCW |
| Cotgrave Dismantled Railway Line | SK642369 | 2011 | DCW |
| East Leake Great Central Railway Line | SK555287 | 2009 | DCW |
| Stanford-on-Soar Great Central Railway Line | SK537229 | 2011 | DCW, MW |
| Holme Pierrepont Gravel Pits | SK619392 | 2001 | DCW |
| Hucknall Dismantled Railway Line | SK552493 | 2007 | DCW |
| Wells Farm, Woodcoates | SK783716 | 2010 | DCW |
| Clipstone Dismantled Railway Line | SK596625 | 2012 | DCW |
| Epperstone Park | SK637501 | 2012 | DCW |

Equisetum sylvaticum L.

Wood Horsetail

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 13

Before 1970 wood horsetail *Equisetum sylvaticum* was found in woods and shady places on the Coal Measures in the west of the VC and in the 18th and 19th Centuries on the Permian Marls near Nottingham, Newark and Southwell. In modern times the species has not been recorded on the Marls, probably because of habitat losses or change of land use and has been lost from a site at Eastwood (SK4547 / SK4548). However, on the Coal Measures, the species is still found in eleven rolling monads and at some sites such as The Dumbles at Annesley, Kirkby Dumble and Selston it is present in large quantity. The population at Annesley was confirmed extant in 2015 (in bold).



| Location | GR | Date | Recorder |
|--------------------------------------|-----------------|-------------|----------------|
| Annesley Woodhouse, Bogs Farm Quarry | SK4811753418 | 2009 | DCW |
| Annesley, The Dumbles | SK498506 | 2011 | DCW, MW |
| Annesley, The Dumbles | SK498511 | 2011 | DCW, MW |
| Annesley, The Dumbles | SK498505 | 2015 | DCW, PO |
| Awsorth Dismantled Railway Cutting | SK489445 | /2011 | DCW, MW |
| Bagthorpe Meadows | SK470518 | 2010 | RAJ, DCW |
| Brinsley, Hobsic | SK457499 | 2008 | DCW, PO |
| Felley, Millington Springs | SK483522 | 2008 | DCW, MW |
| Felley, Millington Springs | SK484522 | 2008 | DCW, MW |
| Fulwood, Kirkby Dumble | SK478567 | 2008 | RAJ |
| Fulwood, Kirkby Dumble | SK481574 | 2008 | RAJ |
| Fulwood, Kirkby Dumble | SK480574 | 2009 | RAJ, DCW |
| Fulwood, Kirkby Dumble | SK478569 | 2011 | RAJ, DCW, JC |

Equisetum sylvaticum (continued)

| Location | GR | Date | Recorder |
|-------------------------------------|----------|------|--------------|
| Fulwood, Kirkby Dumble | SK478571 | 2011 | RAJ, DCW, JC |
| Kirkby-in-Ashfield | SK469563 | 2002 | DCW |
| Kirkby-in-Ashfield, Shire Carr Farm | SK476557 | 1986 | CN, GW |
| Selston Stream | SK464532 | 2011 | DCW |
| Underwood Drain | SK471511 | 1989 | CJ |

Eriophorum angustifolium Honck.

Common Cotton-grass

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 12

By 1963 the species was becoming rare because of habitat destruction and drainage, but was still widely distributed on peat bogs in the VC. The species is now scattered and at many sites the populations are small, often restricted by the area of remaining habitat that is suitable. In recent times, populations at High Marnham Power Station (SK811711), Holme Pierrepont Gravel Pits (SK612380, SK611380 and SK612381), Wilwell Cutting (SK567351) and Scrooby Sand Pit (SK655903) have disappeared, because of habitat loss or degradation. There are, however, recent records for colliery spoil tips at Newstead and Bentinck Void and at Lound Gravel Pits in Area 4 (in bold).

| Location | GR | Date | Recorder |
|--------------------------|---------------------|-------------|---------------------|
| Mattersey | SK670883 | 1990 | DCW |
| Mattersey | SK672884 | 1990 | DCW |
| Torworth Gravel Pit | SK670865 | 1997 | DCW |
| Misson Line Bank | SK716962 | 2001 | DCW |
| Well Hill, Bircotes | SK624916 | 2003 | DCW |
| Mattersey | SK672874 | 2005 | DCW |
| Bestwood Country Park | SK556469 | 2006 | DCW |
| Sandhill Lake | SK579796 | 2007 | DCW |
| Bentinck Void | SK477540 | 2008 | DCW |
| Bentinck Void | SK482539 | 2013 | DCW |
| Manton Colliery | SK6102677587 | 2014 | RAJ, DCW, MW |
| Rainworth Heath | SK591592 | 2012 | DCW, RAJ |
| Newstead Colliery | SK52005371 | 2013 | MW |
| Lound Gravel Pits | SK703871 | 2012 | JS |

Galium palustre subsp. *elongatum* (C. Presl.) Arcangeli

A Marsh-bedstraw

National Status: Data Deficient**Nottinghamshire Status:** Uncommon (probably under recorded)**Monads:** 11

The marsh bedstraw *Galium palustre* subsp. *elongatum* is a more robust, larger taxon than sub-species *palustre* or sub-species *tetralioides* and is generally associated with more base-rich soils and wetter habitats. Although the sub-species *elongatum* is thought to be less common than the other sub-species, Sell & Murrell (2006) state that it may be under-recorded. Historically the status of the sub-species in the VC is not known, because Howitt & Howitt (1963) only recognised *Galium palustre* var. *witheringii* Sm. (which is now recognised as sub-species *palustre*). Since 1970 the sub-species has been recorded in the south, east and northeast of the VC at eleven locations. Since 2012 the population at Bole Ings (in bold) has been confirmed as still being present.

| Location | GR | Date | Recorder |
|--------------------------|---------------|-------------|-----------------|
| Misson Line Bank | SK710961 | 1983 | JOM |
| Stapleford Flood Pasture | SK486383 | 1997 | DCW |
| Stanford-on-Soar | SK5422 | 1998 | DCW |
| Ossington Pond | SK7564 | 1999 | DCW |
| Bole Ings | SK8087 | 2013 | DCW, RAJ |
| Holme Pit | SK536345 | 2002 | DCW |
| Radcliffe-on-Trent Pond | SK649403 | 2005 | DCW |

| Location | GR | Date | Recorder |
|-------------------------------|----------|------|----------|
| Attenborough Gravel Pits | SK528355 | 2006 | RAJ, PA |
| Chesterfield Canal, Clayworth | SK7288 | 2009 | DAB |
| Meering | SK818663 | 2012 | RAJ |
| The Fleet, Giron | SK825652 | 2012 | RAJ |

Geranium rotundifolium L.

Round-leaved Crane's-bill

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 13

Although round-leaved crane's-bill *Geranium rotundifolium* is native in the south of England, in the VC it is introduced and is generally associated with disturbed and artificial habitats such as landfills and colliery tips. In recent years the species has been lost from three landfill sites at Bramcote (SK504388), Bunny (SK578287) and Bassingfield (SK626378 and SK625376), because of capping with topsoil and restoration work, but given the spate of recent records, the species may be increasing. A further record in a car park at Zouch in the south of VC has yet to be confirmed. Since 2012, surveys have located three new populations at scattered sites throughout the VC and two populations at Langold and Boughton have been confirmed as extant. The new populations have resulted in a change in category from scarce to uncommon in the VC.

| Location | GR | Date | Recorder |
|---|-----------------|-------------|----------------|
| Old Coach Road, Carlton-in-Lindrick, | SK6182 | 1975 | CS,RS |
| Boughton Dismantled Railway Line | SK679674 | 2013 | DCW |
| Toton Sidings | SK487346 | 2006 | DCW |
| Toton Sidings | SK488353 | 2006 | DCW |
| Cotgrave Colliery Yards | SK651364 | 2003 | DCW |
| Bessell Lane, Stapleford | SK484363 | 2011 | DCW |
| Langold Colliery Yards | SK582859 | 2015 | RAJ, JC |
| Holbeck Village | SK543734 | 2012 | KB |
| Epperstone Roadside Verge | SK632499 | 2012 | DCW |
| Carlton Forest Sand Quarry | SK602822 | 2012 | DCW, MW |
| Black Hills Farm Roadside Verge | SK635670 | 2012 | DCW |
| Ruddington Wasteland | SK567338 | 2013 | MW |
| Littlewood Lane Quarry | SK532651 | 2014 | DCW |
| Thurgarton Gravel Pits | SK707479 | 2013 | DCW |

Geum x intermedium L.

Hybrid Avens

National Status: Data Deficient**Nottinghamshire Status:** Uncommon**Monads:** 11

Stace describes *Geum x intermedium* as common wherever the parents are growing together. It is persistent, highly fertile, intermediate, and forms a complete spectrum between the parents. Before 1960, the species was considered by Howitt & Howitt (1963) to be rare in the VC and confined to ancient woodland. Recent records confirm that the species is still largely associated with ancient woodland on base-rich soils and to a lesser extent is also located in woodland alongside small rivers and streams. A population at Sookholme (SK539671) was lost because of the tipping of mining waste. Since 2012, a further population has been found at Skegby on the Teversal Trail and the Wellow Park populations have been revisited (in bold). The status of the species has now changed from scarce to uncommon, because of the new record.

| Location | GR | Date | Recorder |
|--------------------------|----------|------|----------|
| Nether Langwith Woodland | SK543703 | 1972 | JH |
| Millwood Brook, Welbeck | SK553755 | 1972 | JH |
| River Leen Valley, Linby | SK541518 | 1992 | GL |
| Wellow Park | SK689673 | 1993 | DCW |

Geum x intermedium (continued)

| Location | GR | Date | Recorder |
|-----------------------|-----------------|-------------|---------------------------|
| Wellow Park | SK691675 | 1993 | DCW |
| Wellow Park | SK688673 | 2013 | DCW, RAJ, JC et al |
| Wellow Park | SK6766 | 1993 | DCW |
| Wellow Park | SK686669 | 2013 | DCW, RAJ, JC et al |
| Lord Stubbins Wood | SK537688 | 1997 | MW |
| Kirkby Grives | SK497552 | 2001 | DCW, Woll. |
| Teversal Trail | SK489616 | 2014 | DaS |
| Gamston Wood | SK729767 | 2003 | DCW |

Hottonia palustris Honck.

Water Violet

National Status: Least Concern
Nottinghamshire Status: Declining
Monads: 14

Before 1970 the water violet *Hottonia palustris* was widespread, but local in drains and ponds on light soils and peat. Since the 1960s the species has been in decline and all of the remaining populations are associated with drains and pools on light soils in the east and northeast of the VC. Populations on peat in the north and in close proximity to Nottingham are no longer extant, because of drainage, eutrophication and habitat destruction. Further losses have occurred in more recent times in the Shire Dyke at Balderton (SK812478), drains in Spalford (SK8269) and a drain at Everton Carr (SK666906). Updated information from surveys carried out since 2012 are highlighted in bold.

| Location | GR | Date | Recorder |
|-------------------------------------|---------------------|-------------|---------------|
| Collingham Field Pond | SK836612 | 1978 | NRL, KLJ, CGC |
| Shire Dyke, Balderton | SK812478 - SK834498 | 1988 | DCW |
| Ox-pasture Drain, Broadholme | SK8773 | 1988 | IW, RN |
| Ox-pasture Drain, Thorney | SK868714 | 1990 | DCW |
| Rampton Borrow Pit | SK833793 | 1991 | DCW |
| Old Trent Dyke, Newark-on-Trent | SK788541 | 1996 | DCW |
| Old Trent Dyke, Newark-on-Trent | SK790540 | 1996 | DCW |
| Borrow Dyke, Newark-on-Trent | SK792540 | 1998 | RAJ |
| Borrow Dyke, Newark-on-Trent | SK785539 | 2011 | DCW |
| High Marnham Power Station Lagoon | SK810711 | 1998 | PA |
| Ox-pasture Drain, Thorney | SK872716 | 1998 | DCW |
| Crow Wood Drain, Thorney | SK867727 | 2013 | JC |
| South Muskham Drain | SK788584 | 2003 | RAJ |
| South Muskham Drain | SK789579 | 2003 | DCW, RAJ |
| South Muskham Drain | SK789582 | 2003 | DCW |
| Shire Dyke, Balderton | SK826485 - SK833489 | 2004 | DCW, Gwi |
| Shire Dyke, Balderton | SK833491 | 2004 | DCW |
| Shire Dyke, Balderton | SK834498 | 2004 | DCW |
| Balderfield | SK8148 | 2004 | DCW |
| Darnsyke, Thorney | SK856740 | 2004 | RAJ |
| Darnsyke, Thorney | SK856739 | 2004 | RAJ |
| The Ring Drain, Thorney | SK871732 | 2013 | JC |
| The Ring Drain, Thorney | SK870729 | 2007 | DCW |
| Thorney Field Drain | SK870740 | 2007 | DCW |
| Wigsley Wood Drain | SK852706 | 2011 | DCW, MW |
| Borrow Dyke, Newark-on-Trent | SK789539 | 2011 | DCW |
| The Ring Drain, Thorney | SK871730 | 2011 | DCW, MW |
| Old Trent Dyke, Newark-on-Trent | SK783544 | 2012 | JC |

Hypericum maculatum Crantz

Imperforate St.John's-wort

National Status: Least Concern
Nottinghamshire Status: Uncommon
Monads: 13

Howitt & Howitt (1963) regarded imperforate St John's-wort *Hypericum maculatum* as very rare and only two historical records were provided. In the 19th Century the species was recorded on a roadside bank near West Bridgeford and in the 20th Century the species was recorded by Harlow Wood Hospital, presumably on sandy soils in Harlow Wood. In recent times the species has been recorded at a variety of sites across the VC in both semi-natural and artificial habitats. Given the diversity of habitats and soil types in which the species is found, it is possible that the species may have been overlooked before 1970, similar to the national situation, Preston *et al.* (2002). In recent times the species has been lost from Beeston Weir (SK535352), probably due to works associated with a hydro-electric scheme, and also at Holme Pierrepont (SK613379), because of habitat loss. Since 2012, a new population has been found at Toton Sidings and the Huthwaite Dismantled Railway population has been confirmed as extant (in bold).

| Location | GR | Date | Recorder |
|--|-----------------|-------------|------------|
| Gateford Fox Covert | SK563820 | 1972 | JH |
| Cotgrave Forest | SK646335 | 1989 | DCW |
| Cotgrave Forest | SK648336 | 1989 | DCW |
| Huthwaite Dismantled Railway Line | SK463580 | 1992 | DCW |
| Huthwaite Dismantled Railway Line | SK466583 | 2013 | DCW |
| West Bridgeford Dismantled Railway Line | SK589361 | 1993 | DCW |
| Wellow Park | SK6867 | 1996 | SFW, BES |
| Huthwaite Dismantled Railway Line | SK465577 | 1997 | DCW |
| Edwinstowe Dismantled Railway Line | SK644666 | 1997 | DCW |
| Sookholme Colliery Tip | SK540676 | 1997 | DCW |
| Clifton Bridge | SK558365 | Undated | RAJ, PA |
| Cotgrave Forest | SK651330 | 2010 | DCW |
| Willoughby-on-the-Wolds | SK648252 | 2010 | DCW |
| Silverhill Colliery site | SK477620 | 2011 | DCW, MW |
| Toton Sidings | SK490350 | 2015 | DCW |

Hypericum x desentangii Lamotte

Des Etang's St.John's-wort

National Status: Data Deficient
Nottinghamshire Status: Uncommon
Monads: 12

In the VC there are no historic records for the hybrid and Preston *et al.* (2002) state that the hybrid was not mapped for the 1962 Atlas. Cheffings and Farrell (2005) define the status of the hybrid as Data Deficient, but Preston *et al.* (2002) state that it is almost certainly under-recorded. There are thirteen post-1970 records, which are scattered across the VC in a variety of grassland types including semi-natural and artificial grassland. At most of the sites one or more of the parents are absent. Since 2012 (all in bold), two new populations have been found on a dismantled railway at Papplewick and in rough grassland at Askham. At Brierley Forest Park plants have been found on the edge of a plantation in flushed grassland away from the original record and the population at Newstead has also been confirmed as extant.

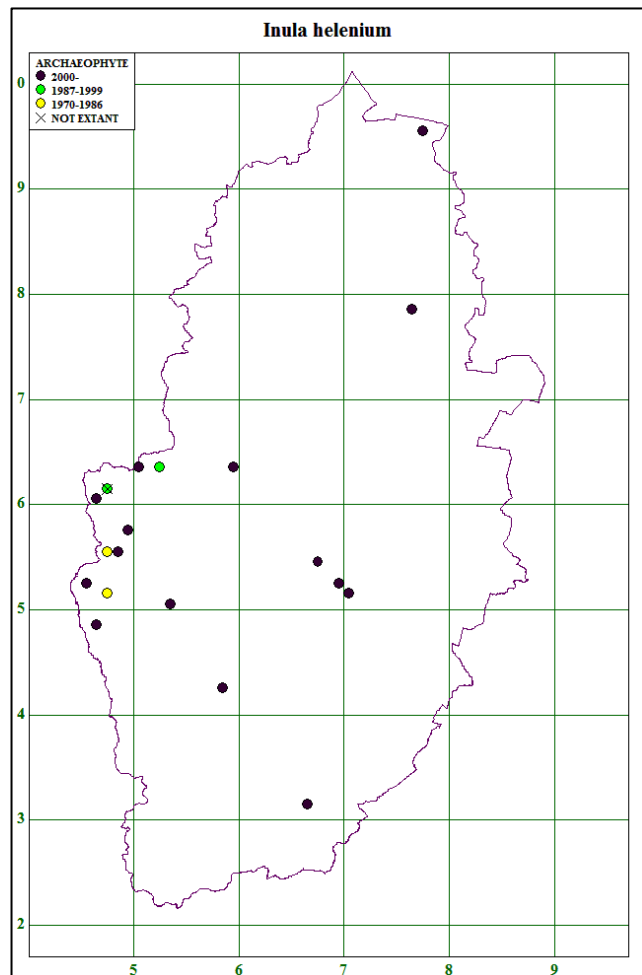
| Location | GR | Date | Recorder |
|------------------------------------|-----------------|-------------|----------------|
| East Bridgeford Grassland | SK699456 | 2002 | DCW |
| Coxmoor Golf Course | SK523577 | 2001 | RAJ, JC |
| Bentinck Banks | SK506574 | 1998 | DCW |
| Misson Carr | SK710977 | 2001 | DCW |
| Newstead Cemetery Grassland | SK517522 | 2012 | RAJ |

Hypericum x desertangsii (continued)

| Location | GR | Date | Recorder |
|--|-----------------|-------------|-----------|
| Normanton-on-Soar Great Western Railway Line | SK536241 | 2011 | DCW, MW |
| City of Whiteborough Dismantled Railway Line | SK462602 | 2001 | MW |
| Woodthorpe Park | SK583435 | 2004 | DCW |
| Brierley Forest Park, Huthwaite | SK479587 | 2015 | MW |
| Brierley Forest Park, Huthwaite | SK478598 | 2000 | DCW |
| Silverhill Colliery Tip | SK477619 | 2003 | DCW |
| Teversal Trail | SK479618 | 2000 | DCW |
| Askham Track | SK750746 | 2015 | MW |
| Papplewick Dismantled Railway | SK551489 | 2015 | MW |

Inula helenium L.

Elecampane

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 19

Howitt and Howitt (1963) considered that the species was extinct in the VC and provided only two records; at Wakeringham and Wakerith Ferry. According to Stace (2010), the species is becoming less common nationally, because it is grown less. Since 1970 the species has been recorded in 17 monads, scattered throughout the county in various habitat types including semi-natural and artificial habitats, often some distance from the nearest habitation. In recent years, one significant population at the Teversal Trail (SK479618) has been lost, because of habitat destruction. Five more populations have been recorded since 2012 but two of the sites were in close proximity to previously recorded populations.

Lathyrus nissolia L.

Grass Vetchling

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 23 (including introduced populations)

Nottinghamshire is close to the northern edge of the range of grass vetchling *Lathyrus nissolia*, but it appears to be increasing its range and abundance. In the VC it used to be very rare in the 1960s, but there have been an increasing number of records in ruderal grassland, and it is increasingly included as a component in commercial seed mixes. The Langford Lowfields RSPB Reserve population, two West Bridgford populations and possibly the University of Nottingham population (marked with an asterisk) are believed to be introductions. The Annesley Woodhouse populations could also be introduced. Despite the gains, populations have been lost from Kirkby Bentinck (SK492552) for unknown reasons and also from the Royal Ordnance Depot (SK561386), because of habitat loss. Additional to the ability of the species to colonise new sites, it also appears to be very resilient at some sites. The species is still present approximately 204 years after being first recorded at Beacon Hill near Newark-on-Trent by T. Ordoyno, but it appears to have moved from the original location on the edge of cornfields to brick pits and then latterly, into rough grassland. Post 2012 records are highlighted in bold and include at least six new sites.

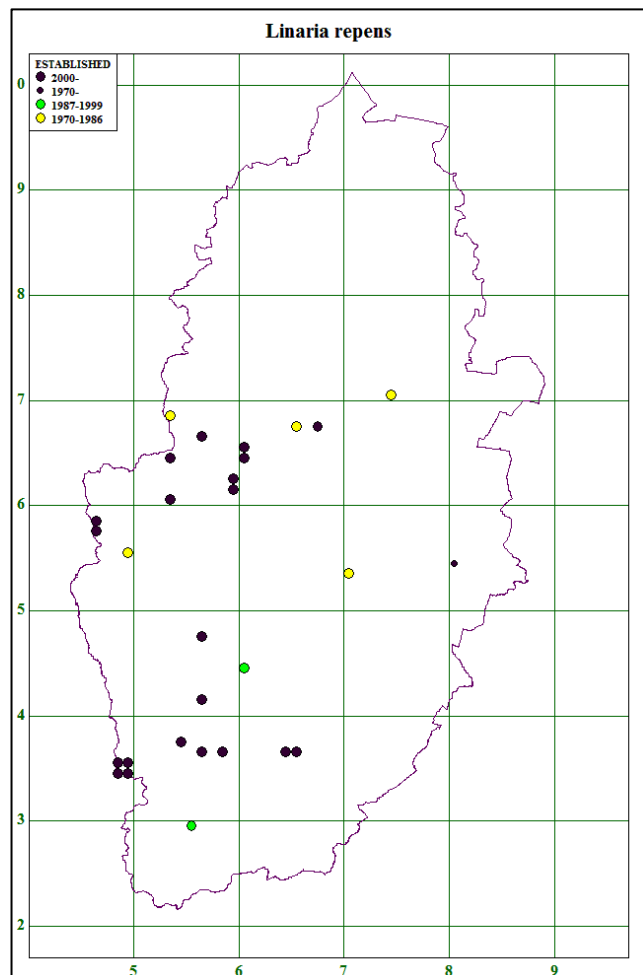
| Location | GR | Date | Recorder |
|--|-----------------|-------------|-----------------|
| Putting Poke Wood | SK679602 | 2012 | NRL, DCW |
| Mansey Common | SK6860 | 2012 | RAJ |
| Welbeck Estate Road Verge | SK5674 | 2012 | RAF |
| Welbeck Estate Road Verge | SK5873 | 2012 | RAF |
| Gotham Roadside Verge | SK533299 | 2001 | RAJ |
| Beacon Hill | SK814543 | 2003 | SW, DCW |
| Newthorpe Common | SK473454 | 2004 | RAJ |
| Hawton Works | SK802504 | 2006 | DCW |
| Hawton Works | SK802506 | 2012 | NC |
| Hawton Works | SK804502 | 2015 | RAJ |
| Hawton Works | SK799506 | 2006 | DCW |
| Hawton Works | SK804505 | 2015 | DCW |
| Ranskill | SK663878 | 2006 | DCW |
| Boughton Grassland | SK677676 | 2007 | RAJ |
| Boughton Grassland | SK671674 | 2007 | RAJ |
| Boughton Grassland | SK670674 | 2007 | RAJ |
| Boughton Grassland | SK669674 | 2007 | RAJ |
| Birdcage Walk, River Leen | SK560384 | 2008 | WM |
| Birdcage Walk, River Leen | SK562384 | 2012 | WM |
| Annesley Woodhouse Grassland (Nature Area)* | SK504534 | 2015 | RAJ, POI |
| Annesley Woodhouse Grassland (Nature Area)* | SK503535 | 2014 | RAJ, POI |
| Annesley Autofill Area | SK495530 | 2014 | POI |
| Sherwood Business Park | SK497550 | 2015 | RAJ, POI |
| Sherwood Business Park | SK505529 | 2014 | RAJ |
| University of Nottingham Lenton Lane Campus* | SK558383 | 2010 | DCW |
| Wilford Lane, West Bridgford | SK570369 | 2015 | DCW |
| 'Collington Common', West Bridgford* | SK577366 | 2015 | SM, DCW |
| 'The Hook', West Bridgford | SK594387 | 2012 | DCW |
| Langford Lowfields | SK818607 | 2012 | CC |
| Cotham Flash | SK798496 | 2013 | CC |
| Sutton Gravel Pits | SK693832 | 2012 | JSi |
| Gedling Colliery | SK607442 | 2013 | DCW |
| Besthorpe Ballast Pit | SK819645 | 2014 | JC |
| Eaton Wood Meadow | SK724774 | 2015 | NC |

Linaria repens (L.) Mill.

Pale Toadflax

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 28

This species is scattered over much of Britain, but is only frequent in the south and west of Britain. In the VC the species is considered to be an archaeophyte and Howitt & Howitt (1963), provided three scattered records including Farndon, Southwell and Gringley. Since 1970, the species appears to have disappeared from its former stations, but has become more widespread, particularly on railway sites.

*Lythrum portula* (L.) D.A. Webb

Water Purslane

National Status: Least Concern**Nottinghamshire Status:** Declining**Monads:** 21

Water purslane *Lythrum portula* has always been local, but scattered in the VC, chiefly on sand. Interestingly, it has not survived at any of the sites described by Howitt & Howitt (1963), but has been located on nearby sites. For example the record for Attenborough Gravel Pits is less than 2km from the historic record at Clifton Grove; the Stapleford Woods record is less than 2km from Coddington and Langford Moors sites. The loss of historic populations is probably because of habitat destruction or natural succession, which has modified the habitat to the point where it is no longer suitable. With the exception of Budby South Forest, which supports the largest populations in the VC, many other extant populations are associated with new habitats that have been created by human activity or disturbance. Since 2012, new populations have been found at Beekingham Marshes, Sherwood Forest Golf Course, Clipstone Forest and Bilhaugh, and extant populations have been confirmed at Budby and Warsop (in bold).

Water purslane *Lythrum portula* at Budby South Forest

Source S. Hammonds

| Location | GR | Date | Recorder |
|------------------------------------|-----------------|-------------|----------------|
| Thoresby Park | SK645732 | 1978 | Woll. |
| Black Pool (Edwinstowe) | SK5967 | 1996 | NRL |
| Clumber Park | SK632737 | 2011 | DCW |
| Clumber Park | SK620728 | 2000 | DCW |
| Boughton Brake | SK671701 | 2003 | DCW |
| Rainworth Water | SK593587 | 2003 | DCW |
| Attenborough Gravel Pits | SK520338 | 2010 | DCW |
| Warsop Disused Sand Quarry | SK565666 | 2015 | JC |
| Sansom Wood | SK584523 | 2008 | DCW |
| Stapleford Wood | SK858555 | 2008 | DCW |
| Misson Sand Pit | SK680956 | 2011 | DCW, MW |
| Misson Sand Pit | SK677959 | 2011 | DCW, MW |
| Misson Sand Pit | SK676957 | 2011 | DCW, MW |
| Budby South Forest | SK6168 | 2015 | JC |
| Budby South Forest | SK6068 | 2012 | RAJ, DCW, JC |
| Budby South Forest | SK6069 | 2015 | JC |
| Budby South Forest | SK6169 | 2015 | JC |
| Budby South Forest | SK6268 | 2012 | RAJ, DCW, JC |
| Budby South Forest | SK6269 | 2012 | RAJ, DCW, JC |
| Misson | SK689973 | 2010 | DCW |
| Scrooby Sandpit | SK656903 | 2012 | DCW |
| Scrooby Sandpit | SK656905 | 2012 | DCW |
| Sherwood Forest Golf Course | SK576613 | 2015 | JC |
| Clipstone Forest | SK610632 | 2015 | RAJ, JC |
| Clipstone Forest | SK611632 | 2011 | RAJ |
| Bilhaugh | SK651691 | 2015 | RAJ, JC |
| Beekingham Marshes | SK806895 | 2015 | JC |

Mentha x piperata L.

Peppermint

National Status: Least Concern**Nottinghamshire Status:** Declining**Monads:** 13

Howitt & Howitt (1963) stated that peppermint *Mentha x piperata* was generally found on streamsides and although widespread, it was already rare and declining before the 1960s. The species is still widespread, but it has only been recorded in 13 rolling monads. Nowadays it has less association with streamsides and more with sites where soil has been dumped. Both hairy and glabrous forms of the species have been recorded within the VC and have not been segregated. Since 2012, extant populations at Mill Lakes have been confirmed.

| Location | GR | Date | Recorder |
|-------------------------------------|----------|------|----------|
| Papplewick Meadows | SK546508 | 1991 | GL |
| Attenborough Gravel Pits | SK520339 | 2011 | DCW |
| Bestwood Sand Quarry | SK565479 | 2012 | MW |
| Summit Colliery, Kirkby-in-Ashfield | SK504571 | 2009 | MW |

Mentha x piperata (continued)

| Location | GR | Date | Recorder |
|-------------------------------------|-----------------|-------------|-----------|
| Commonside | SK462586 | 2012 | DCW |
| Victoria Square, Worksop | SK5879 | 2011 | GLC |
| Wollaton Park Lake | SK5238 | 2010 | WM |
| Bagthorpe Brook | SK466515 | 2005 | DCW |
| Bestwood | SK555485 | 2004 | DCW |
| Bramcote Landfill | SK504388 | 2005 | DCW |
| Mill Lakes, Broomhill | SK549479 | 2015 | MW |
| Mill Lakes, Broomhill | SK549482 | 1999 | DCW |
| River Leen, Broomhill | SK547474 | 2002 | DCW |
| Cauldwell Brook, Sutton-in-Ashfield | SK531583 | 2009 | DCW |
| Newark Dismantled Railway | SK808535 | 2007 | DCW |
| Teversal Trail | SK494636 | 2009 | DCW |

Montia fontana L.

Blinks

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 16

Blinks *Montia fontana* is a species of damp hollows that was described by Howitt & Howitt (1963) as being local in the VC, but much more common in the Trent Valley. Modern records however, indicate a more widespread distribution within the county on a range of substrates. Although only three of the modern records have been determined as *M. fontana* subsp. *chondrosperma* (Fenzl) Walters; Howitt & Howitt (1963) considered that this subspecies was probably the most common of the subspecies in the VC. Since 2012, a further two populations have been found at Kirkby-in-ashfield and Spalford, and a third population is included because it is located in the Vice County at Finningley, which is now part of modern Southwest Yorkshire. All three populations (in bold) are found on damp to wet grassland.

| Location | GR | Date | Recorder |
|--------------------------------------|-----------------|-------------|----------------|
| Park Spring Wood | SK722582 | 1988 | Woll. |
| Foulevil Brook, Rainworth | SK579583 | 1991 | DCW |
| Holme Pierrepont Gravel Pits* | SK618387 | 1992 | DCW |
| Bothamsall Disused Oil Well | SK659737 | 1996 | DCW |
| West Drayton Grassland* | SK701751 | 1996 | DCW |
| Fountain Dale | SK577575 | 1999 | RAJ, PA |
| Attenborough Gravel Pits | SK518337 | 2000 | JBr, EP |
| River Trent, Rolleston | SK764512 | 2004 | DCW |
| Lound Gravel Pits | SK701872 | 2005 | DCW |
| Lound Gravel Pits | SK711873 | 2005 | DCW |
| Chouler's Gorse | SK761573 | 2010 | DCW |
| Budby | SK6069 | 2012 | KB |
| Calverton Dismantled Railway Line | SK612508 | 2012 | DCW, MW |
| Kirkby-in-Ashfield Grassland* | SK518566 | 2013 | MW |
| Spalford Grassland | SK839689 | 2015 | DCW, MW |
| Finningley Grassland | SK673983 | 2008 | GC |

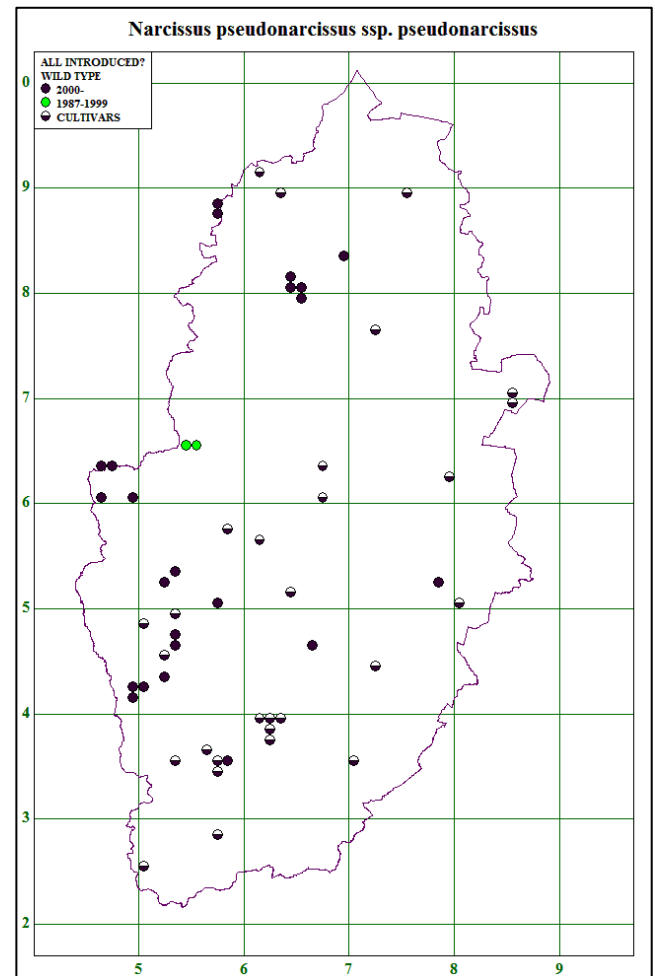
Montia fontana* subsp. *chondrospermaNarcissus pseudonarcissus* subsp. *pseudonarcissus* L.

Wild Daffodil

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 57 (21 as the wild type)

Howitt & Howitt (1963) were very selective about which sites in the VC they considered to support native or 'wild type' daffodils. Only three localities were provided including a 'close' near Oxtoll Bar, Askham Closes and Babbington Springs. In modern times, wild type daffodils have been recorded at 17 sites, which are listed in the table below. At these sites the daffodil populations appear to be naturalised. There are further records for cultivars (shown on the map), but these records are not included because there is evidence of planting or they appear to have been planted / introduced. However, daffodils, which are not the 'wild types' have not been consistently recorded. Since 2012, extant

populations have been confirmed at Lady Spencer's Wood, Chequer Bottoms and Oldmoor Wood, and new populations have been found on a roadside verge leading to Newstead Park (all in bold).



| Location | GR | Date | Recorder |
|--|-----------------|-------------|-----------------|
| Nettleworth | SK548656 | 1994 | DCW |
| Nettleworth | SK550654 | 1994 | DCW |
| Nettleworth | SK551654 | 1994 | DCW |
| Chequer Bottoms | SK645810 | 1995 | DCW |
| Chequer Bottoms | SK643809 | 2015 | DCW |
| Lady Spencer's Wood | SK469633 | 2013 | RAJ |
| Lady Spencer's Wood | SK470633 | 2013 | RAJ |
| Lady Spencer's Wood | SK468633 | 2002 | DCW |
| Home Wood | SK532469 | 2004 | DCW |
| Home Wood | SK533471 | 2004 | DCW |
| Cow Wood | SK578885 | 2004 | DCW |
| Bellmoor Gravel Pits | SK691839 | 2005 | DCW |
| Morton Park | SK653799 | 2006 | DCW |
| Morton Park | SK651800 | 2006 | DCW |
| Burntstump Country Park | SK579506 | 2008 | DCW |
| Lowdham Churchyard | SK663468 | 2008 | DCW |
| Oldmoor Wood | SK498420 | 2008 | PA, DCW |
| Oldmoor Wood | SK496419 | 2012 | MS, CS |
| Oldmoor Wood | SK497419 | 2015 | DCW, RAJ |
| Oldmoor Wood | SK497420 | 2012 | MS, CS |
| Devon Park, Newark-on-Trent | SK788527 | 2009 | DCW |
| Herrod's Hill, Huthwaite | SK467603 | 2010 | DCW |
| Broxtowe Boundary Bank | SK525433 | 2011 | DCW |
| Skegby | SK494606 | 2011 | DCW |
| West Bridgford Dismantled Railway Line | SK589359 | 2011 | DCW |

Narcissus pseudonarcissus subsp. *pseudonarcissus* (continued)

| Location | GR | Date | Recorder |
|--------------------------------|-----------------|-------------|-----------|
| Broadoak Plantation, Strelley | SK509425 | 2011 | DCW |
| Newstead Roadside Verge | SK527528 | 2014 | MW |
| Newstead Roadside Verge | SK531531 | 2014 | MW |

Orobanchе minor Sm. subsp. *minor*

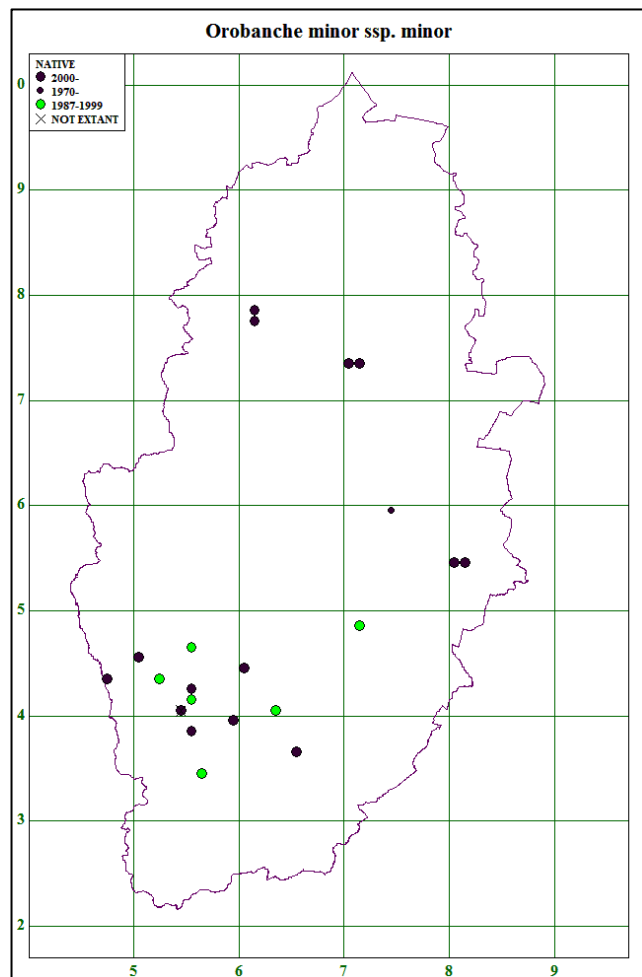
Common Broomrape

National Status: Least Concern

Nottinghamshire Status: Uncommon

Monads: 17

Before 1963, the species had only been recorded at six sites on roadsides, waste places and in newly seeded fields of legumes. Since 1970 the species has been recorded at 17 sites that are scattered throughout the VC. The increased number of records may represent an actual increase in the abundance of the species in the VC or an increase in survey effort, but the species is included in this list because of the limited number of records over a 40-year period. Since 2012, only the King's Meadow population in Nottingham has been re-surveyed.



Paris quadrifolia L.

Herb Paris

National Status: Least Concern

Nottinghamshire Status: Uncommon

Monads: 16

Although herb paris *Paris quadrifolia* is found in more than 10 rolling monads in the VC, it is included in this register because of its strong affinity with ancient woodland and somewhat restricted distribution. Given the protection of ancient woodland nowadays, the species is no longer threatened by habitat loss, but some populations are very small and could be affected by adverse

stochastic events. A population at Treswell Wood (SK764791) has apparently been lost in recent times, but the reasons for this are not clear. Extant populations visited since 2012 are highlighted in bold.

| Location | GR | Date | Recorder |
|------------------------|-----------------|-------------|---------------------------|
| Redgate Wood | SK677601 | 1972 | JH, Woll. |
| Bevercotes Park | SK700709 | 1977 | JH |
| Bevercotes Park | SK699709 | 2013 | DCW |
| Lady Wood | SK727589 | 1977 | CGC |
| Dovedale Wood | SK464631 | 1985 | Woll. |
| Eaton Wood | SK7277 | 1986 | DCW |
| Watnall Coppice | SK5048 | 1986 | DCW |
| Mather Wood | SK723593 | 1991 | DCW |
| Mather Wood | SK725592 | 1991 | DCW |
| Mather Wood | SK726593 | 1991 | DCW |
| Halloughton Wood | SK675515 | 1999 | DCW, MW |
| Wellow Park | SK686668 | 2013 | DCW, RAJ, JC et al |
| Wellow Park | SK687669 | 1999 | DCW |
| Blackholmes Wood | SK493635 | 2006 | RAJ, DCW |
| Bevercotes Park | SK7018870702 | 2006 | DCW |
| Gamston Wood | SK728769 | 2008 | DCW |
| Gamston Wood | SK729768 | 2013 | NC |
| Gamston Wood | SK727766 | 2008 | DCW |
| Gamston Wood | SK726770 | 2008 | DCW |
| Gamston Wood | SK726766 | 2011 | MW |
| Gamston Wood | SK7277 | 2015 | KW |
| Gamston Wood | SK7276 | 2015 | KW |
| High Park Wood | SK496494 | 2011 | DCW, MW |
| High Park Wood | SK496493 | 2015 | DCW |
| Callis Hags | SK498491 | 2015 | DCW, PO |
| Crossley Plantation | SK46966301 | 2011 | DCW, MW |
| Crossley Plantation | SK46996299 | 2011 | DCW, MW |
| Dovedale Wood | SK464631 | 2012 | DCW |

Polygala serpyllifolia Hose.

Heath Milkwort

National Status: Least Concern

Nottinghamshire Status: Declining

Monads: 18

This native species of heaths and pastures on acid soils was already in decline in Nottinghamshire by the middle of the 20th Century, because of habitat destruction and agricultural intensification. Since that time heath milkwort *Polygala serpyllifolia* has continued to decline with recent losses at Budby North Forest (SK610709), Newark Golf Course (SK8553 and 8554) and Stonehills Plantation, Sutton-in-Ashfield (SK533584) and in 2012 it was considered to be confined to only 15 rolling monads in the VC. Since 2012, the species has been recorded in two additional monads and a record from 2009 has added another monad (all in bold) so the species is now found in 18 rolling monads.

| Location | GR | Date | Recorder |
|-----------------------------------|----------|------|----------|
| Robbinettes, Cossall | SK4941 | 1989 | DCW |
| Robbinettes, Cossall | SK4942 | 1989 | DCW |
| Turfmoor, Brough | SK856588 | 1994 | DCW |
| Clipstone Dismantled Railway Line | SK592623 | 1995 | DCW |
| Stapleford Wood | SK852554 | 1999 | DCW |
| Stapleford Wood | SK853552 | 1999 | DCW |
| Rainworth Heath | SK592596 | 2000 | DCW |
| Apleyhead Verges, Clumber Park, | SK644773 | 2001 | DCW |
| Clumber Lane, Clumber Park | SK612756 | 2001 | DCW |
| Clumber Lane, Clumber Park | SK616754 | 2001 | DCW |
| Manton | SK608763 | 2001 | RAJ |
| Rainworth Heath | SK592591 | 2000 | DCW |
| Rufford Colliery Tip | SK594601 | 2000 | MW |
| Ollerton Assarts | SK628687 | 2001 | DCW |
| Vicar Water | SK594620 | 2001 | DCW, MW |

Polygala serpyllifolia (continued)

| Location | GR | Date | Recorder |
|---------------------------------|---------------------|-------------|----------------|
| Rainworth | SK593599 | 2002 | DCW |
| Clipstone Forest | SK601626 | 2002 | DCW |
| Budby South Forest | SK605692 | 2003 | DCW |
| Rainworth | SK590612 | 2003 | RAJ |
| Clipstone | SK603639 | 2004 | RAJ |
| Middle Brook Grassland | SK478519 | 2008 | DCW, MW |
| Stilehollow Plantation | SK643683 | 2009 | RAJ |
| Sherwood Heath | SK6467 | 2010 | MW |
| Misson Sand Pit* | SK679954 | 2011 | DCW, MW |
| Clipstone Heath | SK593625 | 2012 | DCW |
| Bilhaugh | SK6373269689 | 2015 | RAJ, JC |
| Bilhaugh | SK6372969488 | 2015 | RAJ, JC |
| Budby Corner Plantations | SK621727 | 2014 | RAJ |

*Unconfirmed

Potamogeton berchtoldii Fieber

Small Pondweed

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 23

Historically this species was frequent in the Sherwood area in drains, gravel pits and slow streams in acid waters. Elsewhere it was recorded at Besthorpe in the east of the VC and in the River Devon at Staunton in the south of the VC. Since 1970, the species has become rare in the Sherwood area and has been recorded for the most part in the east or far north of the VC, especially on peaty soils, with two records close to the Leicestershire border in the south of the VC. In addition to the records provided below there are a further 6 records that are not listed, because they remain unconfirmed. Since 2012, a population has been found in the Black Bank Drain at Everton Carr (in bold)

| Location | GR | Date | Recorder |
|---------------------------------------|-----------------|-------------|----------------|
| Rampton Ballast Pit | SK87 | 1970 | RCLH |
| Chesterfield Canal | SK68 | 1978 | RCLH |
| Sledder Wood Pond | SK498469 | 1978 | KLJ |
| Ring Drain, Thorney | SK8773 | 1978 | NRL, CGC, KLJ |
| Grantham Canal, Hickling to Kinoulton | SK62 | 1978 | RCLH |
| Claybank Farm, Everton Carr | SK694922 | 1983 | JOM |
| Misterton Carr Drain | SK740954 | 1983 | JOM |
| Cornley, SW of | SK740954 | 1983 | JOM |
| Shire Dyke, Balderton | SK834496 | 1987 | DCW |
| Misson Ballast Pits | SK714961 | 1989 | DCW |
| Misson Ballast Pits | SK718964 | 1989 | DCW |
| Shire Dyke, Balderton | SK835505 | 1996 | DCW |
| Rempstone Old Churchyard | SK567250 | 1997 | DCW, PA |
| Thorney Drain | SK867718 | 1998 | DCW |
| Daneshyke, Thorney | SK856738 | 1998 | DCW |
| Daneshyke Lakes | SK668867 | 2001 | NFS |
| Crow Wood Drain, Thorney | SK867727 | 2005 | DCW |
| Delve Drain, Everton Carr | SK693946 | 2009 | DCW |
| Misson Ballast Pits | SK713959 | 2010 | DCW, MW |
| Magnus Drain, Everton Carr | SK704939 | 2011 | DCW, MW |
| Magnus Drain, Everton Carr | SK705938 | 2011 | DCW, MW |
| Deepes Drain, Misson | SK686982 | 2012 | DCW |
| Mother Drain, Misterton | SK726964 | 2012 | DCW |
| Snow Sewer, Misson | SK714983 | 2012 | DCW |
| Misson, Levels Farm | SK713981 | 2012 | DCW, JC |
| Misson, Levels Farm | SK718979 | 2012 | DCW, JC |
| Black Bank Drain, Everton Carr | SK697938 | 2015 | DCW, MW |

Potamogeton x lintonii Fryer*P. friesii* x *crispus***National Status:** Data Deficient**Nottinghamshire Status:** Declining**Monads:** 11

The hybrid has always been uncommon in the VC, but before 1963 it was found in drains at Misson as well as in the Chesterfield Canal. Since 1970 however, the populations at Misson have not been recorded. It is also, a relatively long time since the hybrid was last recorded in the Chesterfield Canal and its exact status at the present time needs to be determined. Recent surveys have not located any populations.

| Location | GR | Date | Recorder |
|--------------------|----------|------|------------|
| Chesterfield Canal | SK635802 | 1972 | JH |
| Chesterfield Canal | SK588793 | 1972 | JH |
| Chesterfield Canal | SK606787 | 1972 | JH |
| Chesterfield Canal | SK68 | 1978 | RCLH |
| Chesterfield Canal | SK68 | 1978 | RCLH |
| Chesterfield Canal | SK6682 | 1986 | JA |
| Chesterfield Canal | SK78H | 1986 | JA |
| Chesterfield Canal | SK7283 | 1986 | JA |
| Chesterfield Canal | SK7284 | 1986 | JA |
| Chesterfield Canal | SK78A | 1986 | JA |
| Chesterfield Canal | SK78A | 1986 | JA |
| Chesterfield Canal | SK79A | 1986 | JA |
| Chesterfield Canal | SK7190 | 1986 | JA |
| Chesterfield Canal | SK78G | 1986 | JA |
| Chesterfield Canal | SK78G | 1986 | JA |
| Chesterfield Canal | SK79F | 1986 | JA |
| Chesterfield Canal | SK738919 | 1986 | JA |
| Chesterfield Canal | SK79F | 1986 | JA |
| Chesterfield Canal | SK79M | 1986 | JA |
| Chesterfield Canal | SK7694 | 1986 | JA |
| Chesterfield Canal | SK78J | 1986 | JA |
| Chesterfield Canal | SK79A | 1986 | JA |
| Chesterfield Canal | SK78E | 1986 | JA |
| Chesterfield Canal | SK78I | 1986 | JA |
| Chesterfield Canal | SK78I | 1986 | JA |
| Chesterfield Canal | SK724835 | 1987 | CDP |
| Chesterfield Canal | SK727852 | 1988 | CDP |
| Chesterfield Canal | SK711811 | 1988 | CDP |
| Chesterfield Canal | SK707807 | 1988 | CDP |
| Chesterfield Canal | SK720820 | 1988 | CDP |
| Chesterfield Canal | SK713903 | 1991 | CDP,IB,JMC |
| Chesterfield Canal | SK708904 | 1991 | IB |
| Chesterfield Canal | SK724915 | 1991 | CDP,IB,JMC |
| Chesterfield Canal | SK79F | 1991 | IB |
| Chesterfield Canal | SK7391 | 1991 | IB |

Ranunculus peltatus Schrank.

Pond Water-crowfoot

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 16

Pond water-crowfoot *Ranunculus peltatus* was formerly frequent in ditches and ponds throughout the VC and was particularly common in the Trent valley. Nationally there is no evidence of a general decline, so the reasons for the declines in the VC are not well understood, but drainage and habitat loss are probable causes. Most of the present day records occur on peaty or sandy soils in the north and east of the vice-county. There is, however, a perplexing taxon that never produces laminar leaves occurring commonly in the abundant gravel pit lagoons of Nottinghamshire that might be a form of pond water-crowfoot. Since 2012, two new locations have been found; the new population at Thorney is close to existing populations, but a new population at Saundby is somewhat isolated.

Ranunculus peltatus (continued)

| Location | GR | Date | Recorder |
|---------------------------------------|-----------------|-------------|-----------|
| Fiftyrights Road Drain, Misson | SK689987 | 1972 | JH |
| Langford Moor | SK8555 | 1975 | RCLH |
| Besthorpe Borrow Pit | SK818645 | 1978 | KLJ |
| Black Pool (Besthorpe) | SK821645 | 1990 | DCW |
| Rampton Pool | SK833785 | 1991 | DCW |
| Papplewick Meadows | SK5450 | 1991 | GL |
| Scrooby Drain | SK656907 | 1995 | DCW |
| Misson Drain | SK723979 | 1995 | DCW |
| The Fleet, South Muskham | SK800577 | 1996 | DCW |
| The Fleet, South Muskham | SK800579 | 1996 | DCW |
| Besthorpe Drain | SK835648 | 1997 | DCW |
| Chapel Baulk Drain, Misson | SK718983 | 1998 | PA |
| Oxpasture Plantation | SK833632 | 1998 | DCW |
| Misson Drain | SE709008 | 2002 | DCW |
| Holme Pierrepont Gravel Pits | SK63 | 2002 | NFS |
| Drinsey Nook Lane Drains, Thorney | SK871737 | 2005 | DCW |
| Drinsey Nook Lane Drains, Thorney | SK871734 | 2005 | DCW |
| Drinsey Nook Lane Drains, Thorney | SK870728 | 2005 | DCW |
| Crow Wood Drain, Thorney | SK867727 | 2013 | JC |
| Wigsley Wood | SK849707 | 2011 | DCW, MW |
| Wigsley Wood | SK853706 | 2011 | DCW, MW |
| A631 Trunk Road Drain, Saundby | SK812895 | 2013 | RP |

Rosa caesia Sm.

Northern Dog-rose

National Status: Least Concern**Nottinghamshire Status:** Declining (or overlooked)**Monads:** 13

Historically, T. Jowett in 1826 and H. Fisher in 1893 described the species as common in the VC on clay soils at sites such as Roe Wood at Winkburn, Leake Hills and Blyth. The species is generally found in hedgerows, scrub and woodland edge and the modern declines are probably associated with habitat loss such as hedgerow removal on farmland, or habitat modification such as the coniferisation of ancient woodlands. The records given here are very scattered and could indicate the species is much overlooked. Most of the records are subsp. *vosagiaca*, but one is subsp. *caesia* (marked with an asterisk) and two are unattributed. The species has been recently lost from two sites at Netherfield (SK631397) and a dismantled railway line at West Bridgford (SK585368).

| Location | GR | Date | Recorder |
|---|----------|------|----------|
| Newlands, Clipstone | SK574641 | 2006 | DCW |
| Meering | SK821663 | 2004 | DCW |
| Colston Bassett | SK697329 | 2005 | DCW |
| Brierly Forest Park, Sutton-in-Ashfield | SK482599 | 2006 | DCW |
| New Basford | SK553422 | 1996 | DCW |
| Ruddington | SK568334 | 1994 | DCW |
| Bestwood Landfill | SK564479 | 2006 | DCW |
| Wilford Claypit | SK571355 | 2011 | DCW |
| Bassingfield | SK621372 | 2012 | DCW |
| Holme Pierrepont | SK633383 | 2007 | DCW |
| Hawton landfill* | SK803501 | 1993 | DCW |
| Greasley | SK4847 | 2012 | JS |

Rosa sherardii Davies

Sherard's Downy-rose

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 11

Historically the species was recorded only once in the VC by T. Jowett at an unspecified location in Bulwell during 1826.

Therefore, given the number of modern records the species cannot be considered to be declining. It is, however, included in this register because the only population that consists of more than two bushes is located on the Stanton-on-the-Wolds Dismantled Railway Line. As such, the species is considered to be vulnerable to population loss and could easily become scarce in the VC if any losses occur. Alternatively the species may have been overlooked by recorders unfamiliar with roses.

| Location | GR | Date | Recorder |
|--|----------|------|----------|
| Rushcliffe Halt Great Central Railway Line | SK553283 | 1994 | DCW |
| Stanton-on-the-Wolds Dismantled Railway Line | SK636313 | 1994 | DCW |
| Averham Hedgerow | SK749563 | 1998 | DCW |
| Ingram Lane Hedgerow, Grassthorne | SK803673 | 1999 | DCW |
| Upper Broughton Field Hedgerow | SK683265 | 1999 | DCW |
| Owthorpe Field Hedgerow | SK659318 | 2002 | DCW |
| Bothamsall Hedgerow | SK666744 | 2003 | DCW |
| Bulwell | SK533451 | 2005 | DCW |
| Nab's Ashes Wood | SK581825 | 2005 | DCW |
| Stanton-on-the-Wolds Hedgerow | SK637296 | 2010 | DCW |
| Stapleford Wood | SK851556 | 2011 | DCW, MW |
| Stapleford Wood | SK851557 | 2012 | RAJ |

Salix x multinervis Döll.*S. aurita x cinerea***National Status:** Data Deficient**Nottinghamshire Status:** Uncommon**Monads:** 13

Howitt & Howitt (1963) described this hybrid as being common on moist heaths and hedgerows, gravel pits and woods throughout the VC. Presumably the modern declines are the consequence of drainage and habitat destruction, and in the VC the hybrid is now as scarce as one of its parents; the eared willow *Salix aurita*. Howitt & Howitt (1963) described the eared willow as being in decline (see above), partly because of introgression to *Salix x multinervis*, but in recent times the hybrid appears to have suffered the same fate as eared willow. Apart from the Brackenhurst Estate, there are three other sites where the species has obviously been planted. Since 2012, a further six sites (in bold) have been found, each containing a small number of specimens, often without the parents.

| Location | GR | Date | Recorder |
|---------------------------------------|-----------------|-------------|----------------|
| Beauvale Woods | SK44 | 1973 | RCLH |
| King's Mill Reservoir | SK513594 | 1998 | DCW |
| Stapleford Wood | SK852554 | 1997 | DCW |
| Rushcliffe Golf Course | SK546279 | 2009 | DCW |
| Oxton Hedgerow | SK617516 | 2010 | MW |
| Annesley Grassland | SK493525 | 2011 | DCW |
| Attenborough Gravel Pits | SK522344 | 2012 | DCW |
| Brackenhurst Estate* | SK704514 | 2003 | MW |
| Bevercotes Colliery Tip* | SK6973 | 2005 | DCW |
| Shireoaks Colliery Tip* | SK556811 | 2006 | DCW |
| Girton Gravel Pits | SK819676 | 2013 | DCW, MW |
| Dunham Lagoons | SK819736 | 2013 | DCW, MW |
| Black Bank Drain, Everton Carr | SK701931 | 2015 | DCW, MW |
| Mill Lake, Bestwood | SK548476 | 2015 | MW |
| Farndon Gravel Pits | SK769526 | 2015 | MW |
| Shirebrook Colliery Tip | SK543699 | 2013 | MW |

*Planted

Scirpus sylvaticus L.

Wood Club-rush

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 16

This species of damp, shady places was formerly frequent in the west of the VC on the Permian Marls, but was rare in the east towards the Trent valley and Lincolnshire border. In the 20th Century the species has declined and is now probably restricted to 11 or 12 rolling monads. Two populations at Langold Lake and Dovedale Wood are as yet unconfirmed and if not confirmed the species could be locally scarce. On the other hand it is possible that the species is more common than was previously thought. The species has recently been found at Conjure Alders and it is possible that small populations are present elsewhere waiting to be found or re-found. Since 2012, extant populations were confirmed at Greasley and Wollaton (in bold).

| Location | GR | Date | Recorder |
|------------------------------|-----------------|-------------|----------------|
| Cumber Park | SK615734 | 1970s | RCLH, BMH |
| Bole Ings | SK8087 | 1970s | Woll. |
| Langold Lake | SK5786 | 1977 | Woll. |
| Quarry Banks | SK540519 | 1977 | Woll. |
| The Bottoms, Warsop | SK576691 | 1977 | Woll. |
| Dovedale Wood | SK4662 / SK4663 | 1978 | Woll. |
| Stanley | SK467627 | 2011 | DCW |
| Papplewick Dam | SK548506 | 2004 | RAJ |
| Newstead Park | SK544534 | 2004 | DCW |
| Newstead Park | SK544532 | 2004 | DCW |
| Milton | SK7173 | 1970 | Woll. |
| Cumber Park | SK619738 | 2008 | DCW |
| Netherfield | SK633402 | 2012 | DCW |
| The Dumbles, Greasley | SK478484 | 2010 | DCW, PO |
| The Dumbles, Greasley | SK477483 | 2014 | JC |
| Giltbrook | SK495470 | 2011 | DCW, JC |
| Giltbrook | SK499478 | 2011 | DCW, JC |
| Giltbrook | SK495469 | 2011 | DCW, JC |
| Sledder Wood | SK498470 | 2011 | DCW, JC |
| Wollaton Park | SK531386 | 2013 | DCW |
| Wollaton Park | SK527386 | 2013 | DCW |
| Wollaton Park | SK528391 | 2013 | DCW |
| Wollaton Park | SK536397 | 2013 | DCW |
| Wollaton Park | SK529388 | 2013 | DCW |
| Conjure Alders | SK663724 | 2013 | DCW, MW |

Wood Club-rush *Scirpus sylvaticus* at Netherfield Sidings

Source: S. Hammonds

Sorbus aria (L.) Crantz

Whitebeam

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 14 (as a native)

In the VC whitebeam *Sorbus aria* is only native on the Magnesian Limestone; elsewhere it is introduced. It has never been common as a native species and since 1970 it has only been recorded in 15 monads. Cultivars are however frequently planted in landscape schemes and there are at least 25 records for locations where the tree is an obvious introduction or garden escape; these records are not included in the table below. Since 2012 extant populations have been confirmed at Kirkby-in-Ashfield and Littlewood Lane Quarry (in bold), both on limestone and a new population (in bold) has been recorded at Fledborough on the limestone ballast of a dismantled railway.

| Location | GR | Date | Recorder |
|--|-----------------|-------------|----------------|
| Styrrup Magnesian Limestone Quarry | SK594901 | 2000 | DCW |
| Steetley Quarry* | SK551787 | 1992 | DCW |
| Mansfield Limestone Cliff | SK530599 | 2004 | DCW |
| Teversal Dismantled Railway Line | SK489616 | 2009 | DCW |
| Teversal Dismantled Railway Line | SK481626 | 2006 | DCW |
| Skegby Dismantled Railway Line | SK495605 | 1995 | DCW |
| Skegby Dismantled Railway Line | SK495614 | 2003 | DCW |
| Skegby Dismantled Railway Line | SK494622 | 2006 | DCW |
| Skegby Pasture | SK491616 | 1995 | DCW |
| Nuthall Dismantled Railway Line | SK516450 | 1997 | DCW |
| Gedling Colliery site | SK613438 | 2012 | DCW |
| Kirkby-in-Ashfield Disused Limestone Quarry | SK498553 | 2012 | DCW |
| Kirkby-in-Ashfield Disused Limestone Quarry | SK499554 | 2013 | DCW |
| Basford Dismantled Railway Line | SK542439 | 2011 | DCW |
| Littlewood Lane Quarry | SK533649 | 2006 | DCW |
| Littlewood Lane Quarry | SK533651 | 2015 | DCW, MW |
| Kirkby-in-Ashfield Dismantled Railway | SK497555 | 2011 | DCW |
| Fledborough Dismantled Railway | SK797711 | 2015 | MW, DCW |

*Site Destroyed

Spirodela polyrhiza (L.) Schleid.

Greater Duckweed

National Status: Least Concern**Nottinghamshire Status:** Uncommon**Monads:** 19

By the beginning of the 1960s greater duckweed *Spirodela polyrhiza* was decreasing in the VC and although it remained plentiful in ponds and ditches alongside the River Trent downstream of Newark-on-Trent, elsewhere it became increasingly scarce. The decline has continued into modern times and with the exception of the Bunny record, the species is now confined to the Trent valley, with two sites on the River Soar, both in close proximity to the confluence with the River Trent. Curiously, Howitt & Howitt (1963) described the distribution of greater duckweed as being plentiful in the Trent valley downstream of Newark-on-Trent and rare upstream, but the modern distribution is reversed. There are now more records upstream of Newark-on-Trent than there are downstream. Since 2012 the species has been recorded at a further seven sites in the River Trent, gravel pits, ponds and a canal (in bold).

Spirodela polyrhiza (continued)

Whether the additional records represent an extension of the range or an increase in survey intensity is not known at this time and more time is required.

| Location | GR | Date | Recorder |
|---|-----------------|-------------|----------------|
| Bunny Park Pond | SK596296 | 1978 | Woll. |
| Colwick Country Park | SK609399 | 1995 | DCW |
| River Trent, Colwick | SK597389 | 2015 | DCW |
| River Trent, Newark-on-Trent | SK792536 | 1998 | DCW |
| Radcliffe-on-Trent Pond | SK649404 | 1999 | DCW |
| Holme Pit, Clifton | SK535345 | 2003 | DCW |
| River Trent, Clifton | SK539349 | 2010 | DCW |
| River Trent, Clifton | SK535352 | 2010 | DCW |
| River Trent, Beeston Weir | SK533353 | 2010 | DCW |
| River Trent, Holme-on-Trent | SK801595 | 2006 | DCW |
| River Trent, North Muskham | SK807608 | 2013 | DCW |
| River Trent, Church Laneham | SK819762 | 2015 | DCW |
| Holme-on-Trent | SK800594 | 2011 | DCW, MW |
| Rolleston Pond | SK755506 | 2007 | DCW |
| Hoveringham Gravel Pits | SK717475 | 2008 | DCW |
| River Trent, Clifton | SK541351 | 2010 | DCW |
| River Soar, Sutton Bonington | SK496251 | 2010 | DCW |
| River Soar, Stanford-on-Soar | SK526219 | 2010 | DCW |
| Hoveringham Pasture Pond | SK709466 | 2012 | DCW, RAJ |
| River Trent, Bleasby | SK735495 | 2010 | RAJ |
| Holme Pierrepont Gravel Pits | SK628396 | 2013 | DCW |
| Holme Pierrepont Gravel Pits | SK628398 | 2015 | DCW |
| Chesterfield Canal, West Stockwith | SK786947 | 2015 | DCW, MW |
| Chesterfield Canal, Misterton | SK781947 | 2015 | RAJ |
| Chesterfield Canal, Misterton | SK782942 | 2015 | RAJ |
| Chesterfield Canal, Misterton | SK764944 | 2015 | RAJ |
| Retford Golf Course | SK690794 | 2015 | JC |

Stachys x ambigua Sm.

S. sylvatica x palustris

National Status: Data Deficient

Nottinghamshire: Uncommon

Monads: 11

For this hybrid there is only one historical record for the VC, recorded by J. W. Carr in the early 20th Century on the bank of the Chesterfield Canal between Drakeholes and Wiseton and in 2015 the hybrid was found 2km to the south on the Chesterfield Canal at Clayworth (in bold). In modern times, the hybrid has been recorded nine times at scattered localities in the VC. The hybrid does not appear to have any particular affinity for a particular habitat type. Habitats include drain banks, river banks, a roadside and track verges, and woodland. Since 2012, the taxon has been recorded at Farndon Gravel Pits and confirmed as extant at Holme Pierrepont Gravel Pits (in bold). As such, the hybrid is now uncommon in Nottinghamshire.

| Location | GR | Date | Recorder |
|-------------------------------------|-----------------|-------------|------------|
| Everton Carr Drain | SK692929 | 1972 | JH |
| Bestwood Country Park | SK557474 | 1997 | GL |
| River Erewash (Brinsley Flash) | SK448502 | 2002 | DCW, PO |
| Banks Carr Wood | SK599915 | 2006 | DCW |
| Holme Pierrepont Roadside Verge | SK627382 | 2007 | PA, DCW |
| Holme Pierrepont Gravel Pits | SK615379 | 2013 | DCW |
| Nottingham Canal, Cossall | SK479420 | 2011 | MW |
| River Trent, Holme-on-Trent | SK800594 | 2011 | DCW, MW |
| Rolleston | SK758516 | 2012 | RAJ |

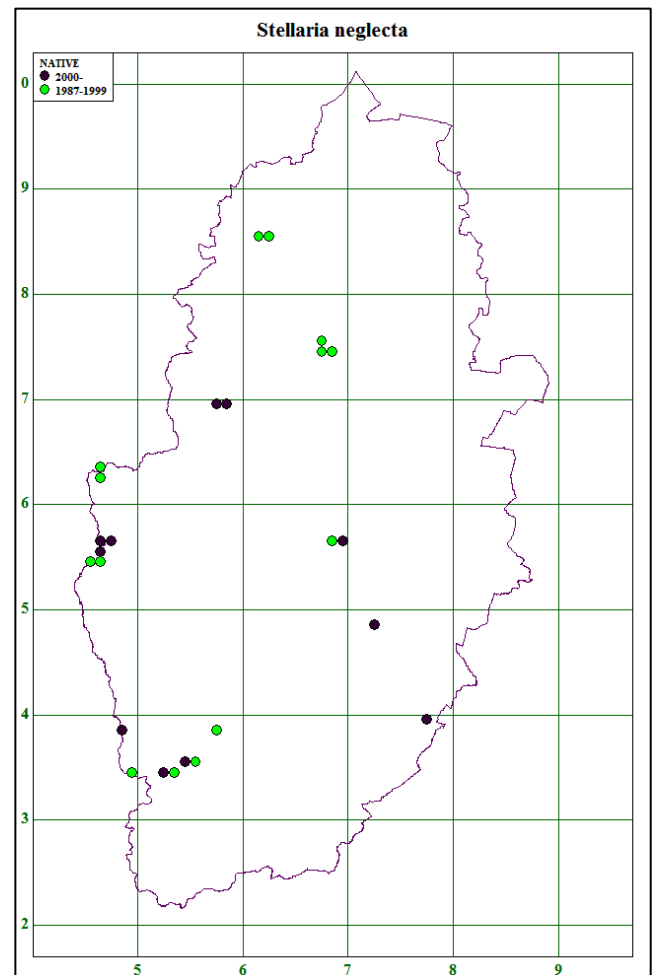
| Location | GR | Date | Recorder |
|--------------------------------------|-----------------|-------------|------------|
| Chesterfield Canal, Clayworth | SK731861 | 2015 | MW |
| Farndon Gravel Pits | SK770527 | 2013 | RAJ |

Stellaria neglecta Weihe ex Bluff & Fingerh. Greater Chickweed

National Status: Least Concern

Nottinghamshire: Uncommon

Monads: 25



Greater Chickweed *Stellaria neglecta* at Clifton Grove



Source: S. Hammonds

Preston *et al.* (2003) describe this species as "an annual to short-lived perennial herb of damp, shaded places such as hedgerows, wood margins, streamsides and the borders of damp copses, on a range of soils". Howitt & Howitt (1963) stated that the species had been recorded throughout the VC, but it was uncommon.

Stellaria neglecta (continued)

The species is still found at some of its historic stations such as Hodsock in the north and at Clifton Grove in the City of Nottingham. Overall, it still has a widespread distribution on a variety of substrates, but it remains uncommon. Since 2012 no new sites have been found, but the populations at The Bottoms and Flintham Wood have been confirmed as extant.

Thymus polytrichus subsp. *britannicus* Wild Thyme
(Ronniger) Kerguelen

National Status: Least Concern

Nottinghamshire Uncommon

Monads: 16

Howitt & Howitt (1963) described the species as being rather rare, but scattered across the VC on dry banks and pastures. Since 1970 the species has persisted in the south of the VC at Gotham Hills and in the west of the VC at Warsop, Annesley, Kirkby-in-Ashfield, Pleasley and Budby. Several new populations have been recorded at, or near to Clumber Park on sandy soils, whilst most recent losses have occurred on the base-rich clays in the centre of the county, because of habitat destruction. Extant populations visited since 2012 are highlighted in bold along with a new, but unconfirmed (to species level) population at Wysall.

| Location | GR | Date | Recorder |
|---|-----------------|-------------|-----------------|
| Lady Lee Quarry | SK562794 | 1978 | Woll. |
| Claypole (W of) | SK84J | 1987 | DCW |
| Swinecotte Dale | SK548544 | 1996 | DCW |
| Pleasley Vale | SK508646 | 1998 | DCW |
| Pleasley Vale | SK510646 | 1998 | DCW |
| Ollerton Assarts | SK628689 | 2012 | DCW |
| Apleyhead Verges, Clumber Park | SK644773 | 2014 | DCW |
| Hanger Hill Drive, Warsop | SK599690 | 2001 | RAJ |
| Budby South Forest | SK624691 | 2002 | DCW |
| Gotham Hills | SK529307 | 2009 | DCW |
| Carburton Plantations | SK611715 | 2006 | DCW |
| Annesley Woodhouse Quarry | SK490533 | 2013 | DCW |
| Warsop Hills and Holes | SK553683 | 2012 | DCW |
| Warsop Hills and Holes | SK558682 | 2012 | DCW |
| Warsop Hills and Holes | SK556678 | 2012 | DCW |
| Warsop Hills and Holes | SK554678 | 2012 | DCW |
| Kirkby-in-Ashfield Hills and Holes | SK499554 | 2013 | DCW, RAJ |
| Clumber Park | SK619744 | 2007 | DCW |
| Clumber Park | SK618751 | 2007 | DCW |
| Clumber Park | SK612756 | 2007 | DCW |
| Clumber Park | SK617750 | 2007 | DCW |
| Warsop Hills and Holes | SK558681 | 2012 | DCW, RAJ, JC |
| Warsop Hills and Holes | SK558679 | 2012 | RAJ, JC |
| Rhein O'Thorns Hills and Holes | SK553683 | 2012 | RAJ, JC |
| Ollerton Assarts | SK628687 | 2012 | DCW, RAJ, JC |
| Long Plantation Bridleway | SK610716 | 2012 | DCW, RAJ |
| Long Plantation Bridleway | SK606715 | 2012 | DCW, RAJ |
| Long Plantation Bridleway | SK605715 | 2012 | DCW, RAJ |
| Bingham dismantled railway trackbed* | SK710388 | 2012 | DCW |
| Wysall Churchyard | SK604272 | 2013 | DCW |

*Probably introduced

Triglochin palustris L.

Marsh Arrow-grass

National Status: Least Concern

Nottinghamshire Declining

Monads: 29

Before 1970 marsh arrow-grass *Triglochin palustris* was frequent in all areas of the VC, except for the south and southeast on the Lias clays, where the species was present at only one site. Habitat destruction, drainage and eutrophication are factors that are likely to be responsible for the losses from 13 monads since 1970. Losses have occurred from Attenborough (SK53), Rempstone (SK5264/5625), Annesley (SK4853), Sutton-in-Ashfield (SK4858), Kirkby Bentinck (SK4954/4955), Chilwell (SK5235), Wollaton (SK5240), Lowdham (SK6647), Scrooby (SK6590 and 6689) Everton (SK6993), Sutton by Retford (SK6983) and Fiskerton (SK7350). The species is still present in 15 rolling monads and is capable of colonising new sites where suitable conditions occur. For example, two new populations have been found during 2012, one in a flush on the Magnesian Limestone, the other on wet soils in former colliery yards. Since 2012, extant populations at Brinsley and Skegby and a new population at Temple Lake, Nuthall (in bold) have been recorded.

| Location | GR | Date | Recorder |
|--------------------------------------|-----------------|-------------|----------------|
| Teversal Pastures | SK493620 | 1972 | JH |
| Leen Pastures | SK550493 | 1978 | Woll. |
| Everton Carr | SK699932 | 1978 | KLJ |
| Teversal, Norwood | SK483636 | 1990 | DCW |
| Leen Pastures | SK550486 | 1991 | GL |
| Kinoulton Grassland | SK678305 | 1991 | DCW |
| Mill Lakes, Bestwood | SK549482 | 1991 | GL |
| Greasley | SK502478 | 1994 | DCW |
| Erewash Pasture, Brinsley | SK451484 | 2013 | DCW, PO |
| Skegby Stream | SK489605 | 1995 | DCW |
| Skegby Stream | SK491606 | 1995 | DCW |
| Skegby Stream | SK492605 | 2015 | RAJ |
| Skegby Stream | SK492606 | 2015 | RAJ |
| Skegby Stream | SK493606 | 2015 | RAJ |
| Kirkby Bentinck | SK473548 | 1996 | Woll. |
| Huthwaite Marsh | SK456598 | 1997 | PA |
| Toton Pond | SK484357 | 2001 | DCW |
| Kirkby Bentinck | SK472548 | 2002 | DCW |
| Leen Pastures | SK552490 | 2007 | DCW |
| Skegby Stream | SK492605 | 2008 | DCW |
| Teversal Grassland | SK490637 | 2008 | DCW |
| Poulter Fen, Nether Langwith, | SK548704 | 2011 | DCW, AB |
| Sookholme Moor | SK554677 | 2012 | RAJ, JC, DCW |
| Stanton Hill Grassland | SK486612 | 2012 | DCW |
| Clipstone Colliery Yards | SK596630 | 2012 | DCW |
| Temple Lake, Nuthall | SK513441 | 2013 | DCW |

Valeriana dioica L.

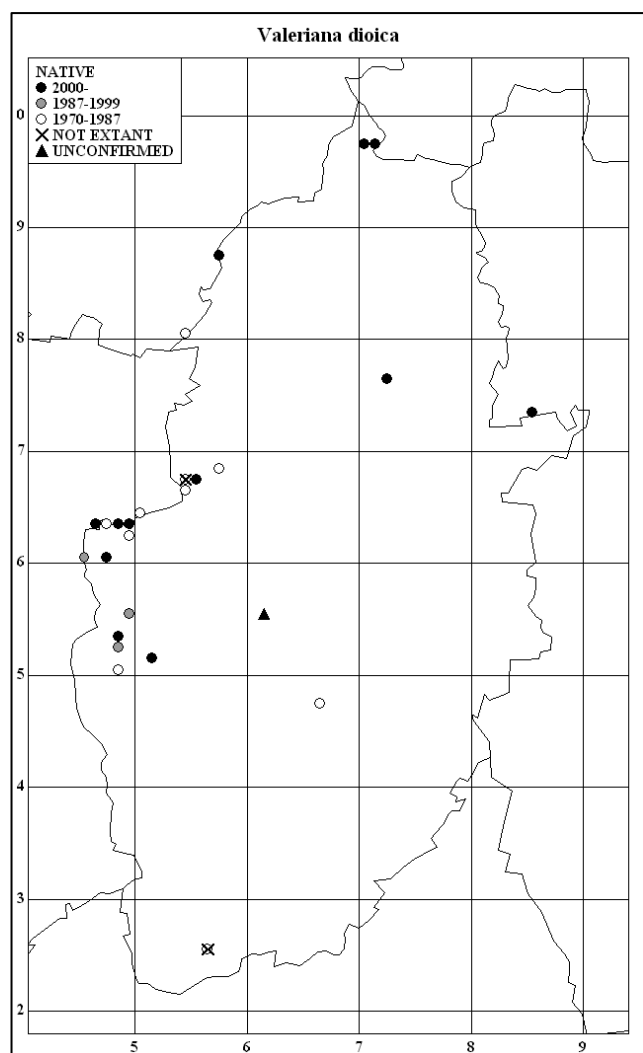
Marsh Valerian

National Status: Least Concern

Nottinghamshire Uncommon

Monads: 23 (and 1 unconfirmed)

Marsh valerian has been declining in the VC over the last century, because of drainage, habitat loss and eutrophication. It was however, considered by Howitt & Howitt (1963) to be still frequent near limestone streams, and it was also occasional on calcareous clays and in fenland. Since 1970, the species does not appear to have undergone further declines and is still locally frequent near Limestone streams and in ancient woodland. Many of the sites in which it is still found are protected and it is probably not under any immediate threat. The distribution map is provided on the following page.



| Location | GR | Date | Recorder |
|------------------------|-----------------|-------------|----------------------------|
| Epperstone Park | SK638508 | 2007 | DCW |
| Epperstone Park | SK638499 | 2007 | DCW |
| Epperstone Park | SK646496 | 2007 | DCW |
| Epperstone Park | SK635504 | 2013 | JC |
| Bevercotes Park | SK702705 | 2013 | DCW |
| Wellow Park | SK687672 | 2009 | DCW |
| Wellow Park | SK684669 | 2013 | DCW, RAJ, JC, et al |
| Wellow Park | SK685673 | 2009 | DCW |
| Wellow Park | SK690674 | 2009 | DCW |
| Wellow Park | SK692673 | 2009 | DCW |
| Wellow Park | SK684672 | 2013 | DCW, RAJ, JC, et al |
| Epperstone Park | SK637501 | 2012 | DCW |
| Brinsley Brook | SK465488 | 2013 | DCW, PO |

Vicia sylvatica L.

Wood Vetch

National Status: Least Concern**Nottinghamshire** Scarce**Monads:** 11

With the exception of one population, which is considered to be an introduction, the species is nowadays wholly confined to ancient woodlands in the VC. Since 1970 the species has not been seen at five sites that were described in Howitt & Howitt (1963) including Grove, Mapperley Hills, Roselle Wood at Oxtun, Manzer Gorse at Eakring and Gringley Wood. However, the losses are to some extent compensated by records of the species at Jackson's Wood Edingley, Redgate Wood at Eakring, Thurgarton Dumble and Souther Wood at Thurgarton. As these are all ancient woodland sites, it is possible that their presence before 1970 may have been overlooked. Since 2012, a new population has been detected at Brinsley in riparian woodland and extant populations have been confirmed at Wellow, Flintham, Oxtun and Bevercotes. The new population has elevated the species from scarce to uncommon.

| Location | GR | Date | Recorder |
|-----------------------|-----------------|-------------|------------|
| Wellow Park | SK685675 | 1972 | JH |
| Wellow Park | SK681674 | 1972 | JH |
| Thurgarton Dumble | SK64 / SK65 | 1974 | RCLH |
| Souther Wood | SK6749 | 1974 | RCLH |
| Jackson's Wood | SK649544 | 2015 | JC |
| Holme Pierrepont | SK622398 | 1987 | DCW |
| Redgate Wood | SK676597 | 1994 | DCW, MW |
| Flintham Wood | SK721477 | 2013 | DCW |
| Bevercotes Park | SK701709 | 1998 | DCW |
| Epperstone Park | SK643497 | 2007 | DCW |

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Appendix I: Status of Taxa Checklist

The status of the taxa in this register is summarised in the table below. Table 1a below provides the conservation codes that are used in taxa checklist (Table 1b). A further four criteria have been added to the table below owing to the publication of the vascular plant red data list for England, Stroh *et al* (2014). Plants that are included in the red data list for England, but do not fulfil any of the other criteria have not been included in the text, but are highlighted in yellow in Table 1b. This is because many of the species such as heather *Calluna vulgaris* and quaking grass *Briza media* are relatively widespread within the county. Changes since the first edition of the RPR are summarised in the right hand column.

Table 1a: Conservation Codes used in Checklist

| Status Code | Explanation |
|-------------|---|
| 1 | Nationally Extinct |
| 2 | County Extinct |
| 2a | County Extinct (as a native) |
| 3 | County Extinct (unconfirmed) |
| 4 | IUCN Critically Endangered (GB) |
| 5 | IUCN Endangered (GB) |
| 6 | IUCN Vulnerable (GB) |
| 7 | IUCN Near Threatened (GB) |
| 8 | Nationally Rare (<15km squares) |
| 9 | Nationally Scarce (16 - 100km squares) |
| 10 | County Rare (1 - 3 monads) |
| 11 | County Scarce (4 - 10 monads) |
| 12 | Section 41 Species of Principal Importance |
| 13 | Nottinghamshire LBAP Species |
| 14 | Declining in the County (10 - 30 monads) |
| 15 | Restricted in the County (10 - 30 monads) |
| 16 | Schedule 8 Wildlife & Countryside Act, 1981 |
| 17 | IUCN Critically Endangered (England) |
| 18 | IUCN Endangered (England) |
| 19 | IUCN Vulnerable (England) |
| 20 | IUCN Near Threatened (England) |

Table 1b: Checklist of Conservation Status of Taxa

| Scientific Name (Kent/Stace) | Common Name | Codes | | | | | | Notes / Change |
|---|--|-------|----|----|----|--|--|--------------------|
| <i>Adiantum capillus-veneris</i> | Maidenhair Fern | 9 | 10 | | | | | |
| <i>Adonis annua</i> | Pheasant's Eye | 2 | 5 | 8 | 17 | | | |
| <i>Agrimonia procera</i> | Fragrant Agrimony | 15 | | | | | | Scarce to uncommon |
| <i>Agrostemma githago</i> | Corncockle | 1 | 2a | 8 | 15 | | | |
| <i>Agrostis x murbeckii</i> | <i>Agrostis capillaris</i> x <i>stolonifera</i> | 11 | | | | | | |
| <i>Allium oleraceum</i> | Field Garlic | 6 | 9 | | | | | |
| <i>Allium scorodoprasum</i> | Sand Leek | 9 | 11 | | | | | |
| <i>Alnus cordata</i> x <i>glutinosa</i> | Hybrid Alder | 8 | 10 | | | | | |
| <i>Alnus cordata</i> x <i>incana</i> | Hybrid Alder | 8 | 11 | | | | | |
| <i>Alopecurus aequalis</i> | Orange Foxtail | 9 | 11 | | | | | |
| <i>Alopecurus x brachystylus</i> | <i>Alopecurus pratensis</i> x <i>geniculatus</i> | 2 | | | | | | |
| <i>Anacamptis morio</i> | Green-winged Orchid | 7 | 9 | 11 | 19 | | | |
| <i>Anagallis arvensis</i> forma <i>azurea</i> | Scarlet Pimpernel | 10 | | | | | | |
| <i>Anagallis arvensis</i> subsp. <i>foemina</i> | Blue Pimpernel | 2 | | | | | | |
| <i>Anagallis tenella</i> | Bog Pimpernel | 14 | | | | | | |
| <i>Antennaria dioica</i> | Mountain Everlasting | 2 | 19 | | | | | |
| <i>Anthemis arvensis</i> | Corn Chamomile | 2 | 5 | 18 | | | | |
| <i>Anthemis cotula</i> | Stinking Chamomile | 6 | 19 | | | | | |

| Scientific Name (Kent/Stace) | Common Name | Codes | | | | | | Notes / Change |
|--|--|-----------|----|----|----|--|--|------------------------------------|
| <i>Apera spica-venti</i> | Loose Silky-bent | 7 | 9 | | | | | |
| <i>Apium graveolens</i> | Wild Celery | 11 | | | | | | |
| <i>Apium inundatum</i> | Lesser Marshwort | 11 | 19 | | | | | |
| <i>Aquilegia vulgaris</i> | Columbine | 11 | | | | | | |
| <i>Arabis hirsuta</i> | Hairy Rock-cress | 11 | 20 | | | | | |
| <i>Arctium x nothum</i> | <i>Arctium lappa</i> x minus | 10 | | | | | | |
| <i>Arnoseris minima</i> | Lamb's succory | 1 | 2 | | | | | |
| <i>Asplenium ceterach</i> | Rustyback | 11 | | | | | | |
| <i>Aster tripolium</i> | Sea Aster | 10 | | | | | | |
| <i>Baldellia ranunculoides</i> | Lesser Water-plantain | 7 | 15 | 19 | | | | |
| <i>Beta vulgaris</i> subsp. <i>maritima</i> | Sea Beet | 2 | | | | | | |
| <i>Betula x aurata</i> | <i>Betula pendula</i> x <i>pubescens</i> | 10 | | | | | | Not in RPR 1 st edition |
| <i>Blechnum spicant</i> | Hard Fern | 14 | | | | | | |
| <i>Blysmus compressus</i> | Flat-sedge | 2 | 6 | 12 | 19 | | | |
| <i>Botrychium lunaria</i> | Moonwort | 2 | 19 | | | | | |
| <i>Brassica nigra</i> | Black Mustard | 11 | | | | | | |
| <i>Brassica oleracea</i> | Wild Cabbage | 10 | | | | | | |
| <i>Briza media</i>* | Quaking Grass | 20 | | | | | | |
| <i>Bromus racemosus</i> | Smooth Brome | 15 | | | | | | |
| <i>Bromus secalinus</i> | Rye Brome | 6 | 20 | | | | | |
| <i>Bupleurum rotundifolium</i> | Thorow-wax | 2 | 4 | 8 | | | | |
| <i>Callitriche brutia</i> subsp. <i>hamulata</i> | Intermediate water-starwort | 15 | | | | | | |
| <i>Callitriche truncata</i> | Short-leaved water-starwort | 9 | | | | | | |
| <i>Calluna vulgaris</i>* | Heather | 20 | | | | | | |
| <i>Calystegia sepium</i> subsp. <i>roseata</i> | Hedge Bindweed | 10 | | | | | | Not in RPR 1 st edition |
| <i>Campanula glomerata</i> | Clustered Bellflower | 11 | | | | | | Scarce to uncommon |
| <i>Campanula patula</i> | Spreading Bellflower | 2a | 5 | 9 | 17 | | | |
| <i>Campanula rapunculus</i> | Rampion | 2a | 5 | 8 | 18 | | | |
| <i>Campanula trachelium</i> | Nettle-leaved Bellflower | 11 | | | | | | |
| <i>Cardamine impatiens</i> | Narrow-leaved Bitter-cress | 2 | 7 | 9 | | | | |
| <i>Carduus tenuiflorus</i> | Slender Thistle | 11 | | | | | | |
| <i>Carduus x stangii</i> | <i>Carduus crispus</i> x <i>nutans</i> | 15 | | | | | | |
| <i>Carex arenaria</i> | Sand Sedge | 15 | | | | | | |
| <i>Carex canescens</i> | White Sedge | 10 | | | | | | |
| <i>Carex diandra</i> | Lesser Tussock-sedge | 2 | 7 | 19 | | | | |
| <i>Carex digitata</i> | Fingered Sedge | 2 | 9 | | | | | |
| <i>Carex dioica</i> | Dioecious Sedge | 10 | | | | | | |
| <i>Carex distans</i> | Distant Sedge | 15 | | | | | | Scarce to uncommon |
| <i>Carex divulsa</i> subsp. <i>Divulsa</i> | Grey Sedge | 11 | | | | | | Rare to scarce |
| <i>Carex echinata</i> | Star Sedge | 10 | 20 | | | | | |
| <i>Carex elata</i> | Tufted Sedge | 9 | 11 | 20 | | | | |
| <i>Carex hostiana</i> | Tawny Sedge | 10 | | | | | | |
| <i>Carex lepidocarpa</i> | Long-stalked Yellow-sedge | 15 | | | | | | |
| <i>Carex pallescens</i> | Pale Sedge | 14 | | | | | | |
| <i>Carex pulcaris</i> | Flea Sedge | 11 | 20 | | | | | |
| <i>Carex vesicaria</i> | Bladder-sedge | 11 | 19 | | | | | |
| <i>Carex vulpina</i> | True Fox-sedge | 2 | 6 | 19 | | | | |
| <i>Carum carvi</i> | Caraway | 10 | 17 | | | | | |
| <i>Catabrosa aquatica</i> | Whorl Grass | 14 | 19 | | | | | |
| <i>Centaurea cyanus</i> | Cornflower | 9 | 10 | 12 | | | | |
| <i>Centaureum pulchellum</i> | Lesser Centaury | 11 | | | | | | |
| <i>Cephalanthera damasonium</i> | White Helleborine | 2 | 6 | 19 | | | | |
| <i>Cephalanthera longifolia</i> | Narrow-leaved Helleborine | 2 | 6 | 9 | 18 | | | |

| Scientific Name (Kent/Stace) | Common Name | Codes | | | | | | Notes / Change |
|--|---|-----------|----|----|----|----|----|------------------------------------|
| <i>Chamaemelum nobile</i> | Chamomile | 3 | 6 | 9 | 19 | | | |
| <i>Chenopodium bonus-henricus</i> | Good King Henry | 6 | 14 | 19 | | | | |
| <i>Chenopodium glaucum</i> | Oak-leaved Goosefoot | 6 | 14 | 19 | | | | |
| <i>Chenopodium hybridum</i> | Sowbane | 11 | | | | | | |
| <i>Chenopodium murale</i> | Nettle-leaved Goosefoot | 6 | 10 | 18 | | | | |
| <i>Chenopodium urbicum</i> | Upright Goosefoot | 2 | 4 | | | | | |
| <i>Chenopodium vulvaria</i> | Stinking Goosefoot | 2 | 5 | 8 | | | | |
| <i>Chrysosplenium alternifolium</i> | Alternate-leaved Golden-saxifrage | 15 | | | | | | |
| <i>Cichorium intybus</i> | Chicory | 19 | | | | | | |
| <i>Cicuta virosa</i> | Cowbane | 2 | 5 | 9 | | | | |
| <i>Circaea x intermedia</i> | Hybrid Enchanter's Nightshade | 10 | | | | | | |
| <i>Cirsium acaule</i> | Dwarf Thistle | 15 | | | | | | |
| <i>Cirsium dissectum</i> | Meadow Thistle | 3 | 10 | | | | | |
| <i>Cirsium x grandiflorum</i> | <i>Cirsium eriophorum</i> x <i>vulgare</i> | 10 | | | | | | |
| <i>Cladium mariscus</i> | Great Fen-sedge | 10 | | | | | | |
| <i>Clinopodium acinos</i> | Basil Thyme | 6 | 11 | 12 | | | | Scarce to uncommon |
| <i>Clinopodium ascendens</i> | Common Calamint | 2a | 11 | | | | | |
| <i>Clinopodium calamintha</i> | Lesser Calamint | 2 | 6 | 9 | | | | |
| <i>Colchicum autumnale</i> | Meadow Saffron | 2a | 7 | 10 | | | | |
| <i>Comarum palustris</i> | Marsh Cinquefoil | 11 | 20 | | | | | |
| <i>Convallaria majalis</i> | Lily of the Valley | 11 | | | | | | |
| <i>Crassula tillaea</i> | Mossy Stonecrop | 9 | 10 | | | | | |
| <i>Crepis paludosa</i> | Marsh Hawk's-beard | 10 | | | | | | |
| <i>Crocus nudiflorus</i> | Autumn Crocus | 11 | 13 | | | | | |
| <i>Crocus vernus</i> | Spring Crocus | 11 | 13 | | | | | |
| <i>Cuscuta epithymum</i> | Dodder | 6 | 10 | 19 | | | | |
| <i>Cuscuta europaea</i> | Greater Dodder | 2 | 9 | | | | | |
| <i>Cynoglossum officinale</i> | Hound's-tongue | 7 | 14 | 20 | | | | |
| <i>Cystopteris fragilis</i> | Brittle Bladder-fern | 11 | | | | | | |
| <i>Dactylorhiza incarnata</i> subsp. <i>incarnata</i> | Early Marsh-orchid | 11 | | | | | | |
| <i>Dactylorhiza incarnata</i> subsp. <i>pulchellum</i> | Early Marsh-orchid | 10 | | | | | | |
| <i>Dactylorhiza maculata</i> subsp. <i>ericetorum</i> | Heath Spotted-orchid | 10 | | | | | | |
| <i>Dactylorhiza purpurella</i> | Northern Marsh-orchid | 15 | | | | | | Scarce to uncommon |
| <i>Dactylorhiza viridis</i> | Frog Orchid | 6 | 11 | | | | | |
| <i>Dactylorhiza x insignis</i> | Hybrid Marsh-orchid | 10 | | | | | | Not in RPR 1 st edition |
| <i>Daphne mezereum</i> | Mezereum | 6 | 9 | 10 | 19 | | | |
| <i>Dianthus armeria</i> | Deptford Pink | 5 | 9 | 10 | 13 | 16 | 18 | |
| <i>Dianthus deltoides</i> | Maiden Pink | 2a | 7 | 9 | 11 | 19 | | |
| <i>Dipsacus pilosus</i> | Small Teasel | 11 | | | | | | |
| <i>Drosera rotundifolia</i> | Round-leaved Sundew | 2 | 20 | | | | | |
| <i>Dryopteris cristata</i> | Crested Buckler-fern | 2 | 4 | 8 | | | | |
| <i>Dryopteris x complexa</i> | <i>Dryopteris filix-mas</i> x <i>affinis</i> | 10 | | | | | | |
| <i>Dryopteris x deweveri</i> | <i>Dryopteris carthusiana</i> x <i>dilatata</i> | 11 | | | | | | Rare to scarce |
| <i>Dryopteris x uliginosa</i> | <i>Dryopteris cristata</i> x <i>carthusiana</i> | 2 | | | | | | |
| <i>Eleocharis acicularis</i> | Needle Spike-rush | 9 | 11 | 20 | | | | |
| <i>Eleocharis multicaulis</i> | Many-stemmed Spike-rush | 2 | | | | | | |
| <i>Eleocharis palustris</i> subsp. <i>palustris</i> | Common Spike-rush | 2 | | | | | | |
| <i>Eleocharis quinqueflora</i> | Few-flowered Spike-rush | 10 | | | | | | |
| <i>Eleogiton fluitans</i> | Floating Club-rush | 11 | | | | | | |
| <i>Empetrum nigrum</i> | Crowberry | 2 | | | | | | |
| <i>Epilobium lanceolatum</i> | Spear-leaved Willowherb | 11 | | | | | | |

| Scientific Name (Kent/Stage) | Common Name | Codes | | | | | | Notes / Change |
|--|------------------------------------|-----------|----|----|----|----|--|------------------------------------|
| Epilobium x brevipilum | Epilobium hirsutum x tetragonum | 11 | | | | | | Rare to scarce |
| Epilobium x dacicum | Epilobium parviflorum x obscurum | 10 | | | | | | Not in RPR 1 st edition |
| Epilobium x erroneum | Epilobium hirsutum x montanum | 11 | | | | | | Rare to scarce |
| Epilobium x floridulum | Epilobium parviflorum x ciliatum | 15 | | | | | | Scarce to uncommon |
| Epilobium x fossicola | Epilobium ciliatum x palustre | 10 | | | | | | Not in RPR 1 st edition |
| Epilobium x haussknechtianum | Epilobium montanum x tetragonum | 10 | | | | | | |
| Epilobium x interjectum | Epilobium montanum x ciliatum | 15 | | | | | | |
| Epilobium x limosum | Epilobium parviflorum x montanum | 15 | | | | | | |
| Epilobium x mentiense | Epilobium tetragonum x ciliatum | 11 | | | | | | |
| Epilobium x novae-civitatis | Epilobium ciliatum x hirsutum | 10 | | | | | | |
| Epilobium x palatinum | Epilobium parviflorum x tetragonum | 11 | | | | | | |
| Epilobium x semiobscurum | Epilobium tetragonum x obscurum | 10 | | | | | | Not in RPR 1 st edition |
| Epilobium x subhirsutum | Epilobium parviflorum x hirsutum | 11 | | | | | | |
| Epilobium x vicinum | Epilobium obscurum x ciliatum | 11 | | | | | | Rare to scarce |
| Epipactis palustris | Marsh Helleborine | 3 | 20 | | | | | |
| Epipactis phyllanthes | Green-flowered Helleborine | 9 | 10 | | | | | |
| Equisetum hyemale | Dutch Rush | 2 | | | | | | |
| Equisetum sylvaticum | Wood Horsetail | 15 | | | | | | |
| Equisetum variegatum | Variegated Horsetail | 2 | 9 | | | | | |
| Equisetum x litorale | Shore Horsetail | 10 | | | | | | |
| Erica cinerea* | Bell Heather | 20 | | | | | | |
| Erica tetralix | Cross-leaved Heath | 11 | 20 | | | | | |
| Eriophorum angustifolium | Common Cottongrass | 15 | 19 | | | | | Scarce to uncommon |
| Eriophorum latifolium | Broad-leaved Cottongrass | 2 | | | | | | |
| Eriophorum vaginatum | Hare's-tail Cottongrass | 3 | 10 | | | | | |
| Erodium maritimum | Sea Stork's-bill | 9 | 10 | | | | | |
| Erodium moschatum | Musk Stork's-bill | 10 | | | | | | Not in RPR 1 st edition |
| Erophila glabrescens | Glabrous Whitlowgrass | 11 | | | | | | |
| Erysimum cheiri | Wallflower | 11 | | | | | | |
| Euphorbia amygdaloides subsp. amygdaloides | Wood spurge | 2 | | | | | | |
| Euphorbia exigua | Dwarf Spurge | 7 | 19 | | | | | |
| Euphorbia platyphyllos | Broad-leaved Spurge | 2 | 9 | | | | | |
| Euphrasia officinalis subsp. anglica | an eyebright | 5 | 11 | 12 | | | | |
| Euphrasia pseudokernerii | Chalk Eyebright | 5 | 9 | 10 | 12 | 19 | | |
| Euphrasia stricta (=brevipila) | an eyebright | 2 | 5 | | | | | |
| Falcaria vulgaris | Longleaf | 10 | | | | | | |
| Festuca longifolia | Blue Fescue | 8 | 11 | | | | | |
| Filago minima | Small Cudweed | 20 | | | | | | |
| Filago vulgaris | Common Cudweed | 7 | 20 | | | | | |
| Fumaria muralis | Common Ramping-fumitory | 7 | 15 | | | | | |
| Gagea lutea | Yellow Star-of-Bethlehem | 9 | 11 | | | | | |
| Galeopsis angustifolia | Red Hemp-nettle | 3 | 4 | 9 | 10 | | | |
| Galeopsis segetum | Downy Hemp-nettle | 1 | 2 | 9 | | | | |
| Galeopsis speciosa | Large-flowered Hemp-nettle | 6 | 19 | | | | | |
| Galium constrictum | Slender Marsh-bedstraw | 2 | 8 | | | | | |
| Galium palustre subsp. elongatum | a common marsh-bedstraw | 15 | | | | | | |
| Galium parisiense | Wall Bedstraw | 3 | 6 | 9 | 10 | 19 | | |
| Galium tricornutum | Corn Cleavers | 2 | 4 | 8 | 17 | | | |
| Galium uliginosum | Fen Bedstraw | 11 | | | | | | |
| Genista anglica | Petty Whin | 7 | 11 | 19 | | | | |

| Scientific Name (Kent/Stace) | Common Name | Codes | | | | | | Notes / Change |
|--|--|-------|----|----|----|----|--|------------------------------------|
| <i>Gentiana pneumonanthe</i> | Marsh Gentian | 2 | 9 | 20 | | | | |
| <i>Gentianella amarella</i> | Autumn Gentian | 15 | 20 | | | | | |
| <i>Gentianella baltica</i> (=campestris) | Field Gentian | 2 | 6 | 18 | | | | |
| <i>Gentianella campestris</i> agg. | Field Gentian | 2 | 6 | 18 | | | | |
| <i>Geranium columbinum</i> | Long-stalked Crane's-bill | 11 | | | | | | |
| <i>Geranium purpureum</i> | Little-Robin | 9 | 10 | | | | | |
| <i>Geranium rotundifolium</i> | Round-leaved Crane's-bill | 15 | | | | | | |
| <i>Geranium sanguineum</i> | Bloody Crane's-bill | 2a | 20 | | | | | |
| <i>Geum x intermedium</i> | <i>Geum rivale</i> x <i>urbanum</i> | 15 | | | | | | |
| <i>Glebionis segetum</i> | Corn Marigold | 6 | 19 | | | | | |
| <i>Glyceria x pedicillata</i> | Hybrid Sweet-grass | 11 | | | | | | |
| <i>Gnaphalium sylvaticum</i> | Heath Cudweed | 5 | 9 | 18 | | | | |
| <i>Groenlandia densa</i> | Opposite-leaved Pondweed | 6 | 19 | | | | | |
| <i>Gymnadenia conopsea</i> sensu lato | A Fragrant Orchid | 10 | | | | | | |
| <i>Gymnadenia densiflora</i> | Marsh fragrant orchid | 11 | | | | | | |
| X <i>Dactyloadenia heinziana</i> | <i>Gymnadenia conopsea</i> x <i>Dactylorhiza fuchsii</i> | 10 | | | | | | Not in RPR 1 st edition |
| <i>Gymnocarpium robertianum</i> | Limestone Fern | 9 | 10 | | | | | |
| <i>Helianthemum nummularium</i> | Common Rock-rose | 11 | | | | | | |
| <i>Helleborus viridis</i> | Green Hellebore | 10 | | | | | | |
| <i>Heracleum sphondylium</i> x <i>mantegazzianum</i> | Hybrid Hogweed | 10 | | | | | | |
| <i>Herniaria glabra</i> | Smooth Rupture-wort | 2a | 8 | 10 | | | | |
| <i>Hippocrepis comosa</i> | Horseshoe Vetch | 2 | | | | | | |
| <i>Hordelymus europaeus</i> | Wood Barley | 9 | 15 | | | | | Scarce to uncommon |
| <i>Hottonia palustris</i> | Water Violet | 14 | 19 | | | | | |
| <i>Huperzia selago</i> | Fir Clubmoss | 2 | | | | | | |
| <i>Hydrocharis morsus-ranae</i> | Frogbit | 6 | 9 | 10 | 19 | | | |
| <i>Hydrocotyle vulgaris</i> | Marsh Pennywort | 20 | | | | | | |
| <i>Hyoscyamus niger</i> | Henbane | 6 | 9 | 15 | 19 | | | |
| <i>Hypericum androsaemum</i> | Tutsan | 2a | 10 | | | | | |
| <i>Hypericum maculatum</i> | Imperforate St. John's-wort | 15 | | | | | | |
| <i>Hypericum montanum</i> | Pale St. John's-wort | 7 | 9 | 10 | | | | |
| <i>Hypericum x desetangii</i> | Des Etang's St. John's-wort | 15 | | | | | | |
| <i>Hypochaeris glabra</i> | Smooth Cat's-ear | 6 | 15 | 19 | | | | |
| <i>Hypopitys monotropa</i> | Yellow Bird's-nest | 5 | 10 | 12 | 18 | | | |
| <i>Iberis amara</i> | Wild Candytuft | 2a | 6 | 19 | | | | |
| <i>Illecebrum verticillatum</i> | Coral-necklace | 2 | 6 | 9 | 18 | | | |
| <i>Inula helenium</i> | Elecampane | 15 | 20 | | | | | |
| <i>Jasione montana</i> | Sheep's-bit | 14 | 19 | | | | | |
| <i>Juncus compressus</i> | Round-fruited Rush | 7 | 19 | | | | | |
| <i>Juncus x diffusus</i> | <i>Juncus inflexus</i> x <i>effusus</i> | 10 | | | | | | |
| <i>Juniperus communis</i> | Juniper | 2 | 20 | | | | | |
| <i>Knautia arvensis</i> | Field Scabious | 20 | | | | | | |
| <i>Lathyrus aphaca</i> | Yellow Vetchling | 3 | 6 | 9 | 10 | 19 | | |
| <i>Lathyrus linifolius</i> | Bitter Vetch | 20 | | | | | | |
| <i>Lathyrus nissolia</i> | Grass Vetchling | 15 | | | | | | |
| <i>Lathyrus palustris</i> | Marsh Pea | 2 | 7 | 9 | 10 | 20 | | |
| <i>Lathyrus sylvestris</i> | Narrow-leaved Everlasting-pea | 11 | | | | | | |
| <i>Legousia hybrida</i> | Venus's-looking-glass | 10 | | | | | | |
| <i>Lepidium campestre</i> | Field Pepperwort | 20 | | | | | | |
| <i>Lepidium latifolium</i> | Dittander | 9 | 15 | | | | | |
| <i>Limosella aquatica</i> | Mudwort | 9 | | | | | | |
| <i>Linaria repens</i> | Pale Toadflax | 15 | | | | | | |
| <i>Linaria x dominii</i> | <i>Linaria purpurea</i> x <i>repens</i> | 10 | | | | | | |

| Scientific Name (Kent/Stace) | Common Name | Codes | | | | | | Notes / Change |
|---|------------------------------------|-----------|----|----|----|----|----|------------------------------------|
| <i>Linaria x sepium</i> | <i>Linaria repens x vulgaris</i> | 11 | | | | | | |
| <i>Linum bienne</i> | Pale Flax | 10 | | | | | | |
| <i>Lithospermum arvense</i> | Field Gromwell | 5 | 11 | 18 | | | | |
| <i>Lithospermum officinale</i> | Common Gromwell | 11 | | | | | | |
| <i>Littorella uniflora</i> | Shoreweed | 2 | | | | | | |
| <i>Lotus tenuis</i> | Narrow-leaved Bird's-foot-trefoil | 14 | | | | | | |
| <i>Luzula sylvatica</i> | Great Wood-rush | 11 | | | | | | |
| <i>Lycopodiella inundata</i> | Marsh Clubmoss | 2 | 9 | 18 | | | | |
| <i>Lycopodium clavatum</i> | Stag's-horn Clubmoss | 11 | 19 | | | | | |
| <i>Lythrum hyssopifolium</i> | Grass Poly | 5 | 8 | 10 | 12 | 16 | 18 | |
| <i>Lythrum portula</i> | Water Purslane | 14 | | | | | | |
| <i>Marrubium vulgare</i> | White Horehound | 3 | 9 | | | | | |
| <i>Medicago polymorpha</i> | Toothed Medick | 9 | 10 | | | | | |
| <i>Medicago sativa nothosubsp. varia</i> | Sand Lucerne | 9 | 10 | | | | | |
| <i>Medicago sativa subsp. falcata</i> | Sickle Medick | 9 | 11 | | | | | |
| <i>Melampyrum cristatum</i> | Crested Cow-wheat | 2 | 6 | 9 | 18 | | | |
| <i>Melampyrum pratense</i> | Common Cow-wheat | 10 | 20 | | | | | |
| <i>Melica nutans</i> | Mountain Melick | 2 | | | | | | |
| <i>Mentha arvensis</i> | Corn Mint | 20 | | | | | | |
| <i>Mentha pulegium</i> | Pennyroyal | 5 | 9 | 12 | 16 | 17 | | |
| <i>Mentha x piperata</i> | Peppermint | 15 | | | | | | |
| <i>Menyanthes trifoliata</i> | Bogbean | 10 | | | | | | |
| <i>Mercurialis annua</i> | Annual Mercury | 15 | | | | | | |
| <i>Microthlaspi perfoliatum</i> | Perfoliate Penny-cress | 2a | 6 | 19 | | | | Not in RPR 1 st edition |
| <i>Minuartia hybrida</i> | Fine-leaved Sandwort | 5 | 9 | 10 | 12 | 18 | | |
| <i>Misopates orontium</i> | Weasel's-snout | 6 | 10 | 19 | | | | |
| <i>Moenchia erecta</i> | Upright Chickweed | 2 | 9 | | | | | |
| <i>Montia fontana</i> | Blinks | 11 | | | | | | Rare to Scarce |
| <i>Montia fontana subsp. chondrosperma</i> | Blinks | 10 | | | | | | |
| <i>Myosotis secunda</i> | Creeping Forget-me-not | 10 | | | | | | |
| <i>Myosotis x suzae</i> | <i>Myosotis laxa x scorpioides</i> | 10 | | | | | | |
| <i>Myosurus minimus</i> | Mousetail | 6 | 9 | 10 | 19 | | | |
| <i>Myrica gale</i> | Bog Myrtle | 2a | 10 | 20 | | | | |
| <i>Myriophyllum alterniflorum</i> | Alternate Water-milfoil | 11 | | | | | | |
| <i>Myriophyllum verticillatum</i> | Whorled Water-milfoil | 6 | 9 | 11 | 20 | | | |
| <i>Narcissus pseudonarcissus subsp. pseudonarcissus</i> | Wild Daffodil | 14 | | | | | | |
| <i>Nardus stricta</i> | Mat Grass | 20 | | | | | | |
| <i>Narthecium ossifragum</i> | Bog Asphodel | 2 | | | | | | |
| <i>Nasturtium x sterile</i> | Hybrid Watercress | 11 | | | | | | |
| <i>Neottia nidus-avis</i> | Bird's-nest Orchid | 7 | 10 | 19 | | | | |
| <i>Neottia ustulata</i> | Burnt Orchid | 2 | 5 | 9 | 18 | | | |
| <i>Nepeta cataria</i> | Cat-mint | 6 | 11 | 19 | | | | |
| <i>Nymphaea alba</i> | White Water-lily | 10 | | | | | | |
| <i>Oenanthe fistulosa</i> | Tubular Water-dropwort | 6 | 12 | 19 | | | | |
| <i>Oenanthe fluviatilis</i> | River Water-dropwort | 2 | | | | | | |
| <i>Oenanthe lachenalii</i> | Parsley Water-dropwort | 11 | 20 | | | | | |
| <i>Oenanthe silaifolia</i> | Narrow-leaved Water-dropwort | 3 | 7 | 9 | | | | |
| <i>Ononis spinosa</i> | Spiny Restharrow | 20 | | | | | | |
| <i>Ophrys insectifera</i> | Fly Orchid | 6 | 10 | 12 | 19 | | | |
| <i>Oreopteris limbosperma</i> | Lemon-scented Fern | 11 | | | | | | |
| <i>Ornithogalum pyrenaicum</i> | Spiked Star-of-Bethlehem | 9 | 10 | | | | | |
| <i>Orobanche minor</i> | Common Broomrape | 15 | | | | | | |
| <i>Orobanche rapum-genistae</i> | Great Broomrape | 2 | 7 | 9 | 19 | | | |
| <i>Osmunda regalis</i> | Royal Fern | 2a | 10 | | | | | |

| Scientific Name (Kent/Stage) | Common Name | Codes | | | | | | Notes / Change |
|---|-------------------------------------|-----------|----|----|----|----|--|---------------------|
| Oxalis acetosella | Wood Sorrel | 20 | | | | | | |
| Papaver argemone | Prickly Poppy | 6 | 9 | 18 | | | | |
| Papaver lecoqii | Yellow-juiced Poppy | 10 | | | | | | |
| Paris quadrifolia | Herb Paris | 15 | | | | | | |
| Parnassia palustris | Grass of Parnassus | 2 | 19 | | | | | |
| Pedicularis palustris | Red Rattle | 2 | 19 | | | | | |
| Pedicularis sylvatica | Lousewort | 3 | 10 | 19 | | | | |
| Persicaria minor | Small Water-pepper | 6 | 9 | 15 | | | | |
| Persicaria mitis | Tasteless Water-pepper | 6 | 9 | 19 | | | | |
| Petroselinum segetum | Corn Parsley | 10 | | | | | | |
| Pinguicula vulgaris | Common Butterwort | 3 | 10 | 19 | | | | |
| Platanthera bifolia | Lesser Butterfly-orchid | 2 | 6 | | | | | |
| Platanthera chlorantha | Greater Butterfly-orchid | 7 | 11 | | | | | |
| Polygala serpyllifolia | Heath Milkwort | 14 | 20 | | | | | |
| Polygala vulgaris subsp. collina | Common Milkwort | 2 | | | | | | |
| Polygonatum multiflorum | Solomon's-seal | 14 | | | | | | Scarce to declining |
| Polygonatum odoratum | Angular Solomon's-seal | 2 | 9 | | | | | |
| Polygonum rurivagum | Cornfield Knotgrass | 9 | 10 | | | | | |
| Polypogon monspeliensis | Annual Beard-grass | 9 | 15 | | | | | Scarce to uncommon |
| Polystichum x bicknellii | Hybrid Shield-fern | 11 | | | | | | Rare to scarce |
| Populus nigra subsp. betulifolia | Black Poplar | 15 | | | | | | Scarce to uncommon |
| Potamogeton berchtoldii | Small Pondweed | 14 | | | | | | |
| Potamogeton coloratus | Fen Pondweed | 9 | 11 | | | | | |
| Potamogeton compressus | Grass-wrack Pondweed | 2 | 5 | 9 | 18 | | | |
| Potamogeton friesii | Flat-stalked Pondweed | 7 | 9 | 11 | 19 | | | |
| Potamogeton gramineus | Various-leaved Pondweed | 11 | 20 | | | | | |
| Potamogeton lucens | Shining Pondweed | 11 | | | | | | |
| Potamogeton obtusifolius | Blunt-leaved Pondweed | 11 | | | | | | Rare to scarce |
| Potamogeton polygonifolius | Bog Pondweed | 11 | | | | | | |
| Potamogeton praelongus | Long-stalked Pondweed | 3 | 7 | 9 | 18 | | | |
| Potamogeton trichoides | Hairlike Pondweed | 9 | 10 | | | | | |
| Potamogeton x cooperi | Potamogeton perfoliatus x crispus | 2 | | | | | | |
| Potamogeton x lintonii | Potamogeton friesii x crispus | 14 | | | | | | |
| Potamogeton x nitens | Potamogeton gramineus x perfoliatus | 3 | 10 | | | | | |
| Potamogeton x salicifolius | Potamogeton lucens x perfoliatus | 10 | | | | | | |
| Potamogeton x sparganifolius | Potamogeton natans x gramineus | 2 | | | | | | |
| Potentilla argentea | Hoary Cinquefoil | 7 | 9 | 20 | | | | |
| Potentilla erecta | Tormentil | 20 | | | | | | |
| Pyrola minor | Common Wintergreen | 2 | 20 | | | | | |
| Pyrola rotundifolia subsp. rotundifolia | Round-leaved Wintergreen | 7 | 9 | 10 | | | | |
| Radiola linoides | All-seed | 2 | 7 | | | | | |
| Ranunculus arvensis | Corn Buttercup | 4 | 9 | 10 | 12 | 18 | | |
| Ranunculus baudotii | Brackish Water-crowfoot | 9 | 11 | | | | | |
| Ranunculus flammula | Lesser Spearwort | 19 | | | | | | |
| Ranunculus hederaceus | Ivy-leaved Crowfoot | 11 | | | | | | |
| Ranunculus lingua | Greater Spearwort | 2a | | | | | | |
| Ranunculus omiophyllus | Round-leaved Crowfoot | 10 | | | | | | |
| Ranunculus parviflorus | Small-flowered Buttercup | 9 | 15 | | | | | Scarce to uncommon |
| Ranunculus peltatus | Pond Water-crowfoot | 15 | | | | | | |
| Ranunculus sardous | Hairy Buttercup | 15 | | | | | | Scarce to uncommon |
| Rhinanthus angustifolius | Greater Yellow-rattle | 2 | 8 | 16 | | | | |
| Rhinanthus minor subsp. stenophyllus | Yellow-rattle | 10 | | | | | | |

| Scientific Name (Kent/Stace) | Common Name | Codes | | | | | | Notes / Change |
|---------------------------------|---|-------|----|----|----|----|--|------------------------------------|
| <i>Ribes alpinum</i> | Mountain Currant | 9 | 15 | | | | | Scarce to uncommon |
| <i>Rosa caesia</i> | Northern Dog-rose | 14 | | | | | | |
| <i>Rosa micrantha</i> | Small-flowered Sweet-briar | 2 | | | | | | |
| <i>Rosa mollis</i> | Soft Downy-rose | 2 | | | | | | |
| <i>Rosa sherardii</i> | Sherard's Downy-rose | 15 | | | | | | |
| <i>Rosa stylosa</i> | Short-styled Field-rose | 11 | | | | | | |
| <i>Rosa x irregularis</i> | <i>Rosa arvensis</i> x <i>canina</i> | 10 | | | | | | |
| <i>Rubus x pseudoidaeus</i> | <i>Rubus caesius</i> x <i>idaeus</i> | 10 | | | | | | |
| <i>Rumex pulcher</i> | Fiddle Dock | 2 | | | | | | |
| <i>Rumex x knafii</i> | <i>Rumex conglomeratus</i> x <i>maritimus</i> | 10 | | | | | | |
| <i>Rumex x schulzei</i> | <i>Rumex conglomeratus</i> x <i>crispus</i> | 10 | | | | | | |
| <i>Rumex x steinii</i> | <i>Rumex obtusifolius</i> x <i>palustris</i> | 10 | | | | | | |
| <i>Rumex x wirtgenii</i> | <i>Rumex conglomeratus</i> x <i>palustris</i> | 10 | | | | | | |
| <i>Sagina maritima</i> | Sea Pearlwort | 3 | 10 | | | | | |
| <i>Sagina nodosa</i> | Knotted Pearlwort | 11 | 19 | | | | | |
| <i>Salix aurita</i> | Eared Willow | 11 | | | | | | |
| <i>Salix myrsinifolia</i> | Dark-leaved Willow | 2 | 9 | 10 | | | | |
| <i>Salix pentandra</i> | Bay Willow | 15 | | | | | | Scarce to uncommon |
| <i>Salix repens</i> | Creeping Willow | 10 | 20 | | | | | |
| <i>Salix x calodendron</i> | Holme Willow | 11 | | | | | | |
| <i>Salix x forbyana</i> | Fine Osier | 11 | | | | | | |
| <i>Salix x fruticosa</i> | Shrubby Osier | 10 | | | | | | |
| <i>Salix x leiophylla</i> | <i>Salix triandra</i> x <i>purpurea</i> | 2 | | | | | | |
| <i>Salix x meyeriana</i> | <i>Salix pentandra</i> x <i>fragilis</i> | 10 | | | | | | |
| <i>Salix x multinervis</i> | <i>Salix aurita</i> x <i>cinerea</i> | 15 | | | | | | Scarce to uncommon |
| <i>Salix x reichardtii</i> | <i>Salix cinerea</i> x <i>caprea</i> | 15 | | | | | | Scarce to uncommon |
| <i>Salix x rubra</i> | Green-leaved Osier | 11 | | | | | | |
| <i>Salix x stipularis</i> | Eared Osier | 2 | | | | | | |
| <i>Salix x subsericea</i> | <i>Salix cinerea</i> x <i>repens</i> | 3 | 10 | | | | | |
| <i>Salvia verbenaca</i> | Wild Clary | 11 | 20 | | | | | |
| <i>Sambucus ebulus</i> | Danewort | 10 | | | | | | |
| <i>Sanicula europaea</i> | Wood Sanicle | 20 | | | | | | |
| <i>Scandix pecten-veneris</i> | Shepherd's-needle | 4 | 9 | 11 | 12 | 18 | | |
| <i>Schoenus nigricans</i> | Black Bog-rush | 10 | | | | | | |
| <i>Scirpus sylvaticus</i> | Wood Club-rush | 15 | | | | | | |
| <i>Scleranthus annuus</i> | Annual Knawel | 5 | 12 | 18 | | | | |
| <i>Sedum telephium</i> | Orpine | 10 | | | | | | |
| <i>Selinum carvifolia</i> | Cambridge Milk-parsley | 2 | 6 | 8 | | | | |
| <i>Senecio x subnebrodensis</i> | <i>Senecio squalidus</i> x <i>viscosus</i> | 11 | | | | | | |
| <i>Silene conica</i> | Striated Catchfly | 2 | 6 | | | | | Not in RPR 1 st edition |
| <i>Silene flos-cuculi</i> | Ragged Robin | 20 | | | | | | |
| <i>Silene gallica</i> | Small -flowered Catchfly | 3 | 9 | 10 | 12 | 18 | | |
| <i>Silene noctiflora</i> | Night-flowering Catchfly | 6 | 9 | 10 | 19 | | | |
| <i>Silene nutans</i> | Nottingham Catchfly | 2 | 7 | 9 | 20 | | | |
| <i>Silene uniflora</i> | Sea Campion | 10 | | | | | | |
| <i>Sium latifolium</i> | Greater Water-parsnip | 3 | 9 | 10 | 18 | | | |
| <i>Solidago virgaurea</i> | Goldenrod | 11 | 20 | | | | | |
| <i>Sorbus aria</i> | Common Whitebeam | 15 | | | | | | |
| <i>Sparganium angustifolium</i> | Floating Bur-reed | 2 | | | | | | |
| <i>Spergula arvensis</i> | Corn Spurrey | 6 | 19 | | | | | |
| <i>Spiranthes spiralis</i> | Ladies' Tresses | 2 | 7 | 20 | | | | |
| <i>Spirodela polyrhiza</i> | Greater Duckweed | 14 | | | | | | |
| <i>Stachys arvensis</i> | Field Woundwort | 7 | 14 | 20 | | | | |

| Scientific Name (Kent/Stace) | Common Name | Codes | | | | | | Notes / Change |
|---------------------------------------|--|-----------|----|----|----|----|--|------------------------------------|
| Stachys x ambigua | Stachys sylvatica x palustris | 15 | | | | | | |
| Stellaria neglecta | Greater Chickweed | 15 | | | | | | |
| Stellaria nemorum subsp. nemorum | Wood Stitchwort | 10 | | | | | | |
| Stellaria palustris | Marsh Stitchwort | 6 | 12 | 19 | | | | |
| Stratiotes aloides | Water Soldier | 2a | 7 | 9 | 15 | | | |
| Succisa pratensis | Devil's-bit Scabious | 20 | | | | | | |
| Teesdalia nudicaulis | Shepherd's Cress | 7 | 9 | 15 | 20 | | | |
| Thelypteris palustris | Marsh Fern | 2 | 9 | | | | | |
| Thymus polytrichus subsp. brittanicus | Wild Thyme | 15 | | | | | | |
| Thymus pulegioides | Large Thyme | 10 | | | | | | |
| Tilia platyphyllos | Large-leaved Lime | 9 | 15 | | | | | |
| Torilis arvensis | Spreading Hedge-parsley | 5 | 9 | 10 | 12 | 18 | | |
| Torilis nodosa | Knotted Hedge-parsley | 14 | | | | | | Scarce to declining |
| Trichophorum germanicum | Deer-grass | 2 | | | | | | |
| Trifolium fragiferum | Strawberry Clover | 19 | | | | | | |
| Trifolium ochroleucon | Sulphur Clover | 2 | 7 | 9 | 19 | | | |
| Triglochin maritima | Sea Arrow-grass | 2 | | | | | | |
| Triglochin palustris | Marsh Arrow-grass | 15 | 20 | | | | | |
| Turritis glabra | Tower Mustard | 2 | 5 | 9 | 18 | | | |
| Typha x glauca | Typha angustifolia x latifolia | 11 | | | | | | |
| Umbilicus rupestris | Navelwort | 10 | | | | | | |
| Urtica dioica subsp. galeopsifolia | Fen Nettle' | 11 | | | | | | |
| Utricularia minor | Lesser Bladderwort | 2 | 19 | | | | | |
| Utricularia vulgaris sensu lato | Greater Bladderwort | 2 | | | | | | |
| Vaccinium myrtillus | Bilberry | 11 | | | | | | |
| Vaccinium oxycoccus | Cranberry | 2 | | | | | | |
| Vaccinium vitis-idaea | Cowberry | 2 | | | | | | |
| Valeriana dioica | Marsh Valerian | 14 | 20 | | | | | |
| Valeriana officinalis | Common Valerian | 20 | | | | | | |
| Valerianella dentata | Narrow-fruited Cornsalad | 5 | 9 | 11 | 18 | | | |
| Verbascum lychnitis | White Mullein | 9 | 10 | | | | | |
| Verbascum nigrum | Dark Mullein | 15 | | | | | | Scarce to uncommon |
| Verbascum pulverulentum | Hoary Mullein | 2 | 9 | | | | | |
| Verbascum x duernsteinense | Verbascum thapsus x speciosum | 10 | | | | | | |
| Verbena officinalis | Vervain | 15 | | | | | | Scarce to uncommon |
| Veronica officinalis | Heath Speedwell | 20 | | | | | | |
| Veronica scutellata | Marsh Speedwell | 15 | 20 | | | | | |
| Veronica triphyllos | Fingered Speedwell | 2 | 5 | 8 | 17 | | | |
| Vicia bithynica | Bithynian vetch | 2 | 6 | | | | | |
| Vicia sylvatica | Wood Vetch | 15 | | | | | | Scarce to uncommon |
| Viola canina subsp. canina | a heath dog-violet | 7 | 14 | 19 | | | | |
| Viola canina subsp. montana | a heath dog-violet | 2 | 5 | | | | | |
| Viola lutea | Mountain Pansy | 2 | 20 | | | | | |
| Viola palustris | Marsh Violet | 10 | | | | | | |
| Viola persicifolia | Fen Violet | 2 | 5 | 8 | 16 | 17 | | |
| Viola tricolor subsp. tricolor | Heartsease | 7 | 20 | | | | | |
| Viola x bavarica | Viola riviniana x reichenbachiana | 10 | | | | | | |
| Viola x intersita | Viola riviniana x canina | 10 | | | | | | |
| Viola x scabra | Viola odorata x hirta | 11 | | | | | | Rare to scarce |
| X Conyzigeron huelsenii | Erigeron acris x Conyza canadensis | 10 | | | | | | |
| X Dactylodenia heinzelliana | Gymnadenia conopsea x Dactylorhiza fuchsii | 10 | | | | | | Not in RPR 1 st edition |

Appendix II: Recorders

The list below includes all of those recorders who have contributed records (modern and historic) to this register.

| Ref. | Name | Ref. | Name | Ref. | Name |
|----------|----------------------------|--------|----------------------------------|-------|----------------------------|
| AB | A. Burroughs | Jacobs | Jacobs Consulting | PA | P. Acton |
| ABL | A.B. Loy | JA | J. Alder | PAC | P.A. Candlish |
| AC | A. Chick | JB | Rev. J. Becher | PK | P. Kirby |
| AG | A. Gilbert | JBn | J. Brown | PO | P. Oxley |
| AJW | A.J. Worland | JBr | J. Branscombe | POI | P. Olko |
| ARH | A.R. Horwood | JC | J. Carruthers | PMc | P. McCormick |
| BDW | Unknown | JCo | J. Coales | PMW | P.M. Wade |
| BF | B. Featherstone | JCr | J. Carter | PP | P. Palmer |
| BES | British Ecological Society | JED | J.E. Dandy | PR | P. Rice |
| BMH | B.M. Howitt | JF | J. Fraser | PS | P. Shepherd |
| BWB | British Waterways Board | JH | J. Hodgson | PSm | P. Smith |
| CBW | C.B. Waite | JMC | J.M. Croft | RAF | R. Frost |
| CC | C. Cornish | JMW | J.M. Way | RAJ | R.A. Johnson |
| CD | C. Deering | JOM | J. O. Mountford | RBa | R. Barker |
| CDB | Unknown | JO | J. Ordoyno | RB | R. Bulley |
| CES | Rev. C.E. Shaw | JR | Rev. J. Roffey | RC | Unknown |
| CGC | C.G. Coppock (Woll) | JS | J. Szczur | RCLH | R.C.L. Howitt |
| CIS | C.I. Sandwith | JSh | J. Shanklin | RDM | R.D. Meikle |
| CJ | C. Joyce | JSi | James Simpson | REGC | R.E.G. Cole |
| CK | C. Kennedy | JT | J. Thompson | RG | R. Goulding |
| CL | C. Levy | JTH | Unknown | RGS | Unknown |
| CN | Unknown | JWC | J.W. Carr | RGW | R.G. Williams |
| CDP / CP | C.D. Preston | JWH | J.W. Hopkinson | RPL | R.P. Libbey |
| CS | C. Smith | KB | K. Balkow | RM | R. Maskell |
| CS(1) | Claire Smith | KLJ | K.L. Jeffries | RMe | R. Melville |
| CW | C. Waite | KRS | Unknown | RMP | R.M. Payne |
| DaS | David Shaw | KW | Kevin Widdowson | RN | R. Nickerson |
| DL | D. Little | LH | L. Hicks | RP | R. Penson |
| DC | Unknown | LA | L. Allen | RS | R. Smith |
| DCW | D.C. Wood | LC | L. Chilton | RT | R. Tratt |
| DK | D. Knight | LF | L. Farrell | RVL | R.V. Lansdown |
| DM | D. McClintock | MAP | M.A. Palmer | RW | R. Wilson |
| DO'G | D. O'Grady | MAV | M.A. Vincent | Sa | Mrs Sandwith |
| DP | D. Peterson | MB | Unknown | SA | S. Alton |
| DRC | Derbyshire Records Centre | MCr | M. Crittenden | SAi | S. Aitken |
| DS | D. Sanders | MC | M.S. Carr | SB | S. Band |
| DW | D. Whiteley | MEP | M.E. Pearce | SC | S. Clifton |
| EC | E. Charter | MF | M. Featherstone | SFW | S. Woodward |
| EG | Eirlys Gilbert | MG | M. Grace | SG | S. Gallagher |
| EHM | E.H. Mullins | MGi | M. Gibbons | SH | S. Hammond |
| EJL | E.J. Lowe | MM | M. Miller | SHe | S. Heathcoate |
| ELS | E.L. Swann | MP | M. Palmer | SHo | S. Horne |
| EMP | E. Pearce | MS | M. Smith | SM | S. Matthews |
| EP | E. Palmer | MT | M. Thompson | SMW | S.M. Walters |
| GC | Graeme Coles | MW | M. Woods | SW | S. Wright |
| GG | Geoff Garratt | MWh | M. White | TG | T. Gent |
| GHB | G.H. Battershall | NBGR | Notts Biological Records Centre | TGCR | T. Rich |
| GH | G. Howitt | NC | N. Crouch | TJ | T. Jowett |
| GL | G. Levy | NCC | Nature Conservancy Council Staff | TO | Thomas Ordoyno |
| GS | G. Smith | NDS | N.D. Simpson | VL | V. Leather |
| GT | Dr. G. Taylor | NFS | N.F. Stewart | Woll. | Wollaton Hall Museum Staff |
| GW | G. Walley | NH | N. Holmes | VD | V. Dale |

| Ref. | Name | Ref. | Name | Ref. | Name |
|------|----------------|------|--------------------------------|------|-------------------------|
| GWi | G. Wilson | NJH | N.J.Hunter | VH | V. Heyes |
| GWW | G.W. Wheeldon | NNDS | North Notts Drains Survey | VPDB | Vascular Plant Database |
| HF | H. Friend | NP | N. Pinder | VW | V. Wilkin |
| HFi | H. Fisher | NRL | N.R. Lewis | WH | Will Heeney |
| HR | Unknown | NS | Norma Sanders | WM | W. Martin |
| Hu | Mr Hurt | Nwi | N. Willby | WJH | W. Heyes |
| IB | I. Butterfield | NWT | Nottinghamshire Wildlife Trust | ZH | Z. Harris |
| IW | I. Weston | NYS | N.Y. Sandwith | ZW | Z. Ward |

Appendix III: Supplementary Geological Information

Availability of geological maps and memoirs

The county of Nottinghamshire is covered by twelve Geological Survey maps at scales of either one-inch to the mile (1:63 360, indicated by #) or 1:50 000. Sheet boundaries are outlined in red on figs. 1 and 2. Of these twelve maps, sheets 100 (Sheffield) and 102 (Market Rasen) merely clip the western and eastern edges respectively of the county and can be ignored. Maps are usually available in either flat or folded form, except sheets 101 East Retford and 113 Ollerton, which are currently only available in flat form. Maps are usually described as 'solid and drift' (of older usage) or 'bedrock and superficial deposits'. Most maps are accompanied by Memoirs (M), Sheet Descriptions (SD) or brief Sheet Explanations (SE).

88 Doncaster (1969#) M

101 East Retford (1967#) M

112 Chesterfield (2012) M

113 Ollerton (1966#) M

114 Lincoln (1973)

125 Derby (1972) M

126 Nottingham (1996) M

127 Grantham (1996) M

141 Loughborough (2001) SE, SD

142 Melton Mowbray (2003) SE, SD

It is now possible to access the geological map of Britain as a free smartphone App (iGeology) that allows the user to view the 1:50 000 scale geology of any location simply by tapping in a place name or postcode, or using your phone's in-built GPS. Go to <http://www.bgs.ac.uk/igeology/>.